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March 16, 2023

Honorable Kimberly D. Bose, Secretary Federal Energy Regulatory Commission 888 First Street, N.E., Room 1A Washington, D.C. 20426-0001

Re: PJM Interconnection, L.L.C., Docket No. ER23-1399-000

Correction to 2022 Annual RTEP Update Filing

Dear Secretary Bose:

PJM Interconnection, L.L.C. ("PJM") hereby submits for filing<sup>1</sup> revisions to the PJM Open Access Transmission Tariff ("Tariff"), Schedule 12 – Appendix and Schedule 12 – Appendix A, to correct incorrect cost allocation assignments for certain Regional Facilities<sup>2</sup> and Necessary Lower Voltage Facilities<sup>3</sup> included in the PJM Regional Transmission Expansion Plan ("RTEP")<sup>4</sup> for calendar year 2022. Specifically, on December 21, 2021, PJM submitted its annual filing to update cost allocation assignments for RTEP facilities that were either then in-service or scheduled

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<sup>&</sup>lt;sup>1</sup> PJM submits this filing pursuant to section 205 of the Federal Power Act ("FPA"), 16 U.S.C. § 824d, and Part 35 of the Commission's ("FERC" or "Commission") regulations, 18 C.F.R. Part 35. All capitalized terms that are not otherwise defined herein have the meaning as defined in the Tariff, Amended and Restated Operating Agreement of PJM Interconnection, L.L.C., ("Operating Agreement"), and Reliability Assurance Agreement among Load Serving Entities in the PJM Region.

<sup>&</sup>lt;sup>2</sup> Under Tariff, Schedule 12-Appendix, Regional Facilities include new transmission enhancements and expansions that will operate at or above 500 kilovolts ("kV"). Under Tariff, Schedule 12-Appendix A, Regional Facilities include: (i) new transmission enhancements and expansions that are alternating current ("A.C.") facilities that operate at or above 500 kV; (ii) single enhancements and expansions comprised of two A.C. circuits operating at or above 345 kV, and below 500 kV, where both circuits originate from a single substation or switching station at one end and terminate at a single substation or switching station at the other end; (iii) A.C. or direct current ("D.C.") shunt reactive resources connected to a Transmission Facility described in (i) or (ii); or (iv) D.C. facilities.

<sup>&</sup>lt;sup>3</sup> Necessary Lower Voltage Facilities are defined the same for Tariff, Schedule 12-Appendix and Tariff, Schedule 12-Appendix A, and include new transmission enhancements and expansions that will operate below 500 kV that must be constructed or strengthened to support new Regional Facilities. *See* Tariff, Schedule 12, section (b)(i).

<sup>&</sup>lt;sup>4</sup> Under Tariff, Schedule 12-Appendix A, Regional Facilities, Necessary Lower Voltage Facilities are updated annually, beginning with the calendar year in which the enhancement and expansion is scheduled to enter service and thereafter annually at the beginning of each calendar year. *See* Tariff, Schedule 12, section (b)(iii)(H)(2).

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to enter service in 2022.<sup>5</sup> As explained below, it has since come to PJM's attention that there was an error in the power flow case model applied to the solution-based distribution factor ("DFAX") method<sup>6</sup> used to calculate the cost allocation assignments set forth in the 2022 RTEP Annual Update Filing, resulting in incorrect zonal cost allocation assignments for 28 projects ("Affected Projects").<sup>7</sup> PJM has recalculated the cost allocation assignments for the Affected Projects for calendar year 2022 using the corrected power flow case model. Accordingly, PJM submits herein proposed Tariff revisions to reflect the correct zonal cost allocation assignments for the Affected Projects for calendar year 2022.

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<sup>&</sup>lt;sup>5</sup> *PJM Interconnection, L.L.C.*, Docket No. ER22-702-000 (Dec. 21, 2021) ("2022 RTEP Annual Update Filing"). The Commission accepted the 2022 RTEP Annual Update Filing, to be effective on January 1, 2022, by order dated February 18, 2022. *PJM Interconnection, L.L.C.*, 178 FERC ¶ 61,113, at P 1 (2022), *reh'g denied*, 179 FERC ¶ 62,043 (2022) ("February 2022 Order").

<sup>&</sup>lt;sup>6</sup> The solution-based DFAX methodology is based on a computer model of the PJM transmission system. Using power flow modeling software, PJM calculates the portion of the power that flows on the transmission facility for consumption by load in each transmission zone and withdrawal by each merchant transmission facility having Firm Transmission Withdrawal Rights ("TWRs") (collectively, "Responsible Zones"). This calculation yields distribution factors, expressed as percentages that represent a measure of the use by the load in each Responsible Zone. These distribution factors are calculated for each Responsible Zone. To perform a DFAX calculation for cost allocation, both a source and sink for power are defined. The source used for the DFAX calculation is the aggregate of all PJM generation and the sink is each transmission owner's peak zonal load or applicable megawatt value for a merchant transmission with Firm TWRs. Using this approach, the simulation produces the change in megawatt usage on a transmission facility as a single megawatt of power is transferred from PJM generation to each PJM load zone. This change represents the DFAX value that is an expression of the usage of a transmission facility by each Responsible Zone.

<sup>&</sup>lt;sup>7</sup> As reflected in the revised Tariff sheets, PJM is proposing to revise the cost allocation assignments for 71 baseline upgrade IDs. A baseline upgrade ID may represent a baseline project, or it may be one of several individual transmission facilities with individual baseline upgrade IDs that constitute a project. Although not formally defined, a project is the required system reinforcement or group of reinforcements that together mitigate, in this instance, a single reliability criteria violation or cluster of related reliability criteria violations identified by PJM through its analysis. PJM may further subdivide a project into components, *i.e.*, sub-IDs, for administration of rates so that PJM and its transmission owners may track project status. For example, a project may require one or more baseline upgrades (*i.e.*, individual transmission facilities, designated to one or more incumbent transmission owner or nonincumbent transmission developer that may be located in one or more zones) to solve the identified reliability violations. To be clear, the power flow modeling error that PJM seeks to correct in this filing affected 28 baseline projects composed of 71 baseline upgrades.

#### I. BACKGROUND

PJM files cost responsibility assignments for transmission enhancements and expansions that the PJM Board of Managers ("PJM Board") approves as part of PJM's RTEP.<sup>8</sup> Under the PJM hybrid cost allocation method accepted as complying with Order No. 1000,<sup>9</sup> in the case of Regional Facilities and Necessary Lower Voltage Facilities that address a reliability need,<sup>10</sup> 50 percent of the costs of those facilities are allocated region-wide on a load-ratio share basis.<sup>11</sup> The other 50 percent of the costs are allocated based on the solution-based DFAX method.<sup>12</sup> Costs of Lower Voltage Facilities are allocated 100 percent using the solution-based DFAX method.<sup>13</sup> In addition, consistent with the Commission-approved contested settlement pending in Docket No. EL05-121-009<sup>14</sup> for the period commencing January 1, 2016 onward, certain Regional

<sup>&</sup>lt;sup>8</sup> See Amended and Restated Operating Agreement of PJM ("Operating Agreement"), Schedule 6, section 1.6(b); PJM Tariff, Schedule 12, section (b)(viii).

<sup>&</sup>lt;sup>9</sup> See Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities, Order No. 1000, FERC Stats. & Regs. ¶ 31,323 (2011) (Order No. 1000), order on reh'g, Order No. 1000-A, 139 FERC ¶ 61,132, order on reh'g and clarification, Order No. 1000-B, 141 FERC ¶ 61,044 (2012), aff'd sub nom. S.C. Pub. Serv. Auth. v. FERC, 762 F.3d 41 (D.C. Cir. 2014) (S.C. Pub. Serv. Auth. v. FERC). See also PJM Interconnection, L.L.C., 142 FERC ¶ 61,214 (2013), order on reh'g and compliance, 147 FERC ¶ 61,128 (2014), order on reh'g and compliance, 150 FERC ¶ 61,038, order on reh'g and compliance, 151 FERC ¶ 61,250 (2015).

<sup>&</sup>lt;sup>10</sup> PJM identifies reliability transmission needs and economic constraints, and allocates the costs of the solutions to such transmission needs in accordance with the type of benefits they provide. *See PJM Interconnection, L.L.C.*, 142 FERC ¶ 61,214, at P 441. *See also* Tariff, Schedule 12, section (b)(v) (assigning cost responsibility for Economic Projects).

<sup>&</sup>lt;sup>11</sup> Tariff, Schedule 12, section (b)(i)(A)(1).

<sup>&</sup>lt;sup>12</sup> Tariff, Schedule 12, section (b)(i)(A)(2)(a). Solution-based DFAX cost allocation responsibilities for transmission enhancements and expansions are set at the time the transmission enhancement or expansion is included in the RTEP, and are revisited annually beginning with the calendar year in which a transmission enhancement or expansion is scheduled to enter service. *See* Tariff, Schedule 12, section (b)(iii)(H)(2).

<sup>&</sup>lt;sup>13</sup> Tariff, Schedule 12, section (b)(ii).

<sup>&</sup>lt;sup>14</sup> *PJM Interconnection, L.L.C.*, 163 FERC ¶ 61,168 (2018) ("2018 Settlement Order"). The Settlement provided for a new Schedule 12-C and three appendices to be added to the Tariff, effective January 1, 2016. Specifically, Tariff, Schedule 12-C includes: (i) Appendix A (List of Covered Transmission Enhancements, including Covered Transmission Enhancements that were canceled or abandoned ("Canceled Projects") before entering service); (ii) Appendix B (50 percent cost responsibility allocations for Canceled Projects); and (iii) Appendix C (Transmission Enhancement Charge Adjustments). For purposes of 2022 RTEP Annual Update Filing, only Tariff, Schedule 12-C, Appendix A and Appendix B were relevant to determine which cost allocations were to be updated.

Facilities and Necessary Lower Voltage Facilities included in Tariff, Schedule 12-Appendix<sup>15</sup> and identified as Covered Transmission Enhancements listed in Tariff, Schedule 12-C are allocated based on the hybrid methodology with 50 percent of cost responsibility assignments using the annual load-ratio share and 50 percent using the solution-based DFAX, which allocations are updated annually as well.

It has come to PJM's attention that when PJM created the power flow model to perform the DFAX calculation to determine the cost responsibility assignments for calendar year 2022, PJM incorrectly assigned seven generators to the wrong Mid-Atlantic areas.<sup>16</sup> PJM therefore corrected the area assignments for those seven generators, and reran the solution-based DFAX calculation. PJM determined that the incorrect area assignments impacted cost allocations for 28 projects.<sup>17</sup>

#### II. PROPOSED TARIFF REVISIONS

For the reasons set forth above, PJM proposes to revise Tariff, Schedule 12 – Appendix and Schedule 12 – Appendix A to reflect the correct cost allocation assignments for the Affected Projects for calendar year 2022, <sup>18</sup> as set forth in Attachment A to this filing. Assuming the

<sup>&</sup>lt;sup>15</sup> Tariff, Schedule 12, section (a)(v) (The assignment of cost responsibility of Required Transmission Enhancements included in the RTEP prior to February 1, 2013 are set forth in Tariff, Schedule 12-Appendix).

<sup>&</sup>lt;sup>16</sup> PJM brought this error to stakeholders' attention at the February 7, 2023 Planning Committee meeting. *See* <a href="https://pjm.com/-/media/committees-groups/committees/pc/2023/20230207/item-07---2022-cost-allocation-update.ashx">https://pjm.com/-/media/committees-groups/committees/pc/2023/20230207/item-07---2022-cost-allocation-update.ashx</a>.

<sup>&</sup>lt;sup>17</sup> See supra, n.7. PJM notes that since the power flow error was identified, PJM has made changes to its processes to ensure that the error will not reoccur.

<sup>&</sup>lt;sup>18</sup> PJM is authorized and obligated under section 10.4 of its PJM Open Access Transmission Tariff and section 15.6 of its Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. to issue adjusted billing statements to correct such errors for a period going back no more than two (2) years from notifying Market Participants of such error. At the February 7, 2023 Planning Committee meeting, PJM notified stakeholders that it would rebill for any such erroneously allocated costs back to and including January 1, 2022. *See supra*, n.16.

Commission accepts the revisions proposed in this filing, PJM will resettle the incorrectly allocated amounts associated with the Affected Projects for calendar year 2022.<sup>19</sup>

#### III. WAIVER AND EFFECTIVE DATE

Consistent with the effective date established by the February 2022 Order, PJM respectfully requests that the Commission accept the proposed revisions to be effective January 1, 2022. To permit such effective date, PJM respectfully requests a waiver of the Commission's prior notice requirement in section 35.3(a)(1) of the Commission's regulations.<sup>20</sup> Good cause exists for such waiver because the amendments filed herein reflect corrections to the inputs to the solution-based DFAX methodology previously accepted by the Commission, with the effective date previously established by the Commission, thereby ensuring that the current effective versions of the PJM Tariff found in the Commission's files and eTariff system, and posted by PJM, conform to and fully reflect the Commission's prior orders.

#### IV. MINISTERIAL CLEAN-UP FILING

As PJM was working to correct the Tariff sheets to reflect the correct cost allocation assignments for the Affected Projects for calendar year 2022, it came to PJM's attention that, due to an administrative oversight, one of the Affected Projects was not listed in the Tariff at the time PJM submitted the 2022 RTEP Annual Update Filing. Specifically, baseline project b1507.1 was inadvertently excluded from Schedule 12 – Appendix (Dominion). To be clear, b1507.1 is not a new project – rather it is a PJM Board-approved project that should be listed in the Tariff. Baseline

<sup>&</sup>lt;sup>19</sup> On December 22, 2022, PJM filed updated annual cost allocations for RTEP facilities that were either then inservice or scheduled to enter service in calendar year 2023. *PJM Interconnection, L.L.C.*, 2023 RTEP Annual Update Filing, Docket No. ER23-712-000, (Dec. 22, 2022) ("2023 RTEP Annual Update Filing"). The Commission accepted the 2023 RTEP Annual Update Filing, to be effective on January 1, 2023, by order dated February 17, 2023. *PJM Interconnection, L.L.C.*, 182 FERC ¶ 61,101 (2023). PJM wishes to make clear that it is only seeking to correct cost allocation assignments for the Affected Projects for calendar year 2022.

<sup>&</sup>lt;sup>20</sup> 18 C.F.R. § 35.3(a)(1) (2022).

project b1507.1 has the same cost allocation assignment as the parent baseline project (ID b1507) and has been billed correctly and consistently with that assignment. PJM therefore proposes to add b1507.1 to Schedule 12 – Appendix (Dominion) to ensure the Tariff accurately reflects the allocation accepted by the Commission.

#### V. DOCUMENTS ENCLOSED

PJM encloses the following documents with this filing:

- 1. This transmittal letter;
- Attachment A: Revised Tariff, Schedule 12 Appendix and Schedule 12 Appendix A (in redlined form); and
- Attachment B: Revised Tariff, Schedule 12 Appendix and Schedule 12 Appendix A (in clean form).

#### VI. COMMUNICATIONS

The following individuals are designated for inclusion on the official service list in this proceeding and for receipt of any communications regarding this filing:

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#### VII. SERVICE

PJM has served a copy of this filing on all PJM Members and on all state utility regulatory commissions in the PJM Region by posting this filing electronically. In accordance with the

Commission's regulations,<sup>21</sup> PJM will post a copy of this filing to the FERC filings section of its internet site, located at the following link: <a href="https://www.pjm.com/library/filing-order">https://www.pjm.com/library/filing-order</a> with a specific link to the newly-filed document, and will send an e-mail on the same date as this filing to all PJM Members and all state utility regulatory commissions in the PJM Region<sup>22</sup> alerting them that this filing has been made by PJM and is available by following such link. If the document is not immediately available by using the referenced link, the document will be available through the referenced link within 24 hours of the filing. Also, a copy of this filing will be available on FERC's eLibrary website located at the following link: <a href="http://www.ferc.gov/docs-filing/elibrary.asp">http://www.ferc.gov/docs-filing/elibrary.asp</a> in accordance with the Commission's regulations and Order No. 714.

<sup>&</sup>lt;sup>21</sup> See 18 C.F.R. §§ 35.2(e) and 385.2010(f)(3) (2022).

<sup>&</sup>lt;sup>22</sup> PJM already maintains, updates and regularly uses e-mail lists for all PJM Members and affected state commissions.

#### VIII. CONCLUSION

For the reasons set forth above, PJM respectfully requests that the Commission accept the proposed changes to Tariff, Schedule 12 – Appendix and Schedule 12 – Appendix A to reflect the correct cost responsibility assignments for the Affected Projects for calendar year 2022. PJM requests that the Commission permit the proposed changes to be effective as of January 1, 2022, which is the date previously established by the Commission in its February 2022 Order for the cost allocation assignments set forth in the 2022 RTEP Annual Update Filing.

Respectfully submitted,

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## **Attachment A**

Schedule 12 – Appendices of the PJM Open Access Transmission Tariff

(Marked / Redline Format)

### **SCHEDULE 12 – APPENDIX**

# (5) Mid-Atlantic Interstate Transmission, LLC for the Metropolitan Edison Company Zone

Troquirea	Transmission Emianeements 1	minual ite venue itequiren	nent Responsible Customer(s)
b0215	Install 230 kV series reactor and 2- 100 MVAR PLC switched capacitors at Hunterstown		AEC (6.71%) / APS (3.97%) / DPL (9.10%) / JCPL (16.85%) / ME (10.53%) / NEPTUNE* (1.69%) / PECO (19.00%) / PPL (7.55%) / PSEG (22.67%) / RE (0.34%) / UGI (0.95%) / ECP** (0.64%)
b0404.1	Replace South Reading 230 kV breaker 107252		ME (100%)
b0404.2	Replace South Reading 230 kV breaker 100652		ME (100%)
b0575.1	Rebuild Hunterstown – Texas Eastern Tap 115 kV		ME (100%)
b0575.2	Rebuild Texas Eastern Tap  – Gardners 115 kV and associated upgrades at Gardners including disconnect switches		ME (100%)
b0650	Reconductor Jackson – JE Baker – Taxville 115 kV line		ME (100%)
b0652	Install bus tie circuit breaker on Yorkana 115 kV bus and expand the Yorkana 230 kV ring bus by one breaker so that the Yorkana 230/115 kV banks 1, 3, and 4 cannot be lost for either B-14 breaker fault or a 230 kV line or bank fault with a stuck breaker		ME (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

Required		Annual Revenue Requirem	ent Responsible Customer(s)
	Construct a 230 kV		
	Bernville station by		
	tapping the North Temple –		
b0653	North Lebanon 230 kV		
00055			
	line. Install a 230/69 kV		
	transformer at existing		
	Bernville 69 kV station		ME (100%)
1.1000	Replace Portland 115 kV		
b1000	breaker '95312'		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	oreaker 33312		ME (100%)
1 1001	Replace Portland 115 kV		
b1001	breaker '92712'		NET (1000()
			ME (100%)
b1002	Replace Hunterstown 115		
01002	kV breaker '96392'		ME (100%)
b1003	Replace Hunterstown 115		
01003	kV breaker '96292'		ME (100%)
1 100 4	Replace Hunterstown 115		
b1004	kV breaker '99192'		ME (100%)
	Replace existing Yorkana		
	230/115 kV transformer		
	banks 1 and 4 with a		
b1061	single, larger transformer		
	similar to transformer bank		
	#3		ME (1009/)
			ME (100%)
b1061.1	Replace the Yorkana 115		NET (1000()
	kV breaker '97282'		ME (100%)
b1061.2	Replace the Yorkana 115		
01001.2	kV breaker 'B282'		ME (100%)
	Replace the limiting bus		
	conductor and wave trap at		
b1302	the Jackson 115 kV		
	terminal of the Jackson –		
	JE Baker Tap 115 kV line		ME (100%)
	Reconductor the		1.112 (10070)
	Middletown – Collins 115		
b1365	kV (975) line 0.32 miles of		
			ME (1000/)
	336 ACSR		ME (100%)

Required	Transmission Enhancements	Annual Revenue Requirem	ient Responsible Customer(s)
	Reconductor the Collins –		
h1266	Cly – Newberry 115 kV		
b1366	(975) line 5 miles with 795		
	ACSR		ME (100%)
	Reconductor 2.4 miles of		,
	existing 556 and 795		
1 1 7 2 7	ACSR from Harley		
b1727	Davidson to Pleasureville		
	115 kV with 795 ACSS to		
	raise the ratings		ME (100%)
			Load-Ratio Share
			Allocation:
			AEC (1.67%) / AEP (13.94%)
			/ APS (5.64%) / ATSI
			(8.02%) / BGE (4.12%) /
			ComEd (13.46%) / Dayton
			(2.12%) / DEOK (3.37%) /
			DL (1.76%) / DPL (2.55%) /
			Dominion (12.97%) / EKPC
	Install a 500 MVAR SVC		(1.81%) / JCPL (3.92%) / ME
b1800	at the existing Hunterstown		(1.95%) / NEPTUNE*
01000	500 kV substation		(0.24%) / OVEC (0.07%) /
	200 H · Bussumen		PECO (5.39%) / PENELEC
			(1.84%) / PEPCO (3.71%) /
			PPL (4.78%) / PSEG (6.40%)
			/ RE (0.27%)
			DFAX Allocation:
			DPL ( <del>31.5845</del> .03%) / ME
			(34.8454.80%) / PSEG
			\
			· · · · · · · · · · · · · · · · · · ·
			, , , ,
			, , , , , ,
1 1001	Build a 250 MVAR SVC at		,
61801	Altoona 230 kV		` ' '
			,
b1801			(34.8454.80%) / PSEG (0.16%) / PECO (33.58%)RE (0.01%) AEC (6.47%) / AEP (2.58%) / APS (6.88%) / BGE (6.57%) / DPL (12.39%) / Dominion (14.89%) / JCPL (8.14%) / ME (6.21%) / NEPTUNE* (0.82%) / PECO (21.56%) / PPL (4.89%) / PSEG (8.18%) / RE (0.33%) / ECP** (0.09%

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

Required	Transmission Enhancements	Annual Revenue Requiremen	t Responsible Customer(s)
	Replace SCCIR (Sub-		
b1816.5	conductor) at Hunterstown		
01010.5	Substation on the No. 1,		
	230/115 kV transformer		ME (100%)
	Replace limiting wave trap,		
	circuit breaker, substation		
b1999	conductor, relay and		
	current transformer		
	components at Northwood		ME (100%)
	Replace limiting wave trap		
b2000	on the Glendon -		
	Hosensack line		ME (100%)
	Replace limiting circuit		
	breaker and substation		
b2001	conductor transformer		
	components at Portland		
	230kV		ME (100%)
b2002	Northwood 230/115 kV		
02002	Transformer upgrade		ME (100%)
	Construct a new North		
b2023	Temple - Riverview -		
02023	Cartech 69 kV line (4.7		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	miles) with 795 ACSR		ME (100%)
	Upgrade 4/0 substation		
b2024	conductors at Middletown		N. F. (1000 ()
	69 kV		ME (100%)
	Upgrade 4/0 and 350 Cu		
	substation conductors at		
b2025	the Middletown Junction		
	terminal of the Middletown		
	Junction - Wood Street Tap		NET (1000/)
	69 kV line		ME (100%)
1.0006	Upgrade an OC protection		
b2026	relay at the Baldy 69 kV		NG (1000/)
	substation		ME (100%)
1.01.40	Install a 115 kV 28.8		
b2148	MVAR capacitor at		NATE (1000/)
	Pleasureville substation		ME (100%)

b2149	Upgrade substation riser on the Smith St York Inc. 115 kV line		ME (100%)
b2150	Upgrade York Haven structure 115 kV bus conductor on Middletown Jct Zions View 115 kV		ME (100%)

### **SCHEDULE 12 – APPENDIX**

# (7) Mid-Atlantic Interstate Transmission, LLC for the Pennsylvania Electric Company Zone

Required T	ransmission Enhancements	Annual Revenue Requirement	nt Responsible Customer(s)
			AEC (1.67%) / AEP (13.94%)
	Build 500 kV substation		/ APS (5.64%) / ATSI (8.02%)
			/ BGE (4.12%) / ComEd
	in PENELEC – Tap the		(13.46%) / Dayton (2.12%) /
	Keystone – Juniata and		DEOK (3.37%) / DL (1.76%) /
	Conemaugh – Juniata 500		DPL (2.55%) / Dominion
b0284.1	kV, connect the circuits		(12.97%) / EKPC (1.81%) /
	with a breaker and half		JCPL (3.92%) / ME (1.95%) /
	scheme, and install new		NEPTUNE* (0.24%) / OVEC
	400 MVAR capacitor		(0.07%) / PECO (5.39%) /
			PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			AEC (1.67%) / AEP (13.94%)
	Replace wave trap and upgrade a bus section at		/ APS (5.64%) / ATSI (8.02%)
			/ BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
			DEOK (3.37%) / DL (1.76%) /
			DPL (2.55%) / Dominion
b0284.3	Keystone 500 kV – on the		(12.97%) / EKPC (1.81%) /
	Keystone – Airydale 500		JCPL (3.92%) / ME (1.95%) /
	kV		NEPTUNE* (0.24%) / OVEC
			(0.07%) / PECO (5.39%) /
			PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required T	ransmission Enhancements	Annual Revenue Requirement	nt Responsible Customer(s)
			AEC (1.67%) / AEP (13.94%)
			/ APS (5.64%) / ATSI (8.02%)
			/ BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
	Replace wave trap at		DEOK (3.37%) / DL (1.76%) /
	Keystone 500 kV – on the		DPL (2.55%) / Dominion
b0285.1	Keystone – Conemaugh		(12.97%) / EKPC (1.81%) /
	500 kV		JCPL (3.92%) / ME (1.95%) /
	300 K V		NEPTUNE* (0.24%) / OVEC
			(0.07%) / PECO (5.39%) /
			PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			AEC (1.67%) / AEP (13.94%)
	Replace wave trap and relay at Conemaugh 500		/ APS (5.64%) / ATSI (8.02%)
			/ BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
			DEOK (3.37%) / DL (1.76%) /
			DPL (2.55%) / Dominion
b0285.2	kV – on the Conemaugh –		(12.97%) / EKPC (1.81%) /
	Keystone 500 kV		JCPL (3.92%) / ME (1.95%) /
	Reystolle 300 kV		NEPTUNE* (0.24%) / OVEC
			(0.07%) / PECO (5.39%) /
			PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Upgrade Rolling b0349 Meadows-Gore Jct 115 kV PENELEC (100%) Construction of a ring bus b0360 on the 345 kV side of Wayne substation **PENELEC** (100%) Add a 50 MVAR, 230 kV b0365 cap bank at Altoona 230 kV **PENELEC** (100%) AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / Install 100 MVAR DPL (2.55%) / Dominion Dynamic Reactive Device b0369 (12.97%) / EKPC (1.81%) / at Airydale 500 kV JCPL (3.92%) / ME (1.95%) / substation NEPTUNE\* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / Install 500 MVAR DPL (2.55%) / Dominion Dynamic Reactive Device b0370 (12.97%) / EKPC (1.81%) / at Airydale 500 kV JCPL (3.92%) / ME (1.95%) / substation NEPTUNE\* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required	Transmission Enhancements Ai	nnual Revenue Requirement	Responsible Customer(s)
			Load-Ratio Share
			Allocation:
			AEC (1.67%) / AEP (13.94%)
			/ APS (5.64%) / ATSI (8.02%)
			/ BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
			DEOK (3.37%) / DL (1.76%) /
			DPL (2.55%) / Dominion
			(12.97%) / EKPC (1.81%) /
			JCPL (3.92%) / ME (1.95%) /
	Install 300 MVAR		NEPTUNE* (0.24%) / OVEC
b0376			(0.07%) / PECO (5.39%) /
00370	capacitor at Conemaugh 500 kV substation		PENELEC (1.84%) / PEPCO
	300 KV substation		(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			DFAX Allocation:
			AEC ( <del>5.89</del> <u>5.20</u> %) / BGE
			( <del>14.03</del> <u>19.46</u> %) / JCPL
			( <del>19.26</del> <u>18.23</u> %) / ME
			( <del>10.43</del> <u>11.67</u> %) / NEPTUNE*
			( <del>2.13</del> <u>2.00</u> %) / PECO
			( <del>20.70</del> <u>18.42</u> %) / PSEG
			( <del>26.53</del> 24.09%) / RE
			( <del>1.03</del> <u>0.93</u> %)
b0442	Spare Keystone 500/230		
00442	kV transformer		PENELEC (100%)
	Replace Lewistown		
b0515	circuit breaker 1LY		
00010	Yeagertown		PENELEC (100%)
			1 LINELEC (10070)
1.0516	Replace Lewistown		
b0516	circuit breaker 2LY		
	Yeagertown		PENELEC (100%)
b0517	Replace Shawville bus		
0031/	section circuit breaker		PENELEC (100%)
	Replace Homer City		121:2220 (10070)
b0518	circuit breaker 201		
00318	Johnstown		DENET E < (1000/)
	Johnstown		PENELEC (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace Keystone circuit b0519 breaker 4 Transformer - 20 PENELEC (100%) **Load-Ratio Share** Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE\* (0.24%) / OVEC (0.07%) / Install 250 MVAR PECO (5.39%) / PENELEC b0549 capacitor at Keystone 500 (1.84%) / PEPCO (3.71%) / kV PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** AEC (<del>5.52</del>5.11%) / BGE (<del>16.52</del>23.95%) / DL (0.04%) / <del>DPL (5.56%) / </del>JCPL (<del>16.64</del>16.27%) / ME (11.0812.99%) / NEPTUNE\* (<del>1.84</del>1.79%) / PECO (<del>19.45</del><u>18.16</u>%) / PSEG (<del>22.48</del>20.88%) / RE (0.870.81%)AEC (8.58%) / APS (1.69%) / DPL (12.24%) / JCPL Install 25 MVAR capacitor (18.16%) / ME (1.55%) / b0550 at Lewis Run 115 kV NEPTUNE\* (1.77%) / PECO substation (21.78%) / PPL (6.40%) / ECP\*\* (0.73%) / PSEG (26.13%) / RE (0.97%) AEC (8.58%) / APS (1.69%) / DPL (12.24%) / JCPL Install 25 MVAR capacitor (18.16%) / ME (1.55%) / NEPTUNE\* (1.77%) / PECO b0551 at Saxton 115 kV substation (21.78%) / PPL (6.40%) / ECP\*\* (0.73%) / PSEG

(26.13%) / RE (0.97%)

- \* Neptune Regional Transmission System, LLC \*\* East Coast Power, L.L.C.

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) AEC (8.58%) / APS (1.69%) / DPL (12.24%) / JCPL (18.16%) Install 50 MVAR / ME (1.55%) / NEPTUNE\* b0552 capacitor at Altoona 230 (1.77%) / PECO (21.78%) / kV substation PPL (6.40%) / ECP\*\* (0.73%) / PSEG (26.13%) / RE (0.97%) AEC (8.58%) / APS (1.69%) / DPL (12.24%) / JCPL (18.16%) Install 50 MVAR / ME (1.55%) / NEPTUNE\* b0553 capacitor at Raystown 230 (1.77%) / PECO (21.78%) / kV substation PPL (6.40%) / ECP\*\* (0.73%) / PSEG (26.13%) / RE (0.97%) AEC (8.58%) / APS (1.69%) / DPL (12.24%) / JCPL (18.16%) Install 100 MVAR / ME (1.55%) / NEPTUNE\* b0555 capacitor at Johnstown (1.77%) / PECO (21.78%) / 230 kV substation PPL (6.40%) / ECP\*\* (0.73%) / PSEG (26.13%) / RE (0.97%) AEC (8.58%) / APS (1.69%) / DPL (12.24%) / JCPL (18.16%) Install 50 MVAR / ME (1.55%) / NEPTUNE\* b0556 capacitor at Grover 230 (1.77%) / PECO (21.78%) / kV substation PPL (6.40%) / ECP\*\* (0.73%) / PSEG (26.13%) / RE (0.97%) AEC (8.58%) / APS (1.69%) / DPL (12.24%) / JCPL (18.16%) Install 75 MVAR / ME (1.55%) / NEPTUNE\* b0557 capacitor at East Towanda (1.77%) / PECO (21.78%) / 230 kV substation PPL (6.40%) / ECP\*\* (0.73%) / PSEG (26.13%) / RE (0.97%) Install 25 MVAR b0563 capacitor at Farmers Valley 115 kV substation **PENELEC** (100%) Install 10 MVAR b0564 capacitor at Ridgeway 115 kV substation **PENELEC** (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

Responsible Customer(s) Reconfigure the Cambria Slope 115 kV and Wilmore Junction 115 kV b0654 stations to eliminate Wilmore Junction 115 kV 3-terminal line **PENELEC** (100%) Reconfigure and expand the Glade 230 kV ring bus b0655 to eliminate the Glade Tap 230 kV 3-terminal line **PENELEC** (100%) Add three breakers to b0656 form a ring bus at Altoona  $230 \, kV$ **PENELEC** (100%) Upgrade the Homer City b0794 230 kV breaker 'Pierce Road' **PENELEC** (100%) Replace Glory 115 kV b1005 breaker '#7 XFMR' PENELEC (100%) Replace Shawville 115 b1006 kV breaker 'NO.14 XFMR' **PENELEC** (100%) Replace Shawville 115 b1007 kV breaker 'NO.15 XFMR' **PENELEC** (100%) Replace Shawville 115 b1008 kV breaker '#1B XFMR' PENELEC (100%) Replace Shawville 115 b1009 kV breaker '#2B XFMR' **PENELEC** (100%) Replace Shawville 115 b1010 kV breaker 'Dubois' **PENELEC** (100%)

Required 1	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b1011	Replace Shawville 115 kV breaker 'Philipsburg'		PENELEC (100%)
b1012	Replace Shawville 115 kV breaker 'Garman'		PENELEC (100%)
b1059	Replace a CRS relay at Hooversville 115 kV station		PENELEC (100%)
b1060	Replace a CRS relay at Rachel Hill 115 kV station		PENELEC (100%)
b1153	Upgrade Conemaugh 500/230 kV transformer and add a new line from Conemaugh-Seward 230 kV		AEC (3.74%) / APS (6.26%) / BGE (16.82%) / DL (0.32%) / JCPL (12.57%) / ME (6.89%) / PECO (11.53%) / PEPCO (0.55%) / PPL (15.42%) / PSEG (20.52%) / RE (0.72%) / NEPTUNE* (1.70%) / ECP** (2.96%)
b1153.1	Revise the reclosing on the Shelocta 115 kV breaker 'Lucerne'		PENELEC (100%)
b1169	Replace Shawville 115 kV breaker '#1A XFMR'		PENELEC (100%)
b1170	Replace Shawville 115 kV breaker '#2A XFMR'		PENELEC (100%)
b1277	Build a new Osterburg East – Bedford North 115 kV Line, 5.7 miles of 795 ACSR		PENELEC (100%)
b1278	Install 25 MVAR Capacitor Bank at Somerset 115 kV		PENELEC (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC
\*\* East Coast Power, L.L.C.

Required T	Fransmission Enhancements Ar	nnual Revenue Requirement	Responsible Customer(s)
	Replace the Cambria		
b1367	Slope 115/46 kV 50		
	MVA transformer with		
	75 MVA		PENELEC (100%)
	Replace the Claysburg		, ,
1.12.60	115/46 kV 30 MVA		
b1368	transformer with 75		
	MVA		PENELEC (100%)
	Replace the 4/0 CU		
	substation conductor with		
b1369	795 ACSR on the		
	Westfall S21 Tap 46 kV		
	line		PENELEC (100%)
			()
b1370	Install a 3rd 115/46 kV		
010,0	transformer at Westfall		PENELEC (100%)
	Reconductor 2.6 miels of		121(2222 (10070)
b1371	the Claysburg – HCR 46		
013/1	kV line with 636 ACSR		PENELEC (100%)
	Replace 4/0 CU		TENEDEC (10070)
	substation conductor with		
b1372	795 ACSR on the		
013/2	Hollidaysburg – HCR 46		
	kV		PENELEC (100%)
	Re-configure the Erie		TENEELE (10070)
	West 345 kV substation,		
b1373	add a new circuit breaker		
01373	and relocate the		
	Ashtabula line exit		PENELEC (100%)
	Replace wave traps at		TENEELE (10070)
	Raritan River and Deep		
	Run 115 kV substations		
b1374	with higher rated		
	equipment for both B2		
	and C3 circuits		PENELEC (100%)
	Reconductor 0.8 miles of		TENEELC (10070)
	the Gore Junction – ESG		
b1535	Tap 115 kV line with 795		
	ACSS		DENELEC (100%)
	ACSS		PENELEC (100%)

Required 1	Tansinission Enhancements Ai	inuai Revenue Requirement	Responsible Customer(s)
b1607	Reconductor the New Baltimore - Bedford		
01007	North 115 kV		PENELEC (100%)
	Construct a new 345/115		
b1608	kV substation and loop		A DG (0 (10/) / DE GO (1 700/) /
	the Mansfield - Everts 115 kV		APS (8.61%) / PECO (1.72%) / PENELEC (89.67%)
	Construct Four Mile		TENEEC (07.0770)
	Junction 230/115 kV		
	substation. Loop the Erie		
b1609	South - Erie East 230 kV		
	line, Buffalo Road - Corry East and Buffalo		
	Road - Erie South 115		APS (4.86%) / PENELEC
	kV lines		(95.14%)
	Install a new 230 kV		
b1610	breaker at Yeagertown		
	Install a 345 kV breaker		PENELEC (100%)
b1713	at Erie West and relocate		
01/13	Ashtabula 345 kV line		PENELEC (100%)
	Install a 75 MVAR cap		
b1769	bank on the Four Mile		
	230 kV bus		PENELEC (100%)
1 1770	Install a 50 MVAR cap		
b1770	bank on the Buffalo Road 115 kV bus		PENELEC (100%)
	115 KV Ous		AEC (6.47%) / AEP (2.58%) /
			APS (6.88%) / BGE (6.57%) /
	Build a 100 MVAR Fast		DPL (12.39%) / Dominion
b1802	Switched Shunt and 200		(14.89%) / JCPL (8.14%) / ME
01002	MVAR Switched Shunt		(6.21%) / NEPTUNE* (0.82%)
	at Mansfield 345 kV		/ PECO (21.56%) / PPL
			(4.89%) / PSEG (8.18%) / RE (0.33%) / ECP** (0.09%)
			(0.3370) / ECF · · (0.0370)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup> East Coast Power, L.L.C.

Responsible Customer(s) Replace the Erie South b1821 115 kV breaker 'Union City' **PENELEC** (100%) Construct a 115 kV ring bus at Claysburg Substation. Bedford b1943 North and Saxton lines will no longer share a common breaker **PENELEC** (100%) Reconductor Eclipse substation 115 kV bus b1944 with 1033 kcmil conductor **PENELEC** (100%) Install second 230/115 b1945 kV autotransformer at Johnstown **PENELEC** (100%) Replace the 1200 Amp Line trap at Lewistown on the Raystownb1966 Lewistown 230 kV line and replace substation conductor at Lewistown **PENELEC** (100%) Replace the Blairsville b1967 138/115 kV transformer **PENELEC** (100%) Install a 25 MVAR 115 b1990 kV Capacitor at Grandview **PENELEC** (100%) Construct Farmers Valley 345/230 kV and 230/115 kV substation. Loop the b1991 Homer City-Stolle Road 345 kV line into Farmers Valley **PENELEC** (100%) Reconductor Cambria Slope-Summit 115kV b1992 with 795 ACSS Conductor **PENELEC** (100%)

required i	Tansmission Emiancements Afindal Revenue Requiremen	it Responsible Customer(s)
b1993	Relocate the Erie South 345 kV line terminal	APS (10.09%) / ECP** (0.45%) / HTP*** (0.49%) / JCPL (5.14%) / NEPTUNE* (0.54%) / PENELEC (70.71%) / PSEG (12.10%) / RE (0.48%)
b1994	Convert Lewis Run- Farmers Valley to 230 kV using 1033.5 ACSR conductor. Project to be completed in conjunction with new Farmers Valley 345/230 kV transformation	APS (33.20%) / ECP** (0.44%) / HTP*** (0.44%) / JCPL (8.64%) / ME (5.52%) / NEPTUNE* (0.86%) / PENELEC (36.81%) / PSEG (13.55%) / RE (0.54%)
b1995	Change CT Ratio at Claysburg	PENELEC (100%)
b1996.1	Replace 600 Amp Disconnect Switches on Ridgeway-Whetstone 115 kV line with 1200 Amp Disconnects	PENELEC (100%)
b1996.2	Reconductor Ridgway and Whetstone 115 kV Bus	PENELEC (100%)
b1996.3	Replace Wave Trap at Ridgway	PENELEC (100%)
b1996.4	Change CT Ratio at Ridgway	PENELEC (100%)
b1997	Replace 600 Amp Disconnect Switches on Dubois-Harvey Run- Whetstone 115 kV line with 1200 Amp Disconnects	PENELEC (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup> East Coast Power, L.L.C.

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

b1998	Install a 75 MVAR 115 kV Capacitor at Shawville		PENELEC (100%)
b2016	Reconductor bus at Wayne 115 kV station		PENELEC (100%)

### SCHEDULE 12 – APPENDIX

### (8) PECO Energy Company

Required T	Fransmission Enhancements	Annual Revenue Requireme	nt Responsible Customer(s)
			Load-Ratio Share
			Allocation:
			AEC (1.67%) / AEP (13.94%)
			/ APS (5.64%) / ATSI (8.02%)
			/ BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
			DEOK (3.37%) / DL (1.76%) /
	Replace two 500 kV		DPL (2.55%) / Dominion
	circuit breakers and two		(12.97%) / EKPC (1.81%) /
	wave traps at Elroy		JCPL (3.92%) / ME (1.95%) /
b0171.1	substation to increase		NEPTUNE* (0.24%) / OVEC
	rating of Elroy -		(0.07%) / PECO (5.39%) /
	Hosensack 500 kV		PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			DFAX Allocation:
			AEC ( <del>9.80</del> 8.03%) / DPL
			( <del>8.43</del> 8.44%) / JCPL
			( <del>19.56</del> 19.98%) / PECO
			( <del>62.21</del> <u>63.55</u> %)
b0180	Replace Whitpain 230 kV		
00180	circuit breaker #165		PECO (100%)
b0181	Replace Whitpain 230 kV		
00101	circuit breaker #J105		PECO (100%)
	Upgrade Plymouth		
b0182	Meeting 230 kV circuit		
	breaker #125		PECO (100%)
b0205	Install three 28.8 Mvar		
	capacitors at Planebrook		
	35 kV substation		PECO (100%)
b0206	Install 161 Mvar capacitor		AEC (14.20%) / DPL
	at Planebrook 230 kV		(24.39%) / PECO (57.94%) /
	substation		PSEG (3.47%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required 1	ransmission Ennancements Annual Revenue Requirement	Responsible Customer(s)
1.000=	Install 161 Mvar capacitor	AEC (14.20%) / DPL
b0207	at Newlinville 230 kV	(24.39%) / PECO (57.94%) /
	substation	PSEG (3.47%)
	Install 161 Myar capacitor	AEC (14.20%) / DPL
b0208	Heaton 230 kV substation	(24.39%) / PECO (57.94%) /
		PSEG (3.47%)
	Install 2% series reactor at	
b0209	Chichester substation on	AEC (65.23%) / JCPL
00207	the Chichester -	(25.87%)/ NEPTUNE*
	Mickleton 230 kV circuit	(2.55%) / PSEG (6.35%)
	Upgrade Chichester –	
	Delco Tap 230 kV and the	
b0264	PECO portion of the	
	Delco Tap – Mickleton	AEC (89.87%) / JCPL (9.48%)
	230 kV circuit	/ NEPTUNE* (0.65%)
	Replace two wave traps	
	and ammeter at Peach	
1.0266	Bottom, and two wave	
b0266	traps and ammeter at	
	Newlinville 230 kV	
	substations	PECO (100%)
		Load-Ratio Share
		Allocation:
		AEC (1.67%) / AEP (13.94%)
		/ APS (5.64%) / ATSI (8.02%)
		/ BGE (4.12%) / ComEd
		(13.46%) / Dayton (2.12%) /
		DEOK (3.37%) / DL (1.76%) /
	Install a new 500 kV	DPL (2.55%) / Dominion
	Center Point substation in	(12.97%) / EKPC (1.81%) /
b0269	PECO by tapping the	JCPL (3.92%) / ME (1.95%) /
	Elroy – Whitpain 500 kV	NEPTUNE* (0.24%) / OVEC
	circuit	(0.07%) / PECO (5.39%) /
		PENELEC (1.84%) / PEPCO
		(3.71%) / PPL (4.78%) / PSEG
		(6.40%) / RE (0.27%)†
		DFAX Allocation:
	l l	A E G (6 E00() / EE G C
		AEC (6.70%) / PECO (93.30%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>†</sup>Cost allocations associated with Regional Facilities and Necessary Lower Voltage Facilities associated with the project

b0269.1	Add a new 230 kV circuit between Whitpain and Heaton substations	AEC (8.25%) / DPL (9.56%) / PECO (82.19%)††
b0269.2	Reconductor the Whitpain 1 – Plymtg 1 230 kV circuit	AEC (8.25%) / DPL (9.56%) / PECO (82.19%)††
b0269.3	Convert the Heaton bus to a ring bus	AEC (8.25%) / DPL (9.56%) / PECO (82.19%)††
b0269.4	Reconductor the Heaton – Warminster 230 kV circuit	AEC (8.25%) / DPL (9.56%) / PECO (82.19%)††
b0269.5	Reconductor Warminster  – Buckingham 230 kV circuit	AEC (8.25%) / DPL (9.56%) / PECO (82.19%)††

<sup>††</sup>Cost allocations associated with below 500 kV elements of the project

Required 113	ansmission Enhancements Ann	uai Revenue Requirement	Responsible Customer(s)
			Load-Ratio Share
			Allocation:
			AEC (1.67%) / AEP (13.94%)
			/ APS (5.64%) / ATSI (8.02%)
			/ BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
			DEOK (3.37%) / DL (1.76%) /
	Add a new 500 kV		DPL (2.55%) / Dominion
	breaker at Whitpain		(12.97%) / EKPC (1.81%) /
b0269.6	between #3 transformer		JCPL (3.92%) / ME (1.95%) /
	and 5029 line		NEPTUNE* (0.24%) / OVEC
			(0.07%) / PECO (5.39%) /
			PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			DFAX Allocation:
			AEC (6.70%) / PECO
			(93.30%)
b0269.7	Replace North Wales 230		
00207.1	kV breaker #105		PECO (100%)
	Install a new 230 kV		
	Center Point substation in		
10000	PECO by tapping the		
b0269.10	North Wales – Perkiomen		
	230 kV circuit. Install a		
	new 500/230 kV Center		AEC (8.25%) / DPL (9.56%) /
	Point transformer		PECO (82.19%)††
	Install 161 MVAR		
b0280.1	capacitor at Warrington		
	230 kV substation		PECO 100%
b0280.2	Install 161 MVAR		
	capacitor at Bradford 230		
	kV substation		PECO 100%
4 0 5 5 5 5	Install 28.8 MVAR		
b0280.3	capacitor at Warrington		<b>D</b>
	34 kV substation		PECO 100%

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>††</sup>Cost allocations associated with below 500 kV elements of the project

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Install 18 MVAR b0280.4 capacitor at Waverly 13.8 kV substation PECO 100% **Load-Ratio Share** Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / Install 600 MVAR JCPL (3.92%) / ME (1.95%) / Dynamic Reactive Device NEPTUNE\* (0.24%) / OVEC b0287 in Whitpain 500 kV (0.07%) / PECO (5.39%) / vicinity PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** AEC (9.808.03%) / DPL (8.438.44%) / JCPL (<del>19.56</del>19.98%) / PECO (62.2163.55%)Reconductor Tunnel – b0351 Grays Ferry 230 kV PECO (100%) Reconductor Tunnel b0352 Parrish 230 kV PECO (100%) Install 2% reactors on b0353.1 both lines from Eddystone - Llanerch 138 kV PECO (100%) Install identical second 230/138 kV transformer in parallel with existing b0353.2 230/138 kV transformer at Plymouth Meeting PECO 100% Replace Whitpain 230 kV b0353.3 breaker 135 PECO (100%) Replace Whitpain 230 kV b0353.4 breaker 145 PECO (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<u> </u>	Eddystone – Island Road	1	
1.0254			
b0354	Upgrade line terminal		
	equipment		PECO 100%
	Reconductor Master –		
b0355	North Philadelphia 230		
	kV line		PECO 100%
			JCPL (37.17%) /
	Reconductor Buckingham		NEPTUNE* (4.46%) /
b0357	– Pleasant Valley 230 kV		PSEG (54.14%) / RE
	- I leasant valley 250 kV		(2.32%) / ECP** (1.91%)
	Reconductor North		(2.3270) / ECF · (1.9170)
1.0250			
b0359	Philadelphia – Waneeta		
	230 kV circuit		PECO 100%
b0402.1	Replace Whitpain 230 kV		
00402.1	breaker #245		PECO (100%)
	Replace Whitpain 230 kV		
b0402.2	breaker #255		PECO (100%)
			1 LCO (10070)
b0438	Spare Whitpain 500/230		PT GO (4000()
	kV transformer		PECO (100%)
b0443	Spare Peach Bottom		
00443	500/230 kV transformer		PECO (100%)
	Reconductor the North		
b0505	Wales – Whitpain 230 kV		AEC (8.58%) / DPL
00000	circuit		(7.76%) / PECO (83.66%)
	Reconductor the North		(7.7070)71ECO (03.0070)
b0506	Wales – Hartman 230 kV		AEC (8.58%) / DPL
00300			` /
	circuit		(7.76%) / PECO (83.66%)
b0507	Reconductor the Jarrett –		AEC (8.58%) / DPL
00307	Whitpain 230 kV circuit		(7.76%) PECO (83.66%)
	Replace station cable at		
b0508.1	Hartman on the		
	Warrington - Hartman		
	230 kV circuit		PECO (100%)
	Reconductor the Jarrett –		(
b0509	Heaton 230 kV circuit		PECO (100%)
	Ticaton 250 KV circuit		FECO (10070)

<sup>\*</sup>Neptune Regional Transmission Partners, LLC
\*\*East Coast Power, L.L.C.

Required 1	ransmission Enhancements Ani	iuai Revenue Requirement	Responsible Customer(s)
b0727	Rebuild Bryn Mawr –		
	Plymouth Meeting 138		AEC (1.25%) / DPL
	kV line		(3.11%) / PECO (95.64%)
	Reconductor the line to		AEC (0.72%) / JCPL
	provide a normal rating of		(17.36%) / NEPTUNE*
b0789	677 MVA and an		(1.70%) / PECO (44.47%) /
	emergency rating of 827		ECP** (0.92%) / PSEG
	MVA		(33.52%) / RE (1.31%)
	Reconductor the Bradford		
	<ul> <li>Planebrook 230 kV Ckt.</li> </ul>		JCPL (17.30%) /
b0790	220-31 to provide a		NEPTUNE* (1.69%) /
00/70	normal rating of 677		PECO (45.09%) / ECP**
	MVA and emergency		(0.93%) / PSEG (33.68%) /
	rating of 827 MVA		RE (1.31%)
b0829.1	Replace Whitpain 230 kV		
00829.1	breaker '155'		PECO (100%)
	Install 2 new 230 kV		
	breakers at Planebrook		
b1073	(on the 220-02 line		
01073	terminal and on the 230		
	kV side of the #9		
	transformer)		PECO (100%)
10020 2	Replace Whitpain 230 kV		
b0829.2	breaker '525'		PECO (100%)
b0829.3	Replace Whitpain 230 kV		
00829.3	breaker '175'		PECO (100%)
	Replace Plymouth		
b0829.4	Meeting 230 kV breaker		
	'225'		PECO (100%)
b0829.5	Replace Plymouth		
	Meeting 230 kV breaker		
	'335'		PECO (100%)
	Move the connection		
b0841	points for the 2nd		
00041	Plymouth Meeting		
	230/138 kV XFMR		PECO (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

Required In	ransmission Enhancements Ann	ual Revenue Requirement	Responsible Customer(s)
b0842	Install a 2nd 230/138 kV XFMR and 35 MVAR CAP at Heaton 138 kV		DECO (100%)
	bus		PECO (100%)
b0842.1	Replace Heaton 138 kV breaker '150'		PECO (100%)
b0843	Install a 75 MVAR CAP at Llanerch 138 kV bus		PECO (100%)
b0844	Move the connection point for the Llanerch 138/69 kV XFMR		PECO (100%)
b0887	Replace Richmond- Tacony 69 kV line		PECO (100%)
b0920	Replace station cable at Whitpain and Jarrett substations on the Jarrett - Whitpain 230 kV circuit		PECO (100%)
b1014.1	Replace Circuit breaker, Station Cable, CTs and Wave Trap at Eddistone 230 kV		PECO (100%)
b1014.2	Replace Circuit breaker, Station Cable, CTs Disconnect Switch and Wave Trap at Island Rd. 230 kV		PECO (100%)
b1015	Replace Breakers #115 and #125 at Printz 230 kV substation		PECO (100%)
b1156.1	Upgrade at Richmond 230 kV breaker '525'		PECO (100%)
b1156.2	Upgrade at Richmond 230 kV breaker '415'		PECO (100%)
b1156.3	Upgrade at Richmond 230 kV breaker '475'		PECO (100%)
b1156.4	Upgrade at Richmond 230 kV breaker '575'		PECO (100%)

### **PECO Energy Company (cont.)**

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s)

1100[0011000 11	distribution Lindrice Terms Tim	att Tto Collaio Tto quin official	responsible Customer(s)
b1156.5	Upgrade at Richmond 230 kV breaker '185'		PECO (100%)
b1156.6	Upgrade at Richmond 230 kV breaker '285'		PECO (100%)
b1156.7	Upgrade at Richmond 230 kV breaker '85'		PECO (100%)
b1156.8	Upgrade at Waneeta 230 kV breaker '425'		PECO (100%)
b1156.9	Upgrade at Emilie 230 kV breaker '815'		PECO (100%)
b1156.10	Upgrade at Plymouth Meeting 230 kV breaker '265'		PECO (100%)
b1156.11	Upgrade at Croydon 230 kV breaker '115'		PECO (100%)
b1156.12	Replace Emilie 138 kV breaker '190'		PECO (100%)
b1178	Add a second 230/138 kV transformer at Chichester. Add an inductor in series with the parallel transformers		JCPL (4.14%) / Neptune* (0.44%) / PECO (82.19%) / ECP** (0.33%) / HTP*** (0.32%) / PSEG (12.10%) / RE (0.48%)
b1179	Replace terminal equipment at Eddystone and Saville and replace underground section of the line		PECO (100%)
b1180.1	Replace terminal equipment at Chichester		PECO (100%)
b1180.2	Replace terminal equipment at Chichester		PECO (100%)
b1181	Install 230/138 kV transformer at Eddystone		PECO (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC \*\*East Coast Power, L.L.C.

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

### **PECO Energy Company (cont.)**

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s)

required i	ransmission Ennancements Ani	iuai Revenue Requirement	Responsible Customer(s)
b1182	Reconductor Chichester  – Saville 138 kV line and upgrade terminal equipment		JCPL (5.08%) / Neptune* (0.54%) / PECO (78.85%) / ECP** (0.39%) / HTP*** (0.38%) / PSEG (14.20%) / RE (0.56%)
b1183	Replace 230/69 kV transformer #6 at Cromby. Add two 50 MVAR 230 kV banks at Cromby		PECO (100%)
b1184	Add 138 kV breakers at Cromby, Perkiomen, and North Wales; add a 35 MVAR capacitor at Perkiomen 138 kV		PECO (100%)
b1185	Upgrade Eddystone 230 kV breaker #365		PECO (100%)
b1186	Upgrade Eddystone 230 kV breaker #785		PECO (100%)
b1197	Reconductor the PECO portion of the Burlington – Croydon circuit		PECO (100%)
b1198	Replace terminal equipments including station cable, disconnects and relay at Conowingo 230 kV station		PECO (100%)
b1338	Replace Printz 230 kV breaker '225'		PECO (100%)
b1339	Replace Printz 230 kV breaker '315'		PECO (100%)
b1340	Replace Printz 230 kV breaker '215'		PECO (100%)
b1398.6	Reconductor the Camden  – Richmond 230 kV circuit (PECO portion) and upgrade terminal equipments at Camden substations		JCPL (12.82%) / NEPTUNE* (1.18%) / HTP*** (0.79%) / PECO (51.08%) / PEPCO (0.57%) / ECP** (0.85%) / PSEG (31.46%) / RE (1.25%)

<sup>\*</sup> Neptune Regional Transmission System, LLC \*\*East Coast Power, L.L.C.

\*\*\*Hudson Transmission Partners, LLC

### **PECO Energy Company (cont.)**

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s)

required 11	ansmission Emancements. Affilial Revenue Requirement	Responsible Customer(s)
	Reconductor Richmond –	JCPL (12.82%) / NEPTUNE*
	Waneeta 230 kV and	(1.18%) / HTP*** (0.79%) /
b1398.8	replace terminal	PECO (51.08%) / PEPCO
	equipments at Richmond	(0.57%) / ECP** (0.85%) /
	and Waneeta substations	PSEG (31.46%) / RE (1.25%)
1.1200.12	Replace Graysferry 230	
b1398.12	kV breaker '115'	PECO (100%)
		AEC (1.67%) / AEP (13.94%)
		/ APS (5.64%) / ATSI
		(8.02%) / BGE (4.12%) /
		ComEd (13.46%) / Dayton
		(2.12%) / DEOK (3.37%) /
		DL (1.76%) / DPL (2.55%) /
	II 1. D 1. D . 4	Dominion (12.97%) / EKPC
b1398.13	Upgrade Peach Bottom	(1.81%) / JCPL (3.92%) / ME
	500 kV breaker '225'	(1.95%) / NEPTUNE*
		(0.24%) / OVEC (0.07%) /
		PECO (5.39%) / PENELEC
		(1.84%) / PEPCO (3.71%) /
		PPL (4.78%) / PSEG (6.40%)
		/ RE (0.27%)†
		/ RE (0.2770)
b1398.14	Replace Whitpain 230	
01370.14	kV breaker '105'	PECO (100%)
	Upgrade the PECO	
	portion of the Camden –	BGE (3.05%) / ME (0.83%) /
b1590.1	Richmond 230 kV to a	HTP*** (0.21%) / PECO
01390.1	six wire conductor and	(91.36%) / PEPCO (1.93%) /
	replace terminal	PPL (2.46%) / ECP**
	equipment at Richmond.	(0.16%)
	Reconductor the	BGE (4.54%) / DL (0.27%) /
	underground portion of	ME (1.04%) / HTP***
b1591	the Richmond – Waneeta	(0.03%) / PECO (88.08%) /
	230 kV and replace	PEPCO (2.79%) / PPL
	terminal equipment	(3.25%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

<sup>†</sup>Cost allocations associated with Regional Facilities and Necessary Lower Voltage Facilities associated with the project

# **PECO Energy Company (cont.)**

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s)

Required I	ransmission Enhancements Annual Revenue Requirement	Responsible Customer(s)
	Install a second Waneeta	
b1717	230/138 kV transformer	HTP*** (0.04%) / PECO
	on a separate bus section	(99.96%)
	Reconductor the	·
b1718	Crescentville - Foxchase	
	138 kV circuit	PECO (100%)
	Reconductor the	
b1719	Foxchase - Bluegrass 138	
	kV circuit	PECO (100%)
	Increase the effective	
	rating of the Eddystone	
b1720	230/138 kV transformer	
01720	by replacing a circuit	
	breaker at Eddystone	PECO (100%)
	Increase the rating of the	1200 (10070)
	Waneeta - Tuna 138 kV	
b1721	circuit by replacing two	
	138 kV CTs at Waneeta	PECO (100%)
	Increase the normal	11200 (10070)
	rating of the Cedarbrook	
	- Whitemarsh 69 kV	
b1722	circuit by changing the	
01/22	CT ratio and replacing	
	station cable at	
	Whitemarsh 69 kV	PECO (100%)
	Install 39 MVAR	1 Leo (10070)
b1768	capacitor at Cromby 138	
01/00	kV bus	PECO (100%)
	K V OUS	PECO (100%) PECO (69.62%) / JCPL
	Add a 3rd 230 kV	` ,
	transmission line between	(6.02%) / ATSI (1.23%) /
b1900	Chichester and Linwood	PSEG (20.83%) / RE
	substations and remove	(0.83%) / NEPTUNE*
	the Linwood SPS	(0.59%) / ECP** (0.45%) /
	V 11 0 17 11	HTP*** (0.43%)
b2140	Install a 3rd Emilie	PECO (97.04%) / ECP**
	230/138 kV transformer	(1.62%) / HTP*** (1.34%)
	Replace two sections of	
b2145	conductor inside	
	Richmond substation	PECO (100%)
	e Regional Transmission System, LLC	
	past Power, L.L.C.	
***Hudso	on Transmission Partners, LLC	

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

### SCHEDULE 12 – APPENDIX

# (9) PPL Electric Utilities Corporation

Required T	Required Transmission Enhancements Annual Revenue Requirem		nent Responsible Customer(s)
ь0074	Rebuild 12 miles of S. Akron – Berks 230 kV to double circuit, looping Met Ed's S. Lebanon – S. Reading line into Berks; replacement of S. Reading 230 kV breaker 107252		PPL (100%)
b0171.2	Replace wavetrap at Hosensack 500 kV substation to increase rating of Elroy - Hosensack 500 kV		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requiren		Annual Revenue Requirement Responsible Customer(s)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd (13.46%)
		/ Dayton (2.12%) / DEOK
		(3.37%) / DL (1.76%) / DPL
		(2.55%) / Dominion (12.97%) /
	Damla as vysys tram at	EKPC (1.81%) / JCPL (3.92%) /
b0172.1	Replace wave trap at Alburtis 500 kV	ME (1.95%) / NEPTUNE*
001/2.1	substation	(0.24%) / OVEC (0.07%) / PECO
	Substation	(5.39%) / PENELEC (1.84%) /
		PEPCO (3.71%) / PPL (4.78%) /
		PSEG (6.40%) / RE (0.27%)
		DFAX Allocation:
		AEC ( <del>8.24</del> <u>7.32</u> %) / JCPL
		( <del>30.19</del> 30.49%) / NEPTUNE*
		(4.85 <u>4.90</u> %) / PSEG
		( <del>54.60</del> <u>55.15</u> %) / RE ( <del>2.12</del> <u>2.14</u> %)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd (13.46%)
		/ Dayton (2.12%) / DEOK
		(3.37%) / DL (1.76%) / DPL
		(2.55%) / Dominion (12.97%) /
		EKPC (1.81%) / JCPL (3.92%) /
	B 1	ME (1.95%) / NEPTUNE*
	Replace two wave traps	(0.24%) / OVEC (0.07%) / PECO
b0284.2	at Juniata 500 kV – on	(5.39%) / PENELEC (1.84%) /
	the two Juniata –	PEPCO (3.71%) / PPL (4.78%) /
	Airydale 500 kV	PSEG (6.40%) / RE (0.27%)
		DFAX Allocation:
		AEC ( <del>5.89</del> 5.20%) / BGE
		( <del>14.03</del> 19.46%) / JCPL
		( <del>19.26</del> 18.23%) / ME
		( <del>10.43</del> 11.67%) / NEPTUNE*
		( <del>2.13</del> 2.00%) / PECO
		( <del>20.70</del> 18.42%) / PSEG
		(26.5324.09%) / RE (1.030.93%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Changes at Juniata 500 b0284.4 kV substation PPL (100%) Replace wavetrap at the Martins Creek 230 kV b0293.1 bus PPL (100%) Raise the operating temperature of the 2b0293.2 1590 ACSR to 140C for the Martins Creek -Portland 230 kV circuit PPL (100%) Spare Juniata 500/230 b0440 kV transformer PPL (100%) Build a new substation with two 150 MVA transformers between Dauphin and Hummelstown 230/69 b0468 kV substations by JCPL (4.55%) / NEPTUNE\* sectionalizing the (0.37%) / PECO (1.79%) / Middletown Junction – PENELEC (0.33%) / PPL (86.63%) / ECP\*\* (0.18%) / New Lebanon 230 kV PSEG (5.93%) / RE (0.22%) line

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup> East Coast Power, L.L.C.

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Install 130 MVAR b0469 capacitor at West Shore 230 kV line PPL (100%) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL Build new 500 kV (2.55%) / Dominion (12.97%) / transmission facilities EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE\* from Susquehanna to b0487 (0.24%) / OVEC (0.07%) / Pennsylvania – New PECO (5.39%) / PENELEC Jersey border at (1.84%) / PEPCO (3.71%) / PPL Bushkill (4.78%) / PSEG (6.40%) / RE (0.27%)**DFAX Allocation:** JCPL (30.99%) / NEPTUNE\* (3.92%) / PSEG (62.66%) / RE (2.43%)Install Lackawanna 500/230 kV transformer and b0487.1 upgrade 230 kV PENELEC (16.90%) / PPL substation and (77.59%) / ECP\*\* (0.19%) / switchyard PSEG (5.13%) / RE (0.19%) Conastone – Otter Creek 230 kV -AEC (6.27%) / DPL (8.65%) / Reconductor JCPL (14.54%) / ME (10.59%) / approximately 17.2 b0500.1 miles of 795 kcmil Neptune\* (1.37%) / PECO ACSR with new 795 (15.66%) / PPL (21.02%) / ECP\*\* (0.57%) / PSEG kcmil ACSS operated at 160 deg C (20.56%) / RE (0.77%)

The Annual Revenue Requirements associated with the Transmission Enhancement Charges are set forth and determined in Appendix A to Attachment H-8G.

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup> East Coast Power, L.L.C.

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s)

Required	i ransmission Ennancements Ar	inuai Revenue Requiremen	t Responsible Customer(s)
b0558	Install 250 MVAR capacitor at Juniata 500 kV substation		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0593	Eldred – Pine Grove 69 kV line Rebuild Part 2: 8 miles		PPL (100%)
b0595	Rebuild Lackawanna – Edella 69 kV line to double circuit		PPL (100%)
b0596	Reconductor and rebuild Stanton – Providence 69 kV #1 and #2 lines with 69 kV design; approximately 8 miles total		PPL (100%)
b0597	Reconductor Suburban – Providence 69 kV #1 and resectionalize the Suburban 69 kV lines		PPL (100%)
b0598	Reconductor Suburban Taps #1 and #2 for 69 kV line portions		PPL (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required'	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b0600	Tripp Park Substation: 69 kV tap off Stanton – Providence 69 kV line #3 to new substation		PPL (100%)
b0601	Jessup Substation: New 138/69 kV tap off of Peckville – Jackson 138/69 kV line		PPL (100%)
b0604	Add 150 MVA, 230/138/69 transformer #6 to Harwood substation		PPL (100%)
b0605	Reconductor Stanton – Old Forge 69 kV line and resectionalize the Jenkins – Scranton 69 kV #1 and #2 lines		PPL (100%)
b0606	New 138 kV tap off Monroe – Jackson 138 kV #1 line to Bartonsville substation		PPL (100%)
b0607	New 138 kV taps off Monroe – Jackson 138 kV lines to Stroudsburg substation		PPL (100%)
b0608	New 138 kV tap off Siegfried – Jackson 138 kV #2 to transformer #2 at Gilbert substation		PPL (100%)
b0610	At South Farmersville substation, a new 69 kV tap off Nazareth – Quarry #2 to transformer #2		PPL (100%)
b0612	Rebuild Siegfried – North Bethlehem portion (6.7 miles) of Siegfried – Quarry 69 kV line		PPL (100%)
b0613	East Tannersville Substation: New 138 kV tap to new substation		PPL (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Elroy substation expansion and new Elroy b0614 - Hatfield 138/69 kV double circuit lines (1.9 miles) PPL (100%) Reconductor and rebuild 12 miles of Seidersville – b0615 Ouakerstown 138/69 kV and a new 75 MVA, 230/69 kV transformer #4 PPL (100%) New Springfield 230/69 kV substation and b0616 transmission line connections PPL (100%) New 138 kV line and b0620 terminal at Monroe 230/138 substation PPL (100%) New 138 kV line and terminal at Siegfried 230/138 kV substation b0621 and add a second circuit to Siegfried – Jackson for 8.0 miles PPL (100%) 138 kV yard upgrades and transmission line b0622 rearrangements at Jackson 138/69 kV substation PPL (100%) New West Shore -Whitehill Taps 138/69 kV b0623 double circuit line (1.3 miles) PPL (100%) Reconductor Cumberland Wertzville 69 kV b0624 portion (3.7 miles) of Cumberland – West Shore 69 kV line PPL (100%) Reconductor Mt. Allen – Rossmoyne 69 kV portions (1.6 miles) of b0625 West Shore – Cumberland #3 and #4 lines PPL (100%)

Required '	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b0627	Replace UG cable from Walnut substation to Center City Harrisburg substation for higher ampacity (0.25 miles)		PPL (100%)
b0629	Lincoln substation: 69 kV tap to convert to modified Twin A		PPL (100%)
b0630	W. Hempfield – Donegal 69 kV line: Reconductor / rebuild from Landisville Tap – Mt. Joy (2 miles)		PPL (100%)
b0631	W. Hempfield – Donegal 69 kV line: Reconductor / rebuild to double circuit from Mt. Joy – Donegal (2 miles)		PPL (100%)
b0632	Terminate new S.  Manheim – Donegal 69 kV circuit into S.  Manheim 69 kV #3		PPL (100%)
b0634	Rebuild S. Manheim – Fuller 69 kV portion (1.0 mile) of S. Manheim – West Hempfield 69 kV #3 line into a 69 kV double circuit		PPL (100%)
b0635	Reconductor Fuller Tap – Landisville 69 kV (4.1 miles) into a 69 kV double circuit		PPL (100%)
b0703	Berks substation modification on Berks – South Akron 230 kV line. Modification will isolate the line fault on the South Akron line and will allow Berks transformer #2 to be energized by the South Lebanon 230 kV circuit		PPL (100%)

Required	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
ь0705	New Derry – Millville 69 kV line		PPL (100%)
ь0707	Construct Bohemia – Twin Lakes 69 kV line, install a 10.9 MVAR capacitor bank near Bohemia 69 kV substation		PPL (100%)
b0708	New 69 kV double circuit from Jackson – Lake Naomi Tap		PPL (100%)
b0709	Install new 69 kV double circuit from Carlisle – West Carlisle		PPL (100%)
b0710	Install a third 69 kV line from Reese's Tap to Hershey substation		PPL (100%)
b0711	New 69 kV that taps West Shore – Cumberland 69 kV #1 to Whitehill 69 kV substation		PPL (100%)
b0712	Construct a new 69 kV line between Strassburg Tap and the Millwood – Engleside 69 kV #1 line		PPL (100%)
b0713	Construct a new 138 kV double circuit line between Dillersville Tap and the West Hempfield – Prince 138 kV line		PPL (100%)
b0714	Prepare Roseville Tap for 138 kV conversion		PPL (100%)
b0715	Transfer S. Akron – S. Manheim #1 and #2 lines from the S. Akron 69 kV Yard to the S. Akron 138 kV Yard; Install switches on S. Akron – S. Manheim 138 kV #1 and #2 lines		PPL (100%)

Required	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b0716	Add a second 69 kV line from Morgantown – Twin Valley		PPL (100%)
b0717	Rebuild existing Brunner Island – West Shore 230 kV line and add a second Brunner Island – West Shore 230 kV line		PPL (100%)
b0718	SPS scheme to drop 190 MVA of 69 kV radial load at West Shore and 56 MVA of 69 kV radial load at Cumberland		PPL (100%)
b0719	SPS scheme at Jenkins substation to open the Stanton #1 and Stanton #2 230 kV circuit breakers after the second contingency		PPL (100%)
b0791	Add a fourth 230/69 kV transformer at Stanton		PENELEC (9.55%) / PPL (90.45%)
b1074	Install motor operators on the Jenkins 230 kV '2W' disconnect switch and build out Jenkins Bay 3 and have MOD '3W' operated as normally open		PPL (100%)
ь0881	Install motor operators on Susquehanna T21 - Susquehanna 230 kV line East CB at Susquehanna 230 kV switching station		PPL (100%)
b0908	Install motor operators at South Akron 230 kV		PPL (100%)

Required	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
ь0909	Convert Jenkins 230 kV yard into a 3-breaker ring bus		PPL (100%)
b0910	Install a second 230 kV line between Jenkins and Stanton		PPL (100%)
b0911	Install motor operators at Frackville 230 kV		PPL (100%)
b0912	Install 2, 10.8 MVAR capacitor banks at Scranton 69 kV		PPL (100%)
b0913	Extend Cando Tap to the Harwood-Jenkins #2 69 kV line		PPL (100%)
b0914	Build a 3rd 69 kV line from Harwood to Valmont Taps		PPL (100%)
b0915	Replace Walnut-Center City 69 kV cable		PPL (100%)
b0916	Reconductor Sunbury- Dalmatia 69 kV line		PPL (100%)
b1021	Install a new (#4) 138/69 kV transformer at Wescosville		PPL (100%)
b1196	Remove the Siegfried bus tie breaker and install a new breaker on the Martins Creek 230 kV line west bay to maintain two ties between the 230 kV buses		PPL (100%)
b1201	Rebuild the Hercules Tap to Double Circuit 69 kV		PPL (100%)

Required '	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b1202	Mack-Macungie Double Tap, Single Feed Arrangement		PPL (100%)
b1203	Add the 2nd Circuit to the East Palmerton-Wagners- Lake Naomi 138/69 kV Tap		PPL (100%)
b1204	New Breinigsville 230-69 kV Substation		PPL (100%)
b1205	Siegfried-East Palmerton #1 69 kV Line- Install new 69 kV LSAB, Sectionalize, and Transfer Treichlers Substation		PPL (100%)
b1206	Siegfried-Quarry #1 & #2 69 kV Lines- Rebuild 3.3 mi from Quarry Substation to Macada Taps		PPL (100%)
b1209	Convert Neffsville Taps from 69 kV to 138 kV Operation		PPL (100%)
b1210	Convert Roseville Taps from 69 kV to 138 kV Operation (Part 1 – operate on the 69 kV system)		PPL (100%)
b1211	Convert Roseville Taps from 69 kV to 138 kV Operation (Part 2 – operate on the 138 kV system)		PPL (100%)
b1212	New 138 kV Taps to Flory Mill 138/69 kV Substation		PPL (100%)

Required T	Fransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b1213	Convert East Petersburg Taps from 69 kV to 138 kV operation, install two 10.8 MVAR capacitor banks		PPL (100%)
b1214	Terminate South Manheim-Donegal #2 at South Manheim, Reduce South Manheim 69 kV Capacitor Bank, Resectionalize 69 kV		PPL (100%)
b1215	Reconductor and rebuild 16 miles of Peckville- Varden 69 kV line and 4 miles of Blooming Grove-Honesdale 69 kV line		PPL (100%)
b1216	Build approximately 2.5 miles of new 69 kV transmission line to provide a "double tap – single feed" connection to Kimbles 69/12 kV substation		PPL (100%)
b1217	Provide a "double tap – single feed" connection to Tafton 69/12 kV substation		PPL (100%)
b1524	Build a new Pocono 230/69 kV substation		PPL (100%)
b1524.1	Build approximately 14 miles new 230 kV South Pocono – North Pocono line		PPL (100%)
b1524.2	Install MOLSABs at Mt. Pocono substation		PPL (100%)

Required T	ransmission Enhancements	Annual Revenue Requirem	nent Responsible Customer(s)
b1525	Build new West Pocono 230/69 kV Substation		PPL (100%)
b1525.1	Build approximately 14 miles new 230 kV Jenkins-West Pocono 230 kV Line		PPL (100%)
b1525.2	Install Jenkins 3E 230 kV circuit breaker		PPL (100%)
b1526	Install a new Honeybrook  – Twin Valley 69/138 kV tie		PPL (100%)
b1528	Install Motor-Operated switches on the Wescosville-Trexlertown #1 & #2 69 kV lines at East Texas Substation		PPL (100%)
b1529	Add a double breaker 230 kV bay 3 at Hosensack		PPL (100%)
b1530	Replace Lock Haven 69 kV ring bus with standard breaker and half design		PPL (100%)
b1532	Install new 32.4 MVAR capacitor bank at Sunbury		PPL (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Rebuild Lycoming-Lock Haven #1 and b1533 Lycoming-Lock Haven #2 69 kV lines PPL (100%) Rebuild 1.4 miles of the b1534 Sunbury-Milton 69 kV PPL (100%) AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / Re-configure the DEOK (3.37%) / DL (1.76%) / Breinigsville 500 kV DPL (2.55%) / Dominion b1601 substation with addition (12.97%) / EKPC (1.81%) / two 500 kV circuit JCPL (3.92%) / ME (1.95%) / NEPTUNE\* (0.24%) / OVEC breakers (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)† Re-configure the Elimsport 230 kV b1602 substation to breaker and half scheme and install 80 MVAR capacitor PPL (100%) Install a 90 MVAR cap b1740 bank on the Frackville 230 kV bus #207973 PPL (100%) Install a 3rd West Shore b1756 230/69 kV transformer PPL (100%) Install a 230 kV motoroperated air-break switch b1757 on the Clinton - Elimsport 230 kV line PPL (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>†</sup>Cost allocations associated with Regional Facilities and Necessary Lower Voltage Facilities associated with the project

Required	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b1758	Rebuild 1.65 miles of Columbia - Danville 69 kV line		PPL (100%)
b1759	Install a 69 kV 16.2 MVAR Cap at Milton substation		PPL (100%)
b1760	Install motor operated devices on the existing disconnect switches that are located on each side of all four 230 kV CBs at Stanton		PPL (100%)
b1761	Build a new Paupack - North 230 kV line (Approximately 21 miles)		PPL (100%)
b1762	Replace 3.7 miles of the existing 230 kV Blooming Grove - Peckville line by building 8.4 miles of new 230 kV circuit onto the Lackawanna - Hopatcong tower-line		PPL (100%)
b1763	Re-terminate the Peckville - Jackson and the Peckville - Varden 69 kV lines from Peckville into Lackawanna		PPL (100%)
b1764	Build a new 230-69 kV substations (Paupack)		PPL (100%)
b1765	Install a 16.2 MVAR capacitor bank at Bohemia 69-12 kV substation		PPL (100%)
b1766	Reconductor/rebuild 3.3 miles of the Siegfried - Quarry #1 and #2 lines		PPL (100%)
b1767	Install 6 motor-operated disconnect switches at Quarry substation		PPL (100%)

Required	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b1788	Install a new 500 kV circuit breaker at Wescosville		PPL (100%)
b1890	Add a second 230/69 kV transformer at North Pocono (NE/Pocono Reliability Project)		PPL (100%)
b1891	Build a new 230/138 kV Yard at Lackawanna (138 kV conversion from Lackawanna to Jenkins)		PPL (100%)
b1892	Rebuild the Throop Taps for 138 kV operation (138 kV Conversion from Lackawanna to Jenkins)		PPL (100%)
b1893	Swap the Staton - Old Forge and Stanton - Brookside 69 kV circuits at Stanton (138 kV Conversion from Lackawanna to Jenkins)		PPL (100%)
b1894	Rebuild and re-conductor 2.5 miles of the Stanton - Avoca 69 kV line		PPL (100%)
b1895	Rebuild and re-conductor 4.9 miles of the Stanton - Providence #1 69 kV line		PPL (100%)
b1896	Install a second 230/138 kV transformer and expand the 138 kV yard at Monroe		PPL (100%)
ь1897	Build a new 230/138 kV substation at Jenkins (138 kV Conversion from Lackawanna to Jenkins)		PPL (100%)
b1898	Install a 69 kV Tie Line between Richfield and Dalmatia substations		PPL (100%)
b2004	Replace the CTs and switch in South Akron Bay 4 to increase the rating		PPL (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace the CTs and switch in SAKR Bay 3 to increase the rating of the b2005 Millwood-South Akron 230 kV Line and of the rating in Bay 3 PPL (100%) AEC (1.10%) / ECP\*\* (0.37%) / HTP\*\*\* (0.37%) / Install North Lancaster JCPL (9.61%) / ME (19.42%) / b2006 500/230 kV substation NEPTUNE\* (0.75%) / PECO (below 500 kV portion) (6.01%) / PPL (50.57%) / PSEG (11.35%) / RE (0.45%) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion **Install North Lancaster** (12.97%) / EKPC (1.81%) / b2006.1 500/230 kV substation JCPL (3.92%) / ME (1.95%) / (500 kV portion) NEPTUNE\* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** BGE (19.51%) / PPL (80.49100%) Construct a new 230/69 kV North Lancaster substation. The sub will b2006.2 be supplied from the SAKR-BERK 230 kV Line PPL (100%) Construct new 69/138 kV transmission from North b2006.3 Lancaster 230/69 kV sub to Brecknock and Honeybrook areas PPL (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup> East Coast Power, L.L.C.

\*\*\* Hudson Transmission Partners, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s)

rtoquirou	Transfirmssion Emmanoements	T IIIII GGG T CO CO T CO GGIT OTTI	
b2007	Install a 90 MVAR capacitor bank at the Frackville 230 kV Substation		PPL (100%)
b2158	Install 10.8 MVAR capacitor at West Carlisle 69/12 kV substation		PPL (100%)

#### **SCHEDULE 12 – APPENDIX**

#### (12) Public Service Electric and Gas Company

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Convert the Bergen-Leonia 138 kV circuit to b0025 230 kV circuit. PSEG (100%) Add 150 MVAR capacitor b0090 at Camden 230 kV PSEG (100%) Add 150 MVAR capacitor at Aldene 230 kV b0121 PSEG (100%) Bypass the Essex 138 kV b0122 series reactors PSEG (100%) Add Special Protection Scheme at Bridgewater to automatically open 230 kV breaker for outage of Branchburg – Deans 500 kV and Deans 500/230 kV b0125 #1 transformer PSEG (100%) Replace wavetrap on Branchburg – Flagtown b0126 230 kV PSEG (100%) Replace terminal equipment to increase Brunswick - Adams -Bennetts Lane 230 kV to b0127 conductor rating PSEG (100%) Replace wavetrap on Flagtown - Somerville b0129 230 kV PSEG (100%) Replace all derated Branchburg 500/230 kV AEC (1.36%) / JCPL (47.76%) / b0130 transformers PSEG (50.88%) Upgrade or Retension PSEG portion of Kittatinny – Newton 230 JCPL (51.11%) / PSEG Kv circuit (45.96%) / RE (2.93%) b0134

The Annual Revenue Requirement for all Public Service Electric and Gas Company Projects (Required Transmission Enhancements) in this Section 12 shall be as specified in Attachment 7 of Attachment H-10A and under the procedures detailed in Attachment H-10B.

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Build new Essex – Aldene 230 kV cable connected through a phase angle PSEG (21.78%) / JCPL regulator at Essex b0145 (73.45%) /RE (4.77%) Add 100 MVAR capacitor at West Orange 138 kV b0157 substation PSEG (100%) Close the Sunnymeade "C" and "F" bus tie b0158 PSEG (100%) Make the Bayonne reactor b0159 permanent installation PSEG (100%) Relocate the X-2250 circuit from Hudson 1-6 PSEG (100%) b0160 bus to Hudson 7-12 bus Install 230/138 kV transformer at Metuchen b0161 substation PSEG (99.80%) / RE (0.20%) Upgrade the Edison – Meadow Rd 138 kV "Q" b0162 circuit PSEG (100%) Upgrade the Edison – Meadow Rd 138 kV "R" b0163 circuit PSEG (100%) Build a new 230 kV section from Branchburg – Flagtown and move the b0169 Flagtown – Somerville AEC (1.72%) / JCPL (25.94%) 230 kV circuit to the new / NEPTUNE\* (10.62%) / PSEG section (59.59%) / ECP\*\* (2.13%) Reconductor the JCLP (42.95%) / NEPTUNE\* Flagtown-Somervilleb0170 Bridgewater 230 kV (17.90%) / PSEG (38.36%) RE circuit with 1590 ACSS (0.79%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

Required	Transmission Enhancements	Annual Revenue Requirement Responsible Customer(s)
b0172.2	Replace wave trap at Branchburg 500 kV substation	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: AEC (8.247.32%) / JCPL (30.1930.49%) / NEPTUNE* (4.854.90%) / PSEG (54.6055.15%) / RE (2.122.14%)
b0184	Replace Hudson 230 kV circuit breakers #1-2	PSEG (100%)
b0185	Replace Deans 230 kV circuit breakers #9-10	PSEG (100%)
b0186	Replace Essex 230 kV circuit breaker #5-6	PSEG (100%)
b1082	Install 230/138 kV transformer at Bergen substation	PENELEC (16.52%) / PSEG (80.29%) / RE (3.19%)

b1082 | substation | \* Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Branchburg substation: replace wave trap on b0201 Branchburg-Readington 230 kV circuit PSEG (100%) Replace New Freedom 230 b0213.1 kV breaker BS2-6 PSEG (100%) Replace New Freedom 230 b0213.3 kV breaker BS2-8 PSEG (100%) Replace both 230/138 kV b0274 transformers at Roseland PSEG (96.77%) / ECP\*\* (3.23%) Upgrade the two 138 kV circuits between Roseland b0275 and West Orange PSEG (100%) Install 228 MVAR b0278 capacitor at Roseland 230 kV substation PSEG (100%) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME Install 400 MVAR (1.95%) / NEPTUNE\* (0.24%) / b0290 capacitor in the Branchburg OVEC (0.07%) / PECO (5.39%) / 500 kV vicinity PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** AEC (8.247.32%) / JCPL (30.1930.49%) / NEPTUNE\* (4.854.90%) / PSEG (54.6055.15%) / RE (<del>2.12</del>2.14%) Reconductor the PSEG portion of Buckingham b0358 Pleasant Valley 230 kV, replace wave trap and metering transformer PSEG (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

Required T	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b0368	Reconductor Tosco – G22_MTX 230 kV circuit with 1033 bundled ACSS		PSEG (100%)
b0371	Make the Metuchen 138 kV bus solid and upgrade 6 breakers at the Metuchen substation		PSEG (100%)
b0372	Make the Athenia 138 kV bus solid and upgrade 2 breakers at the Athenia substation		PSEG (100%)
b0395	Replace Hudson 230 kV breaker BS4-5		PSEG (100%)
b0396	Replace Hudson 230 kV breaker BS1-6		PSEG (100%)
b0397	Replace Hudson 230 kV breaker BS3-4		PSEG (100%)
b0398	Replace Hudson 230 kV breaker BS5-6		PSEG (100%)
b0401.1	Replace Roseland 230 kV breaker BS6-7		PSEG (100%)
b0401.2	Replace Roseland 138 kV breaker O-1315		PSEG (100%)
b0401.3	Replace Roseland 138 kV breaker S-1319		PSEG (100%)
b0401.4	Replace Roseland 138 kV breaker T-1320		PSEG (100%)
b0401.5	Replace Roseland 138 kV breaker G-1307		PSEG (100%)
b0401.6	Replace Roseland 138 kV breaker P-1316		PSEG (100%)
b0401.7	Replace Roseland 138 kV breaker 220-4		PSEG (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace W. Orange 138 kV b0401.8 breaker 132-4 PSEG (100%) AEC (47.01%) / JCPL (7.04%) / Install 4<sup>th</sup> 500/230 kV NEPTUNE\* (0.28%) / PECO transformer at New Freedom b0411 (23.36%) / PSEG (22.31%) Reconductor Readington b0423 (2555) – Branchburg (4962) 230 kV circuit w/1590 ACSS PSEG (100%) Replace Readington wavetrap on Readington (2555) – b0424 Roseland (5017) 230 kV circuit PSEG (100%) Reconductor Linden (4996) – Tosco (5190) 230 kV circuit w/1590 ACSS (Assumes b0425 operating at 220 degrees C) PSEG (100%) Reconductor Tosco (5190) -G22 MTX5 (90220) 230 kV circuit w/1590 ACSS (Assumes operation at 220 b0426 degrees C) PSEG (100%) Reconductor Athenia (4954) – Saddle Brook (5020) 230 kV b0427 circuit river section PSEG (100%) Replace Roseland wavetrap on Roseland (5019) – West Caldwell "G" (5089) 138 kV b0428 circuit PSEG (100%) Reconductor Kittatinny (2553) JCPL (41.91%) / NEPTUNE\* b0429 (3.59%) / PSEG (50.59%) / RE Newton (2535) 230 kV circuit w/1590 ACSS (2.23%) / ECP\*\* (1.68%) Spare Deans 500/230 kV transformer PSEG (100%) b0439 Upgrade Bayway 138 kV breaker #2-3 b0446.1 PSEG (100%) Upgrade Bayway 138 kV breaker #3-4 b0446.2 PSEG (100%) Upgrade Bayway 138 kV b0446.3 breaker #6-7 PSEG (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup> East Coast Power, L.L.C.

Required T	ransmission Enhancements	Annual Revenue Requires	ment Responsible Customer(s)
	Upgrade the breaker		
	associated with TX 132-5		
b0446.4	on Linden 138 kV		PSEG (100%)
	Install 138 kV breaker at		
b0470	Roseland and close the		
	Roseland 138 kV buses		PSEG (100%)
	Replace the wave traps at		
	both Lawrence and		
b0471	Pleasant Valley on the		
	Lawrence – Pleasant		
	Vallen 230 kV circuit		PSEG (100%)
	Increase the emergency		
b0472	rating of Saddle Brook –		
00472	Athenia 230 kV by 25%		ECP** (2.06%) / PSEG (94.41%)
	by adding forced cooling		/ RE (3.53%)
	Move the 150 MVAR		
	mobile capacitor from		
b0473	Aldene 230 kV to		
	Lawrence 230 kV		
	substation		PSEG (100%)
			<b>Load-Ratio Share Allocation:</b>
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd (13.46%)
			/ Dayton (2.12%) / DEOK
			(3.37%) / DL (1.76%) / DPL
	Build new 500 kV		(2.55%) / Dominion (12.97%) /
	transmission facilities		EKPC (1.81%) / JCPL (3.92%) /
b0489			ME (1.95%) / NEPTUNE*
00409	from Pennsylvania – New		(0.24%) / OVEC (0.07%) / PECO
	Jersey border at Bushkill		(5.39%) / PENELEC (1.84%) /
	to Roseland		PEPCO (3.71%) / PPL (4.78%) /
			PSEG (6.40%) / RE (0.27%)†
			<b>DFAX Allocation:</b>
			JCPL (36.99%) / NEPTUNE*
			(3.95%) / PSEG (56.85%) / RE
			(2.21%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

<sup>†</sup>Cost allocations associated with Regional Facilities and Necessary Lower Voltage Facilities associated with the project

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace Athenia 230 kV b0489.1 breaker 31H PSEG (100%) Replace Bergen 230 kV b0489.2 breaker 10H PSEG (100%) Replace Saddlebrook 230 b0489.3 kV breaker 21P PSEG (100%) AEC (5.09%) / ComEd (0.29%) / Dayton (0.03%) / DPL (1.76%) Install two Roseland / JCPL (32.73%) / NEPTUNE\* 500/230 kV transformers b0489.4 (6.32%) / PECO (10.04%) / as part of the Susquehanna PENELEC (0.56%) / ECP\*\* - Roseland 500 kV project (0.95%) / PSEG (40.71%) / RE (1.52%)†† **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE\* Replace Roseland 230 kV (0.24%) / OVEC (0.07%) / b0489.5 breaker '42H' with 80 kA PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)**DFAX Allocation:** JCPL (36.99%) / NEPTUNE\* (3.95%) / PSEG (56.85%) / RE (2.21%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

<sup>††</sup>Cost allocations associated with below 500 kV elements of the project

Required T	ransmission Enhancements	Annual Revenue Requirement Responsible Customer(s)
b0489.6	Replace Roseland 230 kV breaker '51H' with 80 kA	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0489.7	Replace Roseland 230 kV breaker '71H' with 80 kA	(3.95%) / PSEG (56.85%) / RE (2.21%)  Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required T	ransmission Enhancements	Annual Revenue Requirer	ment Responsible Customer(s)
b0489.8	Replace Roseland 230 kV breaker '31H' with 80 kA		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
			DFAX Allocation: JCPL (36.99%) / NEPTUNE* (3.95%) / PSEG (56.85%) / RE (2.21%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Tra	ansmission Enhancements	Annual Revenue Requirement Responsible Customer(s)
b0489.9	Replace Roseland 230 kV breaker '11H' with 80 kA	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0489.10	Replace Roseland 230 kV breaker '21H'	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements		Annual Revenue Requireme	ent Responsible Customer(s)
b0489.11	Replace Roseland 230 kV breaker '32H'		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0489.12	Replace Roseland 230 kV breaker '12H'		(2.21%)  Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Tra	ansmission Enhancements	Annual Revenue Requireme	1
b0489.13	Replace Roseland 230 kV breaker '52H'		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0489.14	Replace Roseland 230 kV breaker '41H'		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements		Annual Revenue Requirement Responsible Customer(s)
b0489.15	Replace Roseland 230 kV breaker '72H'	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0498	Loop the 5021 circuit into New Freedom 500 kV substation	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Upgrade the 20H circuit b0498.1 breaker PSEG (100%) Upgrade the 22H circuit b0498.2 breaker PSEG (100%) Upgrade the 30H circuit b0498.3 breaker PSEG (100%) Upgrade the 32H circuit b0498.4 breaker PSEG (100%) Upgrade the 40H circuit b0498.5 breaker PSEG (100%) Upgrade the 42H circuit b0498.6 breaker PSEG (100%) AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd MAPP Project – install (13.46%) / Dayton (2.12%) / new 500 kV transmission DEOK (3.37%) / DL (1.76%) / from Possum Point to DPL (2.55%) / Dominion Calvert Cliffs and install a (12.97%) / EKPC (1.81%) / b0512 DC line from Calvert JCPL (3.92%) / ME (1.95%) / Cliffs to Vienna and a DC NEPTUNE\* (0.24%) / OVEC line from Calvert Cliffs to (0.07%) / PECO (5.39%) / Indian River PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) Install 100 MVAR b0565 capacitor at Cox's Corner 230 kV substation PSEG (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace Essex 138 kV b0578 breaker 4LM (C1355 line to ECRRF) PSEG (100%) Replace Essex 138 kV b0579 breaker 1LM (220-1 TX) PSEG (100%) Replace Essex 138 kV b0580 breaker 1BM (BS1-3 tie) PSEG (100%) Replace Essex 138 kV b0581 breaker 2BM (BS3-4 tie) PSEG (100%) Replace Linden 138 kV b0582 breaker 3 (132-7 TX) PSEG (100%) Replace Metuchen 138 kV b0592 breaker '2-2 Transfer' PSEG (100%) JCPL (36.35%) / NEPTUNE\* Reconductor with 2x1033 b0664 (18.80%) / PSEG (43.24%) / ACSS conductor RE (1.61%) JCPL (36.35%) / NEPTUNE\* Reconductor with 2x1033 b0665 (18.80%) / PSEG (43.24%) / ACSS conductor RE (1.61%) JCPL (39.41%) / NEPTUNE\* Reconductor with 2x1033 (20.38%) / PSEG (38.76%) / b0668 ACSS conductor RE (1.45%) Replace terminal b0671 equipment at both ends of line PSEG (100%) Add a bus tie breaker at b0743 Roseland 138 kV PSEG (100%) Increase operating temperature on line for b0812 one year to get 925E MVA rating PSEG (100%) BGE (1.25%) / JCPL (9.92%) / Reconductor Hudson -NEPTUNE\* (0.87%) / PEPCO b0813 South Waterfront 230 kV (1.11%) / PSEG (83.73%) / RE circuit (3.12%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) New Essex – Kearney 138 JCPL (23.49%) / NEPTUNE\* b0814 kV circuit and Kearney (1.61%) / PENELEC (5.37%) / PSEG (67.03%) / RE (2.50%) 138 kV bus tie Replace Kearny 138 kV JCPL (23.49%) / NEPTUNE\* breaker '1-SHT' with 80 b0814.1 (1.61%) / PENELEC (5.37%) / kA breaker PSEG (67.03%) / RE (2.50%) Replace Kearny 138 kV JCPL (23.49%) / NEPTUNE\* b0814.2 breaker '15HF' with 80 kA (1.61%) / PENELEC (5.37%) / PSEG (67.03%) / RE (2.50%) breaker Replace Kearny 138 kV JCPL (23.49%) / NEPTUNE\* b0814.3 breaker '14HF' with 80 kA (1.61%) / PENELEC (5.37%) / breaker PSEG (67.03%) / RE (2.50%) Replace Kearny 138 kV JCPL (23.49%) / NEPTUNE\* b0814.4 breaker '10HF' with 80 kA (1.61%) / PENELEC (5.37%) / PSEG (67.03%) / RE (2.50%) breaker Replace Kearny 138 kV JCPL (23.49%) / NEPTUNE\* b0814.5 breaker '2HT' with 80 kA (1.61%) / PENELEC (5.37%) / breaker PSEG (67.03%) / RE (2.50%) Replace Kearny 138 kV JCPL (23.49%) / NEPTUNE\* b0814.6 breaker '22HF' with 80 kA (1.61%) / PENELEC (5.37%) / PSEG (67.03%) / RE (2.50%) breaker JCPL (23.49%) / NEPTUNE\* Replace Kearny 138 kV b0814.7 breaker '4HT' with 80 kA (1.61%) / PENELEC (5.37%) / PSEG (67.03%) / RE (2.50%) breaker Replace Kearny 138 kV JCPL (23.49%) / NEPTUNE\* b0814.8 breaker '25HF' with 80 kA (1.61%) / PENELEC (5.37%) / breaker PSEG (67.03%) / RE (2.50%) Replace Essex 138 kV breaker '2LM' with 63 kA JCPL (23.49%) / NEPTUNE\* b0814.9 breaker and 2.5 cycle (1.61%) / PENELEC (5.37%) / contact parting time PSEG (67.03%) / RE (2.50%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace Essex 138 kV breaker '1BT' with 63 kA JCPL (23.49%) / NEPTUNE\* b0814.10 breaker and 2.5 cycle (1.61%) / PENELEC (5.37%) / PSEG (67.03%) / RE (2.50%) contact parting time Replace Essex 138 kV breaker '2PM' with 63 kA JCPL (23.49%) / NEPTUNE\* b0814.11 breaker and 2.5 cycle (1.61%) / PENELEC (5.37%) / contact parting time PSEG (67.03%) / RE (2.50%) JCPL (23.49%) / NEPTUNE\* Replace Marion 138 kV breaker '2HM' with 63 kA b0814.12 (1.61%) / PENELEC (5.37%) / PSEG (67.03%) / RE (2.50%) breaker Replace Marion 138 kV JCPL (23.49%) / NEPTUNE\* b0814.13 breaker '2LM' with 63 kA (1.61%) / PENELEC (5.37%) / breaker PSEG (67.03%) / RE (2.50%) Replace Marion 138 kV JCPL (23.49%) / NEPTUNE\* breaker '1LM' with 63 kA b0814.14 (1.61%) / PENELEC (5.37%) / breaker PSEG (67.03%) / RE (2.50%) Replace Marion 138 kV JCPL (23.49%) / NEPTUNE\* b0814.15 breaker '6PM' with 63 kA (1.61%) / PENELEC (5.37%) / breaker PSEG (67.03%) / RE (2.50%) Replace Marion 138 kV JCPL (23.49%) / NEPTUNE\* breaker '3PM' with 63 kA (1.61%) / PENELEC (5.37%) / b0814.16 breaker PSEG (67.03%) / RE (2.50%) Replace Marion 138 kV JCPL (23.49%) / NEPTUNE\* breaker '4LM' with 63 kA b0814.17 (1.61%) / PENELEC (5.37%) / breaker PSEG (67.03%) / RE (2.50%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Tra	ansmission Enhancements	Annual Revenue Requiren	nent Responsible Customer(s)
	Replace Marion 138 kV		JCPL (23.49%) / NEPTUNE*
b0814.18	breaker '3LM' with 63 kA		(1.61%) / PENELEC (5.37%) /
	breaker		PSEG (67.03%) / RE (2.50%)
	Replace Marion 138 kV		JCPL (23.49%) / NEPTUNE*
b0814.19	breaker '1HM' with 63 kA		(1.61%) / PENELEC (5.37%) /
	breaker		PSEG (67.03%) / RE (2.50%)
	Replace Marion 138 kV		JCPL (23.49%) / NEPTUNE*
b0814.20	breaker '2PM3' with 63		(1.61%) / PENELEC (5.37%) /
	kA breaker		PSEG (67.03%) / RE (2.50%)
	Replace Marion 138 kV		JCPL (23.49%) / NEPTUNE*
b0814.21	breaker '2PM1' with 63		(1.61%) / PENELEC (5.37%) /
	kA breaker		PSEG (67.03%) / RE (2.50%)
	Replace ECRR 138 kV breaker '903'		JCPL (23.49%) / NEPTUNE*
b0814.22			(1.61%) / PENELEC (5.37%) /
			PSEG (67.03%) / RE (2.50%)
	Replace Foundry 138 kV		JCPL (23.49%) / NEPTUNE*
b0814.23	breaker '21P'		(1.61%) / PENELEC (5.37%) /
			PSEG (67.03%) / RE (2.50%)
	Change the contact parting		
b0814.24	time on Essex 138 kV		JCPL (23.49%) / NEPTUNE*
00017.27	breaker '3LM' to 2.5		(1.61%) / PENELEC (5.37%) /
	cycles		PSEG (67.03%) / RE (2.50%)
	Change the contact parting		
b0814.25	time on Essex 138 kV		JCPL (23.49%) / NEPTUNE*
00017.23	breaker '2BM' to 2.5		(1.61%) / PENELEC (5.37%) /
	cycles		PSEG (67.03%) / RE (2.50%)
*Neptune F	Regional Transmission Syste	m, LLC	

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Change the contact parting time on Essex 138 kV JCPL (23.49%) / NEPTUNE\* b0814.26 breaker '1BM' to 2.5 (1.61%) / PENELEC (5.37%) / PSEG (67.03%) / RE (2.50%) cycles Change the contact parting time on Essex 138 kV JCPL (23.49%) / NEPTUNE\* b0814.27 breaker '3PM' to 2.5 (1.61%) / PENELEC (5.37%) / cycles PSEG (67.03%) / RE (2.50%) Change the contact parting time on Essex 138 kV JCPL (23.49%) / NEPTUNE\* b0814.28 breaker '4LM' to 2.5 (1.61%) / PENELEC (5.37%) / cycles PSEG (67.03%) / RE (2.50%) Change the contact parting time on Essex 138 kV JCPL (23.49%) / NEPTUNE\* b0814.29 breaker '1PM' to 2.5 (1.61%) / PENELEC (5.37%) / cycles PSEG (67.03%) / RE (2.50%) Change the contact parting time on Essex 138 kV JCPL (23.49%) / NEPTUNE\* b0814.30 breaker '1LM' to 2.5 (1.61%) / PENELEC (5.37%) / cycles PSEG (67.03%) / RE (2.50%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Transmission Enhancements		Annual Revenue Requirement	nt Responsible Customer(s)
b0829	Build Branchburg to Roseland 500 kV circuit as part of Branchburg – Hudson 500 kV project		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0829.6	Replace Branchburg 500 kV breaker 91X		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0829.9	Replace Branchburg 230 kV breaker 102H		PSEG (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace Branchburg 230 b0829.11 kV breaker 32H PSEG (100%) Replace Branchburg 230 b0829.12 kV breaker 52H PSEG (100%) AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL Build Roseland - Hudson (2.55%) / Dominion (12.97%) / 500 kV circuit as part of EKPC (1.81%) / JCPL (3.92%) / b0830 Branchburg – Hudson ME (1.95%) / NEPTUNE\* 500 kV project (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)Replace Roseland 230 b0830.1 kV breaker '82H' with 80 kA PSEG (100% Replace Roseland 230 kV breaker '91H' with 80 b0830.2 kA PSEG (100%) Replace Roseland 230 kV breaker '22H' with 80 b0830.3 PSEG (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace 138/13 kV transformers with 230/13 ComEd (2.51%) / Dayton b0831 kV units as part of (0.09%) / PENELEC (2.75%) / Branchburg – Hudson 500 ECP\*\* (2.45%) / PSEG kV project (88.74%) / RE (3.46%) AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL Build Hudson 500 kV (2.55%) / Dominion (12.97%) / switching station as part of EKPC (1.81%) / JCPL (3.92%) / b0832 Branchburg – Hudson 500 ME (1.95%) / NEPTUNE\* kV project (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL Build Roseland 500 kV (2.55%) / Dominion (12.97%) / switching station as part of EKPC (1.81%) / JCPL (3.92%) / b0833 Branchburg – Hudson 500 ME (1.95%) / NEPTUNE\* kV project (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Convert the E-1305/F-ComEd (2.51%) / Dayton (0.09%) / PENELEC (2.75%) / 1306 to one 230 kV circuit b0834 ECP\*\* (2.45%) / PSEG as part of Branchburg – Hudson 500 kV project (88.74%) / RE (3.46%) Build Hudson 230 kV transmission lines as part of Roseland – Hudson 500 ComEd (2.51%) / Dayton b0835 kV project as part of (0.09%) / PENELEC (2.75%) / ECP\*\* (2.45%) / PSEG Branchburg – Hudson 500 kV project (88.74%) / RE (3.46%) Install transformation at new Hudson 500 kV switching station and b0836 perform Hudson 230 kV ComEd (2.51%) / Dayton (0.09%) / PENELEC (2.75%) / and 345 kV station work as ECP\*\* (2.45%) / PSEG part of Branchburg – (88.74%) / RE (3.46%) Hudson 500 kV project Replace Hudson 230 kV b0882 breaker 1HA with 80 kA PSEG (100%) Replace Hudson 230 kV b0883 breaker 2HA with 80 kA PSEG (100%) Replace Hudson 230 kV b0884 breaker 3HB with 80 kA PSEG (100%) Replace Hudson 230 kV b0885 breaker 4HA with 80 kA PSEG (100%) Replace Hudson 230 kV b0886 breaker 4HB with 80 kA PSEG (100%) Replace Bergen 230 kV b0889 breaker '21H' PSEG (100%) Upgrade New Freedom b0890 230 kV breaker '21H' PSEG (100%) Upgrade New Freedom b0891 230 kV breaker '31H' PSEG (100%) Replace ECRR 138 kV b0899 breaker 901 PSEG (100%) Replace ECRR 138 kV b0900 breaker 902 PSEG (100%)

<sup>\*\*</sup>East Coast Power, L.L.C.

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace Linden 138 kV b1013 breaker '7PB' PSEG (100%) JCPL (29.01%) / NEPTUNE\* Reconductor South Mahwah b1017 Waldwick 345 kV J-3410 (2.74%) / PSEG (64.85%) / RE (2.53%) / ECP\*\* (0.87%) circuit JCPL (29.18%) / NEPTUNE\* Reconductor South Mahwah b1018 (2.74%) / PSEG (64.68%) / RE Waldwick 345 kV K-3411 (2.53%) / ECP\*\* (0.87%) circuit Replace wave trap, line disconnect and ground switch b1019.1 at Roseland on the F-2206 circuit PSEG (100%) Replace wave trap, line disconnect and ground switch b1019.2 at Roseland on the B-2258 circuit PSEG (100%) Replace 1-2 and 2-3 section disconnect and ground b1019.3 switches at Cedar Grove on the F-2206 circuit PSEG (100%) Replace 1-2 and 2-3 section disconnect and ground b1019.4 switches at Cedar Grove on the B-2258 circuit PSEG (100%) Replace wave trap, line disconnect and ground switch b1019.5 at Cedar Grove on the F-2206 circuit PSEG (100%) Replace line disconnect and b1019.6 ground switch at Cedar Grove on the K-2263 circuit PSEG (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s)

required 11		muan revenue requirer	itent (3)
	Replace 2-4 and 4-5 section disconnect and ground		
b1019.7	switches at Clifton on the B-		
			(1000 ()
	2258 circuit		PSEG (100%)
	Replace 1-2 and 2-3 section		
b1019.8	disconnect and ground		
01019.8	switches at Clifton on the K-		
	2263 circuit		PSEG (100%)
	Replace line, ground, 230 kV		
b1019.9	main bus disconnects at		
01019.9	Athenia on the B-2258		
	circuit		PSEG (100%)
	Replace wave trap, line,		
	ground 230 kV breaker		
b1019.10	disconnect and 230 kV main		
	bus disconnects at Athenia		
	on the K-2263 circuit		PSEG (100%)

Required Tr	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b1082.1	Replace Bergen 138 kV breaker '30P' with 80 kA		PSEG (100%)
b1082.2	Replace Bergen 138 kV breaker '80P' with 80 kA		PSEG (100%)
b1082.3	Replace Bergen 138 kV breaker '70P' with 80 kA		PSEG (100%)
b1082.4	Replace Bergen 138 kV breaker '90P' with 63 kA		PSEG (100%)
b1082.5	Replace Bergen 138 kV breaker '50P' with 63 kA		PSEG (100%)
b1082.6	Replace Bergen 230 kV breaker '12H' with 80 kA		PSEG (100%)
b1082.7	Replace Bergen 230 kV breaker '21H' with 80 kA		PSEG (100%)
b1082.8	Replace Bergen 230 kV breaker '11H' with 80 kA		PSEG (100%)
b1082.9	Replace Bergen 230 kV breaker '20H' with 80 kA		PSEG (100%)
b1098	Re-configure the Bayway 138 kV substation and install three new 138 kV breakers		PSEG (100%)
b1099	Build a new 230 kV substation by tapping the Aldene – Essex circuit and install three 230/26 kV transformers, and serve some of the Newark area load from the new station		PSEG (100%)
b1100	Build a new 138 kV circuit from Bayonne to Marion		PSEG (100%)
b1101	Re-configure the Cedar Grove substation with breaker and half scheme and build a new 69 kV circuit from Cedar Grove to Hinchman		PSEG (100%)
L	to Illicinium	1	1525 (10070)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Convert the West Orange 138 kV substation, the two Roseland – West Orange b1154 138 kV circuits, and the Roseland – Sewaren 138 kV circuit from 138 kV to 230 kV PSEG (96.18%) / RE (3.82%) Build a new 230 kV circuit from Branchburg to b1155 Middlesex Sw. Rack. Build a new 230 kV substation at JCPL (4.61%) / PSEG (91.75%) Middlesex / RE (3.64%) Replace Branchburg 230 b1155.3 kV breaker '81H' with 63 PSEG (100%) Replace Branchburg 230 b1155.4 kV breaker '72H' with 63 PSEG (100%) Replace Branchburg 230 b1155.5 kV breaker '61H' with 63 PSEG (100%) Replace Branchburg 230 kV breaker '41H' with 63 b1155.6 PSEG (100%) Convert the Burlington, Camden, and Cuthbert Blvd 138 kV substations, the 138 kV circuits from Burlington b1156 to Camden, and the 138 kV circuit from Camden to Cuthbert Blvd. from 138 kV to 230 kV PSEG (96.18%) / RE (3.82%) Replace Camden 230 kV b1156.13 breaker '22H' with 80 kA PSEG (100%) Replace Camden 230 kV b1156.14 breaker '32H' with 80 kA PSEG (100%) Replace Camden 230 kV b1156.15 breaker '21H' with 80 kA PSEG (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace New Freedom 230 kV breaker '50H' with b1156.16 63 kA PSEG (100%) Replace New Freedom b1156.17 230 kV breaker '41H' with 63 kA PSEG (100%) Replace New Freedom 230 kV breaker '51H' with b1156.18 63 kA PSEG (100%) Rebuild Camden 230 kV b1156.19 to 80 kA PSEG (100%) Rebuild Burlington 230 b1156.20 kV to 80 kA PSEG (100%) Reconductor the PSEG portion of the Burlington – b1197.1 Croydon circuit with 1590 ACSS PSEG (100%) Re-configure the Lawrence 230 kV HTP\*\*\* (0.14%) / ECP\*\* b1228 substation to breaker and (0.22%) / PSEG (95.83%) / RE half (3.81%)Build a new 69 kV substation (Ridge Road) and build new 69 kV b1255 circuits from Montgomery - Ridge Road - Penns Neck/Dow Jones PSEG (96.18%) / RE (3.82%) AEC (0.23%) / BGE (0.97%) / Convert the existing ComEd (2.32%) / Dayton 'D1304' and 'G1307' 138 (0.13%) / JCPL (1.17%) / NEPTUNE\* (0.07%) / HTP\*\*\* kV circuits between b1304.1 Roseland – Kearny – (16.05%) / PENELEC (2.97%) / Hudson to 230 kV PEPCO (1.04%) / ECP\*\* (2.11%) / PSEG (70.16%) / RE operation (2.78%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) AEC (0.23%) / BGE (0.97%) / ComEd (2.32%) / Dayton Expand existing Bergen (0.13%) / JCPL (1.17%) / 230 kV substation and NEPTUNE\* (0.07%) / HTP\*\*\* b1304.2 reconfigure the Athenia (16.05%) / PENELEC (2.97%) / 230 kV substation to PEPCO (1.04%) / ECP\*\* breaker and a half scheme (2.11%) / PSEG (70.16%) / RE (2.78%)AEC (0.23%) / BGE (0.97%) / ComEd (2.32%) / Dayton (0.13%) / JCPL (1.17%) / Build second 230 kV NEPTUNE\* (0.07%) / HTP\*\*\* b1304.3 underground cable from (16.05%) / PENELEC (2.97%) / Bergen to Athenia PEPCO (1.04%) / ECP\*\* (2.11%) / PSEG (70.16%) / RE (2.78%)AEC (0.23%) / BGE (0.97%) / ComEd (2.32%) / Dayton Build second 230 kV (0.13%) / JCPL (1.17%) / NEPTUNE\* (0.07%) / HTP\*\*\* underground cable from b1304.4 (16.05%) / PENELEC (2.97%) / Hudson to South PEPCO (1.04%) / ECP\*\* Waterfront (2.11%) / PSEG (70.16%) / RE (2.78%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace Athenia 230 kV b1304.5 breaker '21H' with 80 kA PSEG (100%) Replace Athenia 230 kV b1304.6 breaker '41H' with 80 kA PSEG (100%) Replace South Waterfront b1304.7 230 kV breaker '12H' with 80 kA PSEG (100%) Replace South Waterfront b1304.8 230 kV breaker '22H' with 80 kA PSEG (100%) Replace South Waterfront b1304.9 230 kV breaker '32H' with PSEG (100%) Replace South Waterfront b1304.10 230 kV breaker '52H' with 80 kA PSEG (100%) Replace South Waterfront b1304.11 230 kV breaker '62H' with 80 kA PSEG (100%) Replace South Waterfront b1304.12 230 kV breaker '72H' with 80 kA PSEG (100%) Replace South Waterfront b1304.13 230 kV breaker '82H' with 80 kA PSEG (100%) Replace Essex 230 kV b1304.14 breaker '20H' with 80 kA PSEG (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace Essex 230 kV b1304.15 breaker '21H' with 80 kA PSEG (100%) Replace Essex 230 kV b1304.16 breaker '10H' with 80 kA PSEG (100%) Replace Essex 230 kV b1304.17 breaker '11H' with 80 kA PSEG (100%) Replace Essex 230 kV b1304.18 breaker '11HL' with 80 kA PSEG (100%) Replace Newport R 230 kV breaker '23H' with 63 b1304.19 kA PSEG (100%) Rebuild Athenia 230 kV b1304.20 substation to 80 kA PSEG (100%) Rebuild Bergen 230 kV b1304.21 substation to 80 kA PSEG (100%) JCPL (12.82%) / NEPTUNE\* (1.18%) / HTP\*\*\* (0.79%) / Build two new parallel PECO (51.08%) / PEPCO b1398 underground circuits from Gloucester to Camden (0.57%) / ECP\*\* (0.85%) / PSEG (31.46%) / RE (1.25%) JCPL (12.82%) / NEPTUNE\* (1.18%) / HTP\*\*\* (0.79%) / Install shunt reactor at b1398.1 Gloucester to offset cable PECO (51.08%) / PEPCO (0.57%) / ECP\*\* (0.85%) / charging PSEG (31.46%) / RE (1.25%) JCPL (12.82%) / NEPTUNE\* Reconfigure the Cuthbert (1.18%) / HTP\*\*\* (0.79%) / b1398.2 station to breaker and a PECO (51.08%) / PEPCO half scheme (0.57%) / ECP\*\* (0.85%) / PSEG (31.46%) / RE (1.25%) JCPL (12.82%) / NEPTUNE\* Build a second 230 kV (1.18%) / HTP\*\*\* (0.79%) / parallel overhead circuit b1398.3 PECO (51.08%) / PEPCO from Mickelton -(0.57%) / ECP\*\* (0.85%) / Gloucester PSEG (31.46%) / RE (1.25%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) JCPL (12.82%) / NEPTUNE\* Reconductor the existing (1.18%) / HTP\*\*\* (0.79%) / Mickleton – Gloucester b1398.4 PECO (51.08%) / PEPCO 230 kV circuit (PSEG (0.57%) / ECP\*\* (0.85%) / portion) PSEG (31.46%) / RE (1.25%) Reconductor the Camden Richmond 230 kV JCPL (12.82%) / NEPTUNE\* (1.18%) / HTP\*\*\* (0.79%) / circuit (PSEG portion) and b1398.7 upgrade terminal PECO (51.08%) / PEPCO equipments at Camden (0.57%) / ECP\*\* (0.85%) / substations PSEG (31.46%) / RE (1.25%) Replace Gloucester 230 kV breaker '21H' with 63 b1398.15 PSEG (100%) Replace Gloucester 230 b1398.16 kV breaker '51H' with 63 PSEG (100%) Replace Gloucester 230 kV breaker '56H' with 63 b1398.17 PSEG (100%) Replace Gloucester 230 b1398.18 kV breaker '26H' with 63 PSEG (100%) Replace Gloucester 230 b1398.19 kV breaker '71H' with 63 PSEG (100%) Convert the 138 kV path from Aldene – Springfield b1399 Rd. – West Orange to 230 PSEG (96.18%) / RE (3.82%) Install 230 kV circuit b1400 breakers at Bennetts Ln. "F" and "X" buses PSEG (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

Required T	ransmission Enhancements	Annual Revenue Requirement Responsible Customer(s)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd (13.46%)
		/ Dayton (2.12%) / DEOK
		(3.37%) / DL (1.76%) / DPL
		(2.55%) / Dominion (12.97%) /
1 1 4 1 0	Replace Salem 500 kV	EKPC (1.81%) / JCPL (3.92%) /
b1410	breaker '11X'	ME (1.95%) / NEPTUNE*
		(0.24%) / OVEC (0.07%) /
		PECO (5.39%) / PENELEC
		(1.84%) / PEPCO (3.71%) / PPL
		(4.78%) / PSEG (6.40%) / RE
		(0.27%)
		DFAX Allocation:
		PSEG (96.26%) / RE (3.74%)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd (13.46%)
		/ Dayton (2.12%) / DEOK
		(3.37%) / DL (1.76%) / DPL
		(2.55%) / Dominion (12.97%) /
	Replace Salem 500 kV	EKPC (1.81%) / JCPL (3.92%) /
b1411	breaker '12X'	ME (1.95%) / NEPTUNE*
		(0.24%) / OVEC (0.07%) /
		PECO (5.39%) / PENELEC
		(1.84%) / PEPCO (3.71%) / PPL
		(4.78%) / PSEG (6.40%) / RE
		(0.27%)
		DFAX Allocation:
		PSEG (96.26%) / RE (3.74%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required T	ransmission Enhancements	Annual Revenue Requirement Responsible Customer(s)
b1412	Replace Salem 500 kV breaker '20X'	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b1413	Replace Salem 500 kV breaker '21X'	PSEG (96.26%) / RE (3.74%)  Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required To	ransmission Enhancements	Annual Revenue Requirem	nent Responsible Customer(s)
			<b>Load-Ratio Share Allocation:</b>
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd (13.46%)
			/ Dayton (2.12%) / DEOK
			(3.37%) / DL (1.76%) / DPL
			(2.55%) / Dominion (12.97%) /
	Replace Salem 500 kV		EKPC (1.81%) / JCPL (3.92%) /
b1414	breaker '31X'		ME (1.95%) / NEPTUNE*
	oreaker 312		(0.24%) / OVEC (0.07%) /
			PECO (5.39%) / PENELEC
			(1.84%) / PEPCO (3.71%) / PPL
			(4.78%) / PSEG (6.40%) / RE
			(0.27%)
			DFAX Allocation:
			PSEG (96.26%) / RE (3.74%)
			<b>Load-Ratio Share Allocation:</b>
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd (13.46%)
			/ Dayton (2.12%) / DEOK
			(3.37%) / DL (1.76%) / DPL
			(2.55%) / Dominion (12.97%) /
	Replace Salem 500 kV		EKPC (1.81%) / JCPL (3.92%) /
b1415	breaker '32X'		ME (1.95%) / NEPTUNE*
	510aker 527x		(0.24%) / OVEC (0.07%) /
			PECO (5.39%) / PENELEC
			(1.84%) / PEPCO (3.71%) / PPL
			(4.78%) / PSEG (6.40%) / RE
			(0.27%)
			DFAX Allocation:
			PSEG (96.26%) / RE (3.74%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace Tosco 230 kV b1539 breaker 'CB1' with 63 kA PSEG (100%) Replace Tosco 230 kV b1540 breaker 'CB2' with 63 kA PSEG (100%) Open the Hudson 230 kV b1541 bus tie PSEG (100%) JCPL (10.31%) / NEPTUNE\* Reconductor the Eagle (0.98%) / HTP\*\*\* (0.75%) / Point - Gloucester 230 kV b1588 PECO (30.81%) / ECP\*\* circuit #1 and #2 with (0.82%) / PSEG (54.17%) / RE higher conductor rating (2.16%)Re-configure the Kearny 230 kV substation and b1589 loop the P-2216-1 (Essex -ATSI (8.00%) / HTP\*\*\* NJT Meadows) 230 kV (20.18%) / PENELEC (7.77%) / circuit PSEG (61.59%) / RE (2.46%) Upgrade the PSEG portion of the Camden Richmond 230 kV circuit to six wire BGE (3.05%) / ME (0.83%) / b1590 HTP\*\*\* (0.21%) / PECO conductor and replace terminal equipment at (91.36%) / PEPCO (1.93%) / Camden PPL (2.46%) / ECP\*\* (0.16%) Advance n1237 (Replace Essex 230 kV breaker b1749 '22H' with 80kA) PSEG (100%) Advance n0666.5 (Replace Hudson 230 kV b1750 breaker '1HB' with 80 kA (without TRV cap, so actually 63 kA)) PSEG (100%) Advance n0666.3 (Replace Hudson 230 kV breaker '2HA' with 80 kA b1751 (without TRV cap, so actually 63 kA)) PSEG (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Advance n0666.10 (Replace Hudson 230 kV b1752 breaker '2HB' with 80 kA (without TRV cap, so actually 63 kA)) PSEG (100%) Marion 138 kV breaker '7PM' - delay the relay b1753 time to increase the contact parting time to 2.5 PSEG (100%) cycles Marion 138 kV breaker '3PM' - delay the relay time to increase the b1754 contact parting time to 2.5 cycles PSEG (100%) Marion 138 kV breaker '6PM' - delay the relay b1755 time to increase the contact parting time to 2.5 PSEG (100%) cycles AEC (4.96%) / JCPL (44.20%) / Build a second 230 kV NEPTUNE\* (0.53%) / HTP\*\*\* b1787 circuit from Cox's Corner (0.15%) / ECP\*\* (0.16%) / - Lumberton PSEG (48.08%) / RE (1.92%) Install a reactor along the b2034 Kearny - Essex 138 kV PSEG (100%) Replace Sewaren 138 kV b2035 breaker '11P' PSEG (100%) Replace Sewaren 138 kV b2036 breaker '21P' PSEG (100%) Replace PVSC 138 kV b2037 breaker '452' PSEG (100%) Replace PVSC 138 kV b2038 breaker '552' PSEG (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace Bayonne 138 kV b2039 breaker '11P' PSEG (100%) Reconductor the Mickleton - Gloucester b2139 230 kV parallel circuits with double bundle PSEG (61.11%) / PECO conductor (36.45%) / RE (2.44%) Re-configure the b2146 Brunswick 230 kV and 69 kV substations PSEG (96.16%) / RE (3.84%) Construct Jackson Rd. 69 kV substation and loop the Cedar Grove - Hinchmans Ave into Jackson Rd. and b2151 construct Hawthorne 69 kV substation and build 69 kV circuit from Hinchmans Ave -Hawthorne - Fair Lawn PSEG (100%) Reconfigure the Linden, Bayway, North Ave, and Passaic Valley S.C. 138 b2159 kV substations. Construct and loop new 138 kV circuit to new airport PSEG (72.61%) / HTP\*\*\* station (24.49%) / RE (2.90%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

#### **SCHEDULE 12 – APPENDIX**

### (14) Monongahela Power Company, The Potomac Edison Company, and West Penn Power Company, all doing business as Allegheny Power

Required	Transmission Enhancements	Annual Revenue Requirement	t Responsible Customer(s)
b0216	Install -100/+525 MVAR dynamic reactive device at Black Oak	As specified under the procedures detailed in Attachment H-18B, Section 1.b	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)
			DFAX Allocation: APS (39.2039.86%) / BGE (13.0511.89%) / Dominion (31.4932.02%) / PEPCO (16.2616.23%)
b0218	Install third Wylie Ridge 500/345 kV transformer	As specified under the procedures detailed in Attachment H-18B, Section 1.b	AEC (11.83%) / DPL (19.40%) / Dominion (13.81%) / JCPL (15.56%) / PECO (39.40%)
b0220	Upgrade coolers on Wylie Ridge 500/345 kV #7		AEC (11.83%) / DPL (19.40%) / Dominion (13.81%) / JCPL (15.56%) / PECO (39.40%)
b0229	Install fourth Bedington 500/138 kV		APS (50.98%) / BGE (13.42%) / DPL (2.03%) / Dominion (14.50%) / ME (1.43%) / PEPCO (17.64%)
b0230	Install fourth Meadowbrook 500/138 kV	As specified under the procedures detailed in Attachment H-18B, Section 1.b	APS (79.16%) / BGE (3.61%) / DPL (0.86%) / Dominion (11.75%) / ME (0.67%) / PEPCO (3.95%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s)

Required	Transmission Enhancements	Annual Revenue Requirement	t Responsible Customer(s)
b0238	Reconductor Doubs – Dickerson and Doubs – Aqueduct 1200 MVA	As specified under the procedures detailed in Attachment H-18B, Section 1.b	BGE (16.66%) / Dominion (33.66%) / PEPCO (49.68%)
b0240	Open the Black Oak #3 500/138 kV transformer for the loss of Hatfield – Back Oak 500 kV line		APS (100%)
b0245	Replacement of the existing 954 ACSR conductor on the Bedington – Nipetown 138 kV line with high temperature/low sag conductor		APS (100%)
b0246	Rebuild of the Double Tollgate – Old Chapel 138 kV line with 954 ACSR conductor	As specified under the procedures detailed in Attachment H-18B, Section 1.b	APS (100%)
b0273	Open both North Shenandoah #3 transformer and Strasburg – Edinburgh 138 kV line for the loss of Mount Storm – Meadowbrook 572 500 kV		APS (100%)
b0322	Convert Lime Kiln substation to 230 kV operation		APS (100%)
b0323	Replace the North Shenandoah 138/115 kV transformer	As specified under the procedures detailed in Attachment H-18B, Section 1.b	APS (100%)

Required Ti	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b0328.2	Build new Meadow Brook – Loudoun 500 kV circuit (20 of 50 miles)	As specified under the procedures detailed in Attachment H-18B, Section 1.b	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0343	Replace Doubs 500/230 kV transformer #2	As specified under the procedures detailed in Attachment H-18B, Section 1.b	AEC (1.85%) / BGE (21.49%) / DPL (3.91%) / Dominion (28.86%) / ME (2.97%) / PECO (5.73%) / PEPCO (35.19%)
b0344	Replace Doubs 500/230 kV transformer #3	As specified under the procedures detailed in Attachment H-18B, Section 1.b	AEC (1.86%) / BGE (21.50%) / DPL (3.91%) / Dominion (28.82%) / ME (2.97%) / PECO (5.74%) / PEPCO (35.20%)
b0345	Replace Doubs 500/230 kV transformer #4	As specified under the procedures detailed in Attachment H-18B, Section 1.b	AEC (1.85%) / BGE (21.49%) / DPL (3.90%) / Dominion (28.83%) / ME (2.98%) / PECO (5.75%) / PEPCO (35.20%)

Required T	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b0347.1	Build new Mt. Storm – 502 Junction 500 kV circuit	As specified under the procedures detailed in Attachment H-18B, Section 1.b	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.2	Build new Mt. Storm – Meadow Brook 500 kV circuit	As specified under the procedures detailed in Attachment H-18B, Section 1.b	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Annual Revenue Requirement Responsible Customer(s) Required Transmission Enhancements **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / As specified under the ME (1.95%) / NEPTUNE\* procedures detailed in Build new 502 Junction (0.24%) / OVEC (0.07%) / b0347.3 500 kV substation Attachment H-18B, PECO (5.39%) / PENELEC Section 1.b (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)**DFAX Allocation:** APS (47.3149.03%) / BGE (<del>20.76</del>17.87%) / PEPCO (31.9333.10%) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE\* As specified under the (0.24%) / OVEC (0.07%) / Upgrade Meadow Brook procedures detailed in b0347.4 PECO (5.39%) / PENELEC 500 kV substation Attachment H-18B. (1.84%) / PEPCO (3.71%) / PPL Section 1.b (4.78%) / PSEG (6.40%) / RE (0.27%)**DFAX Allocation:** APS (<del>30.25</del>33.17%) / <del>BGE</del> (8.80%) / Dominion (46.8051.31%) / PEPCO (14.1515.52%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required T	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b0347.5	Replace Harrison 500 kV breaker HL-3		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.6	Upgrade (per ABB		(20.7617.87%) / PEPCO (31.9333.10%)  Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
	inspection) breaker HL-6		PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: APS (47.3149.03%) / BGE (20.7617.87%) / PEPCO (31.9333.10%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required T	ransmission Enhancements	Annual Revenue Requirement Responsible Customer(s)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd (13.46%)
		/ Dayton (2.12%) / DEOK
		(3.37%) / DL (1.76%) / DPL
		(2.55%) / Dominion (12.97%) /
		EKPC (1.81%) / JCPL (3.92%) /
1 00 15 5	Upgrade (per ABB	ME (1.95%) / NEPTUNE*
b0347.7	inspection) breaker HL-7	(0.24%) / OVEC (0.07%) / PECO
	1 /	(5.39%) / PENELEC (1.84%) /
		PEPCO (3.71%) / PPL (4.78%) /
		PSEG (6.40%) / RE (0.27%)
		DFAX Allocation:
		APS ( <del>47.3149.03</del> %) / BGE
		( <del>20.76</del> 17.8 <mark>7</mark> %) / PEPCO
		(31.9333.10%)
		`
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) /
		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK
		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL
		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.8	Upgrade (per ABB	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.8	Upgrade (per ABB inspection) breaker HL-8	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.8	TC d	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.8	TC d	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.8	TC d	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.8	TC d	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.8	TC d	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.8	TC d	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.8	TC d	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Tra	ansmission Enhancements	Annual Revenue Requirement Responsible Customer(s)
b0347.9	Upgrade (per ABB inspection) breaker HL-10	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: APS (47.3149.03%) / BGE (20.7617.87%) / PEPCO
b0347.10	Upgrade (per ABB Inspection) Hatfield 500 kV breakers HFL-1	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: APS (47.3149.03%) / BGE (20.7617.87%) / PEPCO (31.9333.10%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / Upgrade (per ABB NEPTUNE\* (0.24%) / OVEC b0347.11 Inspection) Hatfield (0.07%) / PECO (5.39%) / 500 kV breakers HFL-3 PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** APS (47.3149.03%) / BGE (<del>20.76</del><u>17.87</u>%) / PEPCO (31.9333.10%) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / Upgrade (per ABB NEPTUNE\* (0.24%) / OVEC Inspection) Hatfield b0347.12 (0.07%) / PECO (5.39%) / 500 kV breakers HFL-4 PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** APS (47.3149.03%) / BGE (<del>20.76</del>17.87%) / PEPCO (31.9333.10%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Tra	ansmission Enhancements	Annual Revenue Require	ment Responsible Customer(s)
b0347.13	Upgrade (per ABB Inspection) Hatfield 500 kV breakers HFL-6		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: APS (47.3149.03%) / BGE (20.7617.87%) / PEPCO (31.9333.10%)
b0347.14	Upgrade (per ABB Inspection) Hatfield 500 kV breakers HFL-7		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: APS (47.3149.03%) / BGE (20.7617.87%) / PEPCO (31.9333.10%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Transmission Enhancements A		Annual Revenue Requirement Responsible Customer(s)	
b0347.15	Upgrade (per ABB Inspection) Hatfield 500 kV breakers HFL-9	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: APS (47.3149.03%) / BGE (20.7617.87%) / PEPCO (31.9333.10%)	
b0347.16	Upgrade (per ABB inspection) Harrison 500 kV breaker 'HL-3'	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: APS (47.3149.03%) / BGE (20.7617.87%) / PEPCO (31.9333.10%)	

<sup>\*</sup>Neptune Regional Transmission System, LLC

Replace Meadow Brook 138 kV breaker 'MD-10'		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)
		<b>DFAX Allocation:</b> APS (30.2533.17%) / <del>BGE (8.80%)</del> ∠Dominion (46.8051.31%) / PEPCO (14.1515.52%)
Replace Meadow Brook 138 kV breaker 'MD-11'		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: APS (30.2533.17%) / BGE (8.80%) /-Dominion (46.8051.31%) / PEPCO
	Replace Meadow Brook 138 kV breaker	Brook 138 kV breaker 'MD-10'  Replace Meadow Brook 138 kV breaker

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Transmission Enhancements		Annual Revenue Requirement Responsible Customer(s)	
b0347.19	Replace Meadow Brook 138 kV breaker 'MD-12'	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: APS (30.2533.17%) / BGE (8.80%)	
b0347.20	Replace Meadow Brook 138 kV breaker 'MD-13'	## Dominion (46.8051.31%) / PEPCO (14.1515.52%)    Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)    DFAX Allocation: APS (30.2533.17%) / BGE (8.80%) / Dominion (46.8051.31%) / PEPCO (14.1515.52%)	

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Transmission Enhancements		Annual Revenue Requirement Responsible Customer(s)	
b0347.21	Replace Meadow Brook 138 kV breaker 'MD-14'	Load-Ratio Share Allocation AEC (1.67%) / AEP (13.94%) APS (5.64%) / ATSI (8.02%) BGE (4.12%) / ComEd (13.46%) Dayton (2.12%) / DEOK (3.37%) DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) OVEC (0.07%) / PECO (5.39%) PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEC (6.40%) / RE (0.27%)  DFAX Allocation: APS (30.2533.17%) / BGE (8.80%) /-Dominion (46.8051.31%) /	AEP (13.94%) / ATSI (8.02%) / ComEd (13.46%) / DEOK (3.37%) / DPL (2.55%) / 2.97%) / EKPC L (3.92%) / ME FUNE* (0.24%) / PECO (5.39%) / 84%) / PEPCO (4.78%) / PSEG RE (0.27%)  llocation: %) / BGE (8.80%) 6.8051.31%) /
b0347.22	Replace Meadow Brook 138 kV breaker 'MD-15'	Load-Ratio Share Allocation AEC (1.67%) / AEP (13.94%) APS (5.64%) / ATSI (8.02%) BGE (4.12%) / ComEd (13.46%) Dayton (2.12%) / DEOK (3.37%) DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) OVEC (0.07%) / PECO (5.39%) PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEC (6.40%) / RE (0.27%)  DFAX Allocation: APS (30.2533.17%) / BGE (8.86%) / Dominion (46.8051.31%) / PEPCO (14.1515.52%)	are Allocation: AEP (13.94%) / ATSI (8.02%) / ComEd (13.46%) / DEOK (3.37%) / DPL (2.55%) / 2.97%) / EKPC L (3.92%) / ME FUNE* (0.24%) / PECO (5.39%) / 84%) / PEPCO (4.78%) / PSEG RE (0.27%)  llocation: %) / BGE (8.80%) 6.8051.31%) /

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Tra	ansmission Enhancements	Annual Revenue Requireme	
b0347.23	Replace Meadow Brook 138 kV breaker 'MD-16'		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: APS (30.2533.17%) / BGE (8.80%) / Dominion (46.8051.31%) / PEPCO (14.1515.52%)
b0347.24	Replace Meadow Brook 138 kV breaker 'MD-17'		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: APS (30.2533.17%) / BGE (8.80%) / Dominion (46.8051.31%) / PEPCO (14.1515.52%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Tra	ansmission Enhancements	Annual Revenue Requirement Responsible Customer(s)
b0347.25	Replace Meadow Brook 138 kV breaker 'MD-18'	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: APS (30.2533.17%) / BGE (8.80%) / Dominion (46.8051.31%) / PEPCO (14.1515.52%)
b0347.26	Replace Meadow Brook 138 kV breaker 'MD-22#1 CAP'	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: APS (30.2533.17%) / BGE (8.80%) / Dominion (46.8051.31%) / PEPCO (14.1515.52%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Tra	ansmission Enhancements	Annual Revenue Requirement Res	ponsible Customer(s)
b0347.27	Replace Meadow Brook 138 kV breaker 'MD-4'	Load AEC (1	d-Ratio Share Allocation:67%) / AEP (13.94%) / APS 4%) / ATSI (8.02%) / BGE ) / ComEd (13.46%) / Dayton 2%) / DEOK (3.37%) / DL 6) / DPL (2.55%) / Dominion 7%) / EKPC (1.81%) / JCPL 3.92%) / ME (1.95%) / PTUNE* (0.24%) / OVEC07%) / PECO (5.39%) / NELEC (1.84%) / PEPCO 1%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation:
		Load AEC (1	0.2533.17%) / BGE (8.80%) nion (46.8051.31%) / PEPCO (14.1515.52%) d-Ratio Share Allocation:
b0347.28	Replace Meadow Brook 138 kV breaker 'MD-5'	(4.12%) (2.12) (1.76%) (12.97) (NEI) (0) PEN (3.71)	4%) / ATSI (8.02%) / BGE ) / ComEd (13.46%) / Dayton 2%) / DEOK (3.37%) / DL 6) / DPL (2.55%) / Dominion 7%) / EKPC (1.81%) / JCPL 3.92%) / ME (1.95%) / PTUNE* (0.24%) / OVEC .07%) / PECO (5.39%) / NELEC (1.84%) / PEPCO 1%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)
		`	<b>DFAX Allocation:</b> 30.2533.17%) / <del>BGE (8.80%)</del> nion (46.8051.31%) / PEPCO (14.1515.52%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Tra	ansmission Enhancements	Annual Revenue Requirem	nent Responsible Customer(s)
b0347.29	Replace Meadowbrook 138 kV breaker 'MD-6'		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: APS (30.2533.17%) / BGE (8.80%) / Dominion (46.8051.31%) / PEPCO
b0347.30	Replace Meadowbrook 138 kV breaker 'MD-7'		Load-Ratio Share Allocation:     AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)     DFAX Allocation:     APS (30.2533.17%) / BGE (8.80%) / Dominion (46.8051.31%) / PEPCO (14.1515.52%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Tra	ansmission Enhancements	Annual Revenue Requiremen	nt Responsible Customer(s)
b0347.31	Replace Meadowbrook 138 kV breaker 'MD-8'		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: APS (30.2533.17%) / BGE (8.80%) / Dominion (46.8051.31%) / PEPCO (14.1515.52%)
b0347.32	Replace Meadowbrook 138 kV breaker 'MD-9'		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: APS (30.2533.17%) / BGE (8.80%) / Dominion (46.8051.31%) / PEPCO (14.1515.52%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required 11a	ansmission Enhancements	Annual Revenue Requirement	t Responsible Customer(s)
b0347.33	Replace Meadow Brook 138 kV breaker 'MD-1'		APS (100%)
b0347.34	Replace Meadow Brook 138 kV breaker 'MD-2'		APS (100%)
b0348	Upgrade Stonewall – Inwood 138 kV with 954 ACSR conductor		APS (100%)
b0373	Convert Doubs – Monocacy 138 kV facilities to 230 kV operation		AEC (1.82%) / APS (76.84%) / DPL (2.64%) / JCPL (4.53%) / ME (9.15%) / NEPTUNE* (0.42%) / PPL (4.60%)
b0393	Replace terminal equipment at Harrison 500 kV and Belmont 500 kV		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: APS (44.89%) / Dayton (17.18%) / DEOK (28.83%) / EKPC (9.10%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required 1.	ransmission Enhancements	Annual Revenue Requirement	Responsible Cusionici(s)
b0406.1	Replace Mitchell 138 kV breaker "#4 bank"		APS (100%)
b0406.2	Replace Mitchell 138 kV breaker "#5 bank"		APS (100%)
b0406.3	Replace Mitchell 138 kV breaker "#2 transf"		APS (100%)
b0406.4	Replace Mitchell 138 kV breaker "#3 bank"		APS (100%)
b0406.5	Replace Mitchell 138 kV breaker "Charlerio #2"		APS (100%)
b0406.6	Replace Mitchell 138 kV breaker "Charlerio #1"		APS (100%)
b0406.7	Replace Mitchell 138 kV breaker "Shepler Hill Jct"		APS (100%)
b0406.8	Replace Mitchell 138 kV breaker "Union Jct"		APS (100%)
b0406.9	Replace Mitchell 138 kV breaker "#1-2 138 kV bus tie"		APS (100%)
b0407.1	Replace Marlowe 138 kV breaker "#1 transf"		APS (100%)
b0407.2	Replace Marlowe 138 kV breaker "MBO"		APS (100%)
b0407.3	Replace Marlowe 138 kV breaker "BMA"		APS (100%)
b0407.4	Replace Marlowe 138 kV breaker "BMR"		APS (100%)
b0407.5	Replace Marlowe 138 kV breaker "WC-1"		APS (100%)

Required 1	ransmission Ennancements	Annuai Revenue Requirement	Responsible Customer(s)
b0407.6	Replace Marlowe 138 kV breaker "R11"		APS (100%)
b0407.7	Replace Marlowe 138 kV breaker "W"		APS (100%)
b0407.8	Replace Marlowe 138 kV breaker "138 kV bus tie"		APS (100%)
b0408.1	Replace Trissler 138 kV breaker "Belmont 604"		APS (100%)
b0408.2	Replace Trissler 138 kV breaker "Edgelawn 90"		APS (100%)
b0409.1	Replace Weirton 138 kV breaker "Wylie Ridge 210"		APS (100%)
b0409.2	Replace Weirton 138 kV breaker "Wylie Ridge 216"		APS (100%)
b0410	Replace Glen Falls 138 kV breaker "McAlpin 30"		APS (100%)
b0417	Reconductor Mitchell – Shepler Hill Junction 138 kV with 954 ACSR		APS (100%)

Required	Transmission Enhancements	Annual Revenue Requir	rement Responsible Customer(s)
b0418	Install a breaker failure auto-restoration scheme at Cabot 500 kV for the failure of the #6 breaker		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)
b0419	Install a breaker failure auto-restoration scheme at Bedington 500 kV for the failure of the #1 and #2 breakers		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation:
b0420	Operating Procedure to open the Black Oak 500/138 kV transformer #3 for the loss of Hatfield – Ronco 500 kV and the Hatfield #3 Generation		APS (100%)  APS (100%)
b0445	Upgrade substation equipment and reconductor the Tidd – Mahans Lane – Weirton 138 kV circuit with 954 ACSR		APS (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Raise limiting structures on Albright - Bethelboro 138 kV to b0460 raise the rating to 175 MVA normal 214 MVA emergency APS (100%) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE\* (0.24%) / OVEC (0.07%) / PECO Construct an Amos to (5.39%) / PENELEC (1.84%) / Welton Spring to WV As specified under the PEPCO (3.71%) / PPL (4.78%) / b0491 procedures detailed in state line 765 kV PSEG (6.40%) / RE (0.27%) Attachment H-19B circuit (APS equipment) **DFAX Allocation:** AEC (5.01%) / AEP (4.39%) / APS (9.26%) / BGE (4.43%) / DL (0.02%) / DPL (6.91%) / Dominion (10.82%) / JCPL (11.64%) / ME (2.94%) / NEPTUNE\* (1.12%) / PECO (14.51%) / PEPCO (6.11%) / PPL (6.39%) / PSEG (15.86%) / RE (0.59%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required T	ransmission Enhancements	Annual Revenue Requirement	nt Responsible Customer(s)
b0492	Construct a Welton Spring to Kemptown 765 kV line (APS equipment)	As specified under the procedures detailed in Attachment H-19B	Load-Ratio Share Allocation:  AEC (1.67%) / AEP (13.94%) /  APS (5.64%) / ATSI (8.02%) /  BGE (4.12%) / ComEd (13.46%) /  Dayton (2.12%) / DEOK (3.37%) /  DL (1.76%) / DPL (2.55%) /  Dominion (12.97%) / EKPC  (1.81%) / JCPL (3.92%) / ME  (1.95%) / NEPTUNE* (0.24%) /  OVEC (0.07%) / PECO (5.39%) /  PENELEC (1.84%) / PEPCO  (3.71%) / PPL (4.78%) / PSEG  (6.40%) / RE (0.27%)  DFAX Allocation:  AEC (5.01%) / AEP (4.39%) / APS  (9.26%) / BGE (4.43%) / DL  (0.02%) / DPL (6.91%) / Dominion  (10.82%) / JCPL (11.64%) / ME  (2.94%) / NEPTUNE* (1.12%) /  PECO (14.51%) / PEPCO (6.11%) /  PPL (6.39%) / PSEG (15.86%) / RE  (0.59%)
b0492.3	Replace Eastalco 230 kV breaker D-26		APS (100%)
b0492.4	Replace Eastalco 230 kV breaker D-28		APS (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Annual Revenue Requirement

Replace Eastalco 230 kV breaker D-31 b0492.5 APS (100%) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME Replace existing (1.95%) / NEPTUNE\* (0.24%) / Kammer 765/500 kV b0495 OVEC (0.07%) / PECO (5.39%) / transformer with a new PENELEC (1.84%) / PEPCO larger transformer (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** AEP (2.21%) / APS (1.71%) / BGE (45.34%) / Dayton (0.76%) / DEOK (1.02%) / EKPC (0.26%) / PEPCO (48.70%) Reconductor the Powell

Parsons – Loughs Lane

Mountain – Sutton 138

Install a 28.61 MVAR

Install a 44 MVAR

capacitor on Sutton 138

capacitor on Dutch Fork

Replace Doubs circuit

Replace Doubs circuit

Replace Doubs circuit

Reconductor Albright – Mettiki – Williams –

kV line

138 kV

breaker DJ1

breaker DJ7

breaker DJ10

kV

Required Transmission Enhancements

b0533

b0534

b0535

b0536

b0537

b0538

b0572.1

Responsible Customer(s)

APS (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

required 1	Tansinission Enhancements	Annual Revenue Requirement	responsible editionier(s)
	Reconductor Albright –		
b0572.2	Mettiki – Williams –		
00372.2	Parsons – Loughs Lane		
	138 kV with 954 ACSR		APS (100%)
	Reconfigure circuits in		
b0573	Butler – Cabot 138 kV		
	area		APS (100%)
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd (13.46%) /
			Dayton (2.12%) / DEOK (3.37%) /
			DL (1.76%) / DPL (2.55%) /
			Dominion (12.97%) / EKPC
1.0577	Replace Fort Martin 500		(1.81%) / JCPL (3.92%) / ME
b0577	kV breaker FL-1		(1.95%) / NEPTUNE* (0.24%) /
			OVEC (0.07%) / PECO (5.39%) /
			PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			(0.1070)/112 (0.2770)
			<b>DFAX Allocation:</b>
			APS (100%)
	Install 33 MVAR 138		
b0584	kV capacitor at		
	Necessity 138 kV		APS (100%)
	Increase Cecil 138 kV		
	capacitor size to 44		
	MVAR, replace five 138		
1.0505	kV breakers at Cecil due		
ь0585	to increased short circuit		
	fault duty as a result of		
	the addition of the Prexy		
	substation		APS (100%)
	Increase Whiteley 138		,
b0586	kV capacitor size to 44		
	MVAR		APS (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s)

Required 1	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
	Reconductor AP portion		
	of Tidd – Carnegie 138		
b0587	kV and Carnegie –		
	Weirton 138 kV with		
	954 ACSR		APS (100%)
	Install a 40.8 MVAR		1112 (10070)
b0588	138 kV capacitor at		
00366	-		A DC (100%)
	Grassy Falls		APS (100%)
1.0500	Replace five 138 kV		
b0589	breakers at Cecil		A DG (1000/)
	7 1 111		APS (100%)
	Replace #1 and #2		
b0590	breakers at Charleroi		
	138 kV		APS (100%)
	Install a 25.2 MVAR		
b0591	capacitor at Seneca		
	Caverns 138 kV		APS (100%)
	Rebuild Elko – Carbon		
b0673	Center Junction using		
	230 kV construction		APS (100%)
	200 11 . 0011011 01011		APS (97.68%) / DL (0.96%) /
	Construct new Osage –		PENELEC (1.09%) / ECP**
b0674	Whiteley 138 kV circuit		(0.01%) / PSEG (0.25%) / RE
	Willieley 138 KV circuit		(0.01%)/ FSEG (0.25%)/ KE (0.01%)
	D 1 4 0 120		(0.01%)
106741	Replace the Osage 138		
b0674.1	kV breaker		A TO (4.000 ()
	'CollinsF126'		APS (100%)
			AEC (1.02%) / APS (81.96%)
	Convert Monocacy -		/ DPL (0.85%) / JCPL (1.75%)
b0675.1	Walkersville 138 kV to		/ ME (6.37%) / NEPTUNE*
000/3.1			(0.15%) / PECO (3.09%) / PPL
	230 kV		(2.24%) / PSEG (2.42%) / RE
			(0.09%) / ECP** (0.06%)
			AEC (1.02%) / APS (81.96%)
	Convert Walkersville -		/ DPL (0.85%) / JCPL (1.75%)
	Catoctin 138 kV to 230		/ ME (6.37%) / NEPTUNE*
b0675.2	kV		(0.15%) / PECO (3.09%) / PPL
	K V		
			(2.24%) / PSEG (2.42%) / RE
			(0.09%) / ECP** (0.06%)

\*Neptune Regional Transmission System, LLC
\*\*East Coast

\*\*East Coast Power, L.L.C.

Annual Revenue Requirement Responsible Customer(s) Required Transmission Enhancements AEC (1.02%) / APS (81.96%) / Convert Ringgold -DPL (0.85%) / JCPL (1.75%) / Catoctin 138 kV to 230 ME (6.37%) / NEPTUNE\* b0675.3 (0.15%) / PECO (3.09%) / PPL kV (2.24%) / PSEG (2.42%) / RE (0.09%) / ECP\*\* (0.06%) AEC (1.02%) / APS (81.96%) / Convert Catoctin -DPL (0.85%) / JCPL (1.75%) / Carroll 138 kV to 230 ME (6.37%) / NEPTUNE\* b0675.4 kV (0.15%) / PECO (3.09%) / PPL (2.24%) / PSEG (2.42%) / RE (0.09%) / ECP\*\* (0.06%)AEC (1.02%) / APS (81.96%) / Convert portion of DPL (0.85%) / JCPL (1.75%) / Ringgold Substation ME (6.37%) / NEPTUNE\* b0675.5 from 138 kV to 230 kV (0.15%) / PECO (3.09%) / PPL (2.24%) / PSEG (2.42%) / RE (0.09%) / ECP\*\* (0.06%)AEC (1.02%) / APS (81.96%) / DPL (0.85%) / JCPL (1.75%) / Convert Catoctin Substation from 138 kV ME (6.37%) / NEPTUNE\* b0675.6 to 230 kV (0.15%) / PECO (3.09%) / PPL (2.24%) / PSEG (2.42%) / RE (0.09%) / ECP\*\* (0.06%)AEC (1.02%) / APS (81.96%) / Convert portion of DPL (0.85%) / JCPL (1.75%) / ME (6.37%) / NEPTUNE\* Carroll Substation from b0675.7 138 kV to 230 kV (0.15%) / PECO (3.09%) / PPL (2.24%) / PSEG (2.42%) / RE (0.09%) / ECP\*\* (0.06%)AEC (1.02%) / APS (81.96%) / Convert Monocacy DPL (0.85%) / JCPL (1.75%) / Substation from 138 kV ME (6.37%) / NEPTUNE\* b0675.8 to 230 kV (0.15%) / PECO (3.09%) / PPL (2.24%) / PSEG (2.42%) / RE (0.09%) / ECP\*\* (0.06%)

\*\*East Coast Power, L.L.C.

<sup>\*</sup>Neptune Regional Transmission System, LLC

Requirea 11	ansmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b0675.9	Convert Walkersville Substation from 138 kV to 230 kV		AEC (1.02%) / APS (81.96%) / DPL (0.85%) / JCPL (1.75%) / ME (6.37%) / NEPTUNE* (0.15%) / PECO (3.09%) / PPL (2.24%) / PSEG (2.42%) / RE (0.09%) / ECP** (0.06%)
b0676.1	Reconductor Doubs - Lime Kiln (#207) 230 kV		AEC (0.64%) / APS (86.70%) / DPL (0.53%) / JCPL (1.93%) / ME (4.04%) / NEPTUNE* (0.18%) / PECO (1.93%) / PENELEC (0.93%) / PSEG (2.92%) / RE (0.12%) / ECP** (0.08%)
b0676.2	Reconductor Doubs - Lime Kiln (#231) 230 kV		AEC (0.64%) / APS (86.70%) / DPL (0.53%) / JCPL (1.93%) / ME (4.04%) / NEPTUNE* (0.18%) / PECO (1.93%) / PENELEC (0.93%) / PSEG (2.92%) / RE (0.12%) / ECP** (0.08%)
b0677	Reconductor Double Toll Gate – Riverton with 954 ACSR		APS (100%)
b0678	Reconductor Glen Falls - Oak Mound 138 kV with 954 ACSR		APS (100%)
b0679	Reconductor Grand Point – Letterkenny with 954 ACSR		APS (100%)
b0680	Reconductor Greene – Letterkenny with 954 ACSR		APS (100%)
b0681	Replace 600/5 CT's at Franklin 138 kV		APS (100%)
b0682	Replace 600/5 CT's at Whiteley 138 kV		APS (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

Required 1	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b0684	Reconductor Guilford – South Chambersburg		
00004	with 954 ACSR		APS (100%)
b0685	Replace Ringgold 230/138 kV #3 with larger transformer		APS (71.93%) / JCPL (4.17%) / ME (6.79%) / NEPTUNE* (0.38%) / PECO (4.05%) / PENELEC (5.88%) / ECP** (0.18%) / PSEG (6.37%) / RE (0.25%)
b0704	Install a third Cabot 500/138 kV transformer		APS (74.36%) / DL (2.73%) PENELEC (22.91%)
b0797	Advance n0321 (Replace Doubs Circuit Breaker DJ2)		APS (100%)
b0798	Advance n0322 (Replace Doubs Circuit Breaker DJ3)		APS (100%)
b0799	Advance n0323 (Replace Doubs Circuit Breaker DJ6)		APS (100%)
b0800	Advance n0327 (Replace Doubs Circuit Breaker DJ16)		APS (100%)
b0941	Replace Opequon 138 kV breaker 'BUSTIE'		APS (100%)
b0942	Replace Butler 138 kV breaker '#1 BANK'		APS (100%)
b0943	Replace Butler 138 kV breaker '#2 BANK'		APS (100%)
b0944	Replace Yukon 138 kV breaker 'Y-8'		APS (100%)
b0945	Replace Yukon 138 kV breaker 'Y-3'		APS (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

Requirea 1	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b0946	Replace Yukon 138 kV breaker 'Y-1'		APS (100%)
b0947	Replace Yukon 138 kV breaker 'Y-5'		APS (100%)
b0948	Replace Yukon 138 kV breaker 'Y-2'		APS (100%)
b0949	Replace Yukon 138 kV breaker 'Y-19'		APS (100%)
b0950	Replace Yukon 138 kV breaker 'Y-4'		APS (100%)
b0951	Replace Yukon 138 kV breaker 'Y-9'		APS (100%)
b0952	Replace Yukon 138 kV breaker 'Y-11'		APS (100%)
b0953	Replace Yukon 138 kV breaker 'Y-13'		APS (100%)
b0954	Replace Charleroi 138 kV breaker '#1 XFMR BANK'		APS (100%)
b0955	Replace Yukon 138 kV breaker 'Y-7'		APS (100%)
b0956	Replace Pruntytown 138 kV breaker 'P-9'		APS (100%)
b0957	Replace Pruntytown 138 kV breaker 'P-12'		APS (100%)
b0958	Replace Pruntytown 138 kV breaker 'P-15'		APS (100%)
	· · · · · · · · · · · · · · · · · · ·	·	

Annual Revenue Requirement Responsible Customer(s) Required Transmission Enhancements Replace Charleroi 138 b0959 kV breaker '#2 XFMR BANK' APS (100%) Replace Pruntytown 138 b0960 kV breaker 'P-2' APS (100%) Replace Pruntytown 138 b0961 kV breaker 'P-5' APS (100%) Replace Yukon 138 kV b0962 breaker 'Y-18' APS (100%) Replace Yukon 138 kV b0963 breaker 'Y-10' APS (100%) Replace Pruntytown 138 b0964 kV breaker 'P-11' APS (100%) Replace Springdale 138 b0965 kV breaker '138E' APS (100%) Replace Pruntytown 138 b0966 kV breaker 'P-8' APS (100%) Replace Pruntytown 138 b0967 kV breaker 'P-14' APS (100%) Replace Ringgold 138 b0968 kV breaker '#3 XFMR BANK' APS (100%) Replace Springdale 138 b0969 kV breaker '138C' APS (100%) Replace Rivesville 138 b0970 kV breaker '#8 XFMR BANK' APS (100%) Replace Springdale 138 b0971 kV breaker '138F' APS (100%)

ransmission Ennancements	Annuai Revenue Requirement	Responsible Customer(s)
Replace Belmont 138 kV breaker 'B-16'		APS (100%)
Replace Springdale 138 kV breaker '138G'		APS (100%)
Replace Springdale 138 kV breaker '138V'		APS (100%)
Replace Armstrong 138 kV breaker 'BROOKVILLE'		APS (100%)
Replace Springdale 138 kV breaker '138P'		APS (100%)
Replace Belmont 138 kV breaker 'B-17'		APS (100%)
Replace Springdale 138 kV breaker '138U'		APS (100%)
Replace Springdale 138 kV breaker '138D'		APS (100%)
Replace Springdale 138 kV breaker '138R'		APS (100%)
Replace Yukon 138 kV breaker 'Y-12'		APS (100%)
Replace Yukon 138 kV breaker 'Y-17'		APS (100%)
Replace Yukon 138 kV breaker 'Y-14'		APS (100%)
Replace Rivesville 138 kV breaker '#10 XFMR BANK'		APS (100%)
Replace Belmont 138 kV breaker 'B-14'		APS (100%)
	Replace Belmont 138 kV breaker 'B-16'  Replace Springdale 138 kV breaker '138G'  Replace Springdale 138 kV breaker '138V'  Replace Armstrong 138 kV breaker 'BROOKVILLE'  Replace Springdale 138 kV breaker '138P'  Replace Belmont 138 kV breaker 'B-17'  Replace Springdale 138 kV breaker '138U'  Replace Springdale 138 kV breaker '138D'  Replace Springdale 138 kV breaker '138B'  Replace Springdale 138 kV breaker '138R'  Replace Yukon 138 kV breaker 'Y-12'  Replace Yukon 138 kV breaker 'Y-17'  Replace Yukon 138 kV breaker 'Y-14'  Replace Rivesville 138 kV breaker 'Y-14'  Replace Belmont 138 kV	Replace Belmont 138 kV breaker 'B-16'  Replace Springdale 138 kV breaker '138G'  Replace Springdale 138 kV breaker '138V'  Replace Armstrong 138 kV breaker 'BROOKVILLE'  Replace Springdale 138 kV breaker '138P'  Replace Belmont 138 kV breaker 'B-17'  Replace Springdale 138 kV breaker '138U'  Replace Springdale 138 kV breaker '138D'  Replace Springdale 138 kV breaker '138R'  Replace Yukon 138 kV breaker 'Y-12'  Replace Yukon 138 kV breaker 'Y-17'  Replace Yukon 138 kV breaker 'Y-14'  Replace Rivesville 138 kV breaker 'Y-14'  Replace Rivesville 138 kV breaker 'H10 XFMR BANK'  Replace Belmont 138 kV

Required i	ransmission Enhancements	Annuai Revenue Requirement	Responsible Customer(s)
b0986	Replace Armstrong 138 kV breaker 'RESERVE BUS'		APS (100%)
b0987	Replace Yukon 138 kV breaker 'Y-16'		APS (100%)
b0988	Replace Springdale 138 kV breaker '138T'		APS (100%)
b0989	Replace Edgelawn 138 kV breaker 'GOFF RUN #632'		APS (100%)
b0990	Change reclosing on Cabot 138 kV breaker 'C-9'		APS (100%)
b0991	Change reclosing on Belmont 138 kV breaker 'B-7'		APS (100%)
b0992	Change reclosing on Belmont 138 kV breaker 'B-12'		APS (100%)
b0993	Change reclosing on Belmont 138 kV breaker 'B-9'		APS (100%)
b0994	Change reclosing on Belmont 138 kV breaker 'B-19'		APS (100%)
b0995	Change reclosing on Belmont 138 kV breaker 'B-21'		APS (100%)
b0996	Change reclosing on Willow Island 138 kV breaker 'FAIRVIEW #84'		APS (100%)
b0997	Change reclosing on Cabot 138 kV breaker 'C-4'		APS (100%)
b0998	Change reclosing on Cabot 138 kV breaker 'C-1'		APS (100%)

Required T	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b0999	Replace Redbud 138 kV breaker 'BUS TIE'		APS (100%)
b1022.1	Reconfigure the Peters to Bethel Park 138 kV line and Elrama to Woodville 138 kV line to create a 138 kV path from Woodville to Peters and a 138 kV path from Elrama to Bethel Park		APS (96.98%) / DL (3.02%)
b1022.3	Add static capacitors at Smith 138 kV		APS (96.98%) / DL (3.02%)
b1022.4	Add static capacitors at North Fayette 138 kV		APS (96.98%) / DL (3.02%)
b1022.5	Add static capacitors at South Fayette 138 kV		APS (96.98%) / DL (3.02%)
b1022.6	Add static capacitors at Manifold 138 kV		APS (96.98%) / DL (3.02%)
b1022.7	Add static capacitors at Houston 138 kV		APS (96.98%) / DL (3.02%)
b1023.1	Install a 500/138 kV transformer at 502 Junction		APS (100%)
b1023.2	Construct a new Franklin - 502 Junction 138 kV line including a rebuild of the Whiteley - Franklin 138 kV line to double circuit		APS (100%)
b1023.3	Construct a new 502 Junction - Osage 138 kV line		APS (100%)

Required T	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
	Construct Braddock 138		
	kV breaker station that		
	connects the Charleroi -		
	Gordon 138 kV line,		
b1023.4	Washington - Franklin		
	138 kV line and the		
	Washington - Vanceville		
	138 kV line including a		
	66 MVAR capacitor		APS (100%)
	Increase the size of the		
b1027	shunt capacitors at Enon		
	138 kV		APS (100%)
	Raise three structures on		
b1028	the Osage - Collins Ferry		
01020	138 kV line to increase		
	the line rating		APS (100%)
	Reconductor the		
	Edgewater – Vasco Tap;		
b1128	Edgewater – Loyalhanna		
	138 kV lines with 954		
	ACSR		APS (100%)
	Reconductor the East		
b1129	Waynesboro – Ringgold		
	138 kV line with 954		A PG (1000()
	ACSR		APS (100%)
1 1 1 2 1	Upgrade Double Tollgate		
b1131	– Meadowbrook MDT		A DG (1000()
	Terminal Equipment		APS (100%)
	Upgrade Double		
b1132	Tollgate-Meadowbrook		
	MBG terminal		A DG (1000()
	equipment		APS (100%)
b1133	Upgrade terminal		A DG (1000)
	equipment at Springdale		APS (100%)
	Reconductor the		
1 1 1 2 7	Bartonville –		
b1135	Meadowbrook 138 kV		
	line with high		A DG (1000/)
	temperature conductor		APS (100%)

ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
Reconductor the Eastgate		
– Luxor 138 kV;		APS (78.59%) / PENELEC
Eastgate – Sony 138 kV		(14.08%) / ECP** (0.23%) /
line with 954 ACSR		PSEG (6.83%) / RE (0.27%)
Reconductor the King		
Farm – Sony 138 kV line		
with 954 ACSR		APS (100%)
Reconductor the Yukon		
– Waltz Mills 138 kV		
line with high		
temperature conductor		APS (100%)
Reconductor the Bracken		
Junction – Luxor 138 kV		
line with 954 ACSR		APS (100%)
Reconductor the		
Sewickley – Waltz Mills		
Tap 138 kV line with		
high temperature		
conductor		APS (100%)
Reconductor the		
Bartonsville –		
Stephenson 138 kV;		
Stonewall – Stephenson		
138 kV line with 954		
ACSR		APS (100%)
Reconductor the		
Youngwood – Yukon		
138 kV line with high		APS (89.92%) / PENELEC
temperature conductor		(10.08%)
Reconductor the Bull		
Creek Junction – Cabot		
138 kV line with high		
temperature conductor		APS (100%)
	Reconductor the Eastgate  - Luxor 138 kV;  Eastgate - Sony 138 kV line with 954 ACSR  Reconductor the King Farm - Sony 138 kV line with 954 ACSR  Reconductor the Yukon  - Waltz Mills 138 kV line with high temperature conductor  Reconductor the Bracken Junction - Luxor 138 kV line with 954 ACSR  Reconductor the Sewickley - Waltz Mills Tap 138 kV line with high temperature conductor  Reconductor the Bartonsville - Stephenson 138 kV; Stonewall - Stephenson 138 kV line with 954 ACSR  Reconductor the Youngwood - Yukon 138 kV line with high temperature conductor  Reconductor the Youngwood - Yukon 138 kV line with high temperature conductor Reconductor the Bull Creek Junction - Cabot 138 kV line with high	Reconductor the Eastgate  - Luxor 138 kV; Eastgate - Sony 138 kV line with 954 ACSR  Reconductor the King Farm - Sony 138 kV line with 954 ACSR  Reconductor the Yukon  - Waltz Mills 138 kV line with high temperature conductor  Reconductor the Bracken Junction - Luxor 138 kV line with 954 ACSR  Reconductor the Bracken Junction - Luxor 138 kV line with 954 ACSR  Reconductor the Sewickley - Waltz Mills  Tap 138 kV line with high temperature conductor  Reconductor the  Bartonsville -  Stephenson 138 kV; Stonewall - Stephenson  138 kV line with 954  ACSR  Reconductor the  Youngwood - Yukon  138 kV line with high temperature conductor  Reconductor the Bull  Creek Junction - Cabot  138 kV line with high temperature conductor

<sup>\*\*</sup>East Coast Power, L.L.C.

Reconductor the Lawson   Junction - Cabot 138 kV   line with high   temperature conductor	Required T	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
Seconductor the   Seconducto		Reconductor the Lawson		
Inter with high   temperature conductor   Replace Layton -   Smithton #61 138 kV   line structures to increase   line rating   APS (100%)	b1145	Junction – Cabot 138 kV		
Replace Layton - Smithton #61 138 kV   line structures to increase   line rating   Replace Smith - Yukon		line with high		
Smithton #61 138 kV   line structures to increase   line rating   APS (100%)		temperature conductor		APS (100%)
Ine structures to increase   line rating		Replace Layton -		
Ine structures to increase   line rating   Replace Smith – Yukon   138 kV line structures to increase line rating   APS (100%)	h11/16	Smithton #61 138 kV		
Replace Smith - Yukon   138 kV line structures to increase line rating   APS (100%)	01146	line structures to increase		
b1147		line rating		APS (100%)
Increase line rating				
Reconductor the   Loyalhanna - Luxor 138   kV line with 954 ACSR   APS (100%)	b1147	138 kV line structures to		
b1148		increase line rating		APS (100%)
Reconductor the Luxor - Stony Springs Junction   138 kV line with 954   ACSR   APS (100%)				
Reconductor the Luxor - Stony Springs Junction 138 kV line with 954 ACSR	b1148			
b1149         Stony Springs Junction 138 kV line with 954 ACSR         APS (100%)           b1150         Upgrade terminal equipment at Social Hall equipment at Social Hall         APS (100%)           B1151         Reconductor the Greenwood – Redbud 138 kV line with 954 ACSR         APS (100%)           b1152         Reconductor Grand Point – South Chambersburg Pound Point – Pound Point – Pound Point – Pound Pound Point – Poun		kV line with 954 ACSR		APS (100%)
138 kV line with 954 ACSR  APS (100%)  b1150  Upgrade terminal equipment at Social Hall  Reconductor the Greenwood – Redbud 138 kV line with 954 ACSR  APS (100%)  b1151  Reconductor Grand Point – South Chambersburg  APS (100%)  b1159  Replace Peters 138 kV breaker 'Bethel P OCB'  APS (100%)  b1160  Replace Peters 138 kV breaker 'Cecil OCB'  Replace Pouble Toll  Gate 138 kV breaker 'DRB-2'  Replace Double Toll  Gate 138 kV breaker  APS (100%)				
holiso  b1150  Upgrade terminal equipment at Social Hall  Reconductor the Greenwood – Redbud 138 kV line with 954 ACSR  b1151  B1152  Reconductor Grand Point – South Chambersburg  b1159  Replace Peters 138 kV breaker 'Cecil OCB'  B1160  Replace Peters 138 kV breaker 'Union JctOCB'  Replace Double Toll  Gate 138 kV breaker	h11/10			
b1150 Upgrade terminal equipment at Social Hall  Reconductor the Greenwood – Redbud 138 kV line with 954 ACSR  Reconductor Grand Point – South Chambersburg  Beplace Peters 138 kV breaker 'Bethel P OCB'  B1160 Replace Peters 138 kV breaker 'Cecil OCB'  B1161 Replace Peters 138 kV breaker 'Union JctOCB'  Replace Double Toll Gate 138 kV breaker 'DRB-2'  Replace Double Toll Gate 138 kV breaker	01149	138 kV line with 954		
bilist				APS (100%)
Reconductor the   Greenwood - Redbud   138 kV line with 954   ACSR   APS (100%)	h1150			
b1151       Greenwood – Redbud 138 kV line with 954 ACSR       APS (100%)         b1152       Reconductor Grand Point – South Chambersburg       APS (100%)         b1159       Replace Peters 138 kV breaker 'Bethel P OCB'       APS (100%)         b1160       Replace Peters 138 kV breaker 'Cecil OCB'       APS (100%)         b1161       Replace Peters 138 kV breaker 'Union JctOCB'       APS (100%)         B1162       Gate 138 kV breaker 'DRB-2'       APS (100%)         B1163       Replace Double Toll Gate 138 kV breaker       APS (100%)	01130			APS (100%)
138 kV line with 954 ACSR  Reconductor Grand Point — South Chambersburg  Replace Peters 138 kV breaker 'Bethel P OCB'  APS (100%)  Replace Peters 138 kV breaker 'Cecil OCB'  APS (100%)  Replace Peters 138 kV breaker 'Cecil OCB'  APS (100%)  Replace Peters 138 kV breaker 'Union JctOCB'  Replace Double Toll  Gate 138 kV breaker 'DRB-2'  Replace Double Toll  Gate 138 kV breaker  Gate 138 kV breaker				
ACSR  Reconductor Grand Point — South Chambersburg  B1159  Replace Peters 138 kV breaker 'Bethel P OCB'  B1160  Replace Peters 138 kV breaker 'Cecil OCB'  Replace Peters 138 kV breaker 'Union JctOCB'  Replace Double Toll  Gate 138 kV breaker  'DRB-2'  Replace Double Toll  Gate 138 kV breaker	h1151			
B1152 Reconductor Grand Point - South Chambersburg  Replace Peters 138 kV breaker 'Bethel P OCB'  APS (100%)  B1160 Replace Peters 138 kV breaker 'Cecil OCB'  APS (100%)  Replace Peters 138 kV breaker 'Union JctOCB'  Replace Double Toll Gate 138 kV breaker 'DRB-2'  Replace Double Toll Gate 138 kV breaker  APS (100%)	01131	138 kV line with 954		
b1152 — South Chambersburg  B1159 Replace Peters 138 kV breaker 'Bethel P OCB'  B1160 Replace Peters 138 kV breaker 'Cecil OCB'  B1161 Replace Peters 138 kV breaker 'Union JctOCB'  Replace Peters 138 kV breaker 'Union JctOCB'  Replace Double Toll  Gate 138 kV breaker 'DRB-2'  Replace Double Toll  Gate 138 kV breaker  APS (100%)  APS (100%)		ACSR		APS (100%)
- South Chambersburg  Replace Peters 138 kV breaker 'Bethel P OCB'  Breplace Peters 138 kV breaker 'Cecil OCB'  APS (100%)  Replace Peters 138 kV breaker 'Cecil OCB'  APS (100%)  Replace Peters 138 kV breaker 'Union JctOCB'  APS (100%)  Replace Double Toll  Gate 138 kV breaker 'DRB-2'  Replace Double Toll  Gate 138 kV breaker  APS (100%)	b1152	Reconductor Grand Point		
breaker 'Bethel P OCB'  Breaker 'Bethel P OCB'  Replace Peters 138 kV breaker 'Cecil OCB'  APS (100%)  Replace Peters 138 kV breaker 'Union JctOCB'  Replace Double Toll  Gate 138 kV breaker 'DRB-2'  Replace Double Toll  Gate 138 kV breaker  Gate 138 kV breaker		<ul><li>South Chambersburg</li></ul>		APS (100%)
breaker 'Bethel P OCB'  Replace Peters 138 kV breaker 'Cecil OCB'  APS (100%)  Replace Peters 138 kV breaker 'Union JctOCB'  Replace Double Toll Gate 138 kV breaker 'DRB-2'  Replace Double Toll Gate 138 kV breaker	h1150	Replace Peters 138 kV		
breaker 'Cecil OCB'  Replace Peters 138 kV breaker 'Union JctOCB'  Replace Double Toll  Gate 138 kV breaker 'DRB-2'  Replace Double Toll  Gate 138 kV breaker  Gate 138 kV breaker	01137	breaker 'Bethel P OCB'		APS (100%)
breaker 'Cecil OCB'  Replace Peters 138 kV breaker 'Union JctOCB'  Replace Double Toll  Gate 138 kV breaker 'DRB-2'  Replace Double Toll  Gate 138 kV breaker  Gate 138 kV breaker	h1160			
breaker 'Union JctOCB'  Replace Double Toll  b1162 Gate 138 kV breaker  'DRB-2'  Replace Double Toll  b1163 Gate 138 kV breaker	01100	breaker 'Cecil OCB'		APS (100%)
Replace Double Toll  b1162 Gate 138 kV breaker  'DRB-2'  Replace Double Toll  b1163 Gate 138 kV breaker	1.1171	Replace Peters 138 kV		
b1162 Gate 138 kV breaker 'DRB-2' Replace Double Toll b1163 Gate 138 kV breaker	01101	breaker 'Union JctOCB'		APS (100%)
'DRB-2' Replace Double Toll b1163 Gate 138 kV breaker  APS (100%)	b1162	Replace Double Toll		
Replace Double Toll b1163 Gate 138 kV breaker		Gate 138 kV breaker		
b1163 Gate 138 kV breaker		'DRB-2'		APS (100%)
b1163 Gate 138 kV breaker				
'DT 138 kV OCB' APS (100%)	b1163	Gate 138 kV breaker		
		'DT 138 kV OCB'		APS (100%)

Required I	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b1164	Replace Cecil 138 kV breaker 'Enlow OCB'		APS (100%)
b1165	Replace Cecil 138 kV breaker 'South Fayette'		APS (100%)
b1166	Replace Wylie Ridge 138 kV breaker 'W-9'		APS (100%)
b1167	Replace Reid 138 kV breaker 'RI-2'		APS (100%)
b1171.1	Install the second Black Oak 500/138 kV transformer, two 138 kV breaker, and related substation work		BGE (20.76%) / DPL (3.14%) / Dominion (39.55%) / ME (2.71%) / PECO (3.36%) / PEPCO (30.48%)
b1171.3	Install six 500 kV breakers and remove BOL1 500 kV breaker at Black Oak		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b1200	Reconductor Double Toll Gate – Greenwood 138 kV with 954 ACSR conductor		APS (100%)
b1221.1	Convert Carbon Center from 138 kV to a 230 kV ring bus		APS (100%)
b1221.2	Construct Bear Run 230 kV substation with 230/138 kV transformer		APS (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required 1	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
	Loop Carbon Center		
b1221.3	Junction – Williamette		
	line into Bear Run		APS (100%)
	Carbon Center – Carbon		
	Center Junction &		
b1221.4	Carbon Center Junction		
	– Bear Run conversion		
	from 138 kV to 230 kV		APS (100%)
	Reconductor Willow-		\ /
b1230	Eureka & Eurkea-St		
	Mary 138 kV lines		APS (100%)
			AEC (1.40%) / APS (75.74%) /
	D 1		DPL (1.92%) / JCPL (2.92%) /
1 1000	Reconductor Nipetown –		ME (6.10%) / NEPTUNE*
b1232	Reid 138 kV with 1033		(0.27%) / PECO (4.40%) /
	ACCR		PENELEC (3.26%) / PPL
			(3.99%)
	Upgrade terminal		\ /
b1233.1	equipment at		
	Washington		APS (100%)
	Replace structures		, ,
b1234	between Ridgeway and		
	Paper city		APS (100%)
	Reconductor the Albright		
1 1005	– Black Oak AFA 138		APS (30.25%) / BGE (16.10%)
b1235	kV line with 795		/ Dominion (30.51%) / PEPCO
	ACSS/TW		(23.14%)
	Upgrade terminal		,
	equipment at Albright,		
b1237	replace bus and line side		
	breaker disconnects and		
	leads, replace breaker		
	risers, upgrade RTU and		
	line		APS (100%)
	Install a 138 kV 44		, ,
b1238	MVAR capacitor at		
	Edgelawn substation		APS (100%)
•		•	. ,

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required 1	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
	Install a 138 kV 44		
b1239	MVAR capacitor at		
	Ridgeway substation		APS (100%)
	Install a 138 kV 44		
b1240	MVAR capacitor at Elko		
	Substation		APS (100%)
	Upgrade terminal		
	equipment at		
b1241	Washington substation		
	on the GE		
	Plastics/DuPont terminal		APS (100%)
	Replace structures		
b1242	between Collins Ferry		
	and West Run		APS (100%)
	Install a 138 kV		
b1243	capacitor at Potter		
	Substation		APS (100%)
b1261	Replace Butler 138 kV		
01201	breaker '1-2 BUS 138'		APS (100%)
	Install 2nd 500/138 kV		
b1383	transformer at 502		APS (93.27%) / DL (5.39%) /
	Junction		PENELEC (1.34%)
	Reconductor		
	approximately 2.17 miles		
b1384	of Bedington –		
	Shepherdstown 138 kV		
	with 954 ACSR		APS (100%)
	Reconductor Halfway –		
b1385	Paramount 138 kV with		
	1033 ACCR		APS (100%)
	Reconductor Double		
b1386	Tollgate – Meadow		
	Brook 138 kV ckt 2 with		APS (93.33%) / BGE (3.39%) /
	1033 ACCR		PEPCO (3.28%)
b1387	Reconductor Double		
	Tollgate – Meadow		APS (93.33%) / BGE (3.39%) /
	Brook 138 kV		PEPCO (3.28%)
	Reconductor Feagans		
b1388	Mill – Millville 138 kV		
	with 954 ACSR		APS (100%)

Annual Revenue Requirement

Required Transmission Enhancements

at 15 seconds

138 kV breaker

kA breaker

b1404

b1405

Replace the Kiski Valley

'Vandergrift' with a 40

breaker 'GARETTRJCT' at 1 shot at 15 seconds

Change reclosing on Armstrong 138 kV

Responsible Customer(s) Reconductor Bens Run – b1389 St. Mary's 138 kV with AEP (12.40%) / APS (17.80%) 954 ACSR / DL (69.80%) Replace Bus Tie Breaker b1390 at Opequon APS (100%) Replace Line Trap at b1391 Gore APS (100%) Replace structure on b1392 Belmont – Trissler 138 kV line APS (100%) Replace structures b1393 Kingwood – Pruntytown 138 kV line APS (100%) Upgrade Terminal b1395 Equipment at Kittanning APS (100%) Change reclosing on Pruntytown 138 kV b1401 breaker 'P-16' to 1 shot at 15 seconds APS (100%) Change reclosing on Rivesville 138 kV b1402 breaker 'Pruntytown #34' to 1 shot at 15 seconds APS (100%) Change reclosing on Yukon 138 kV breaker b1403 'Y21 Shepler' to 1 shot

APS (100%)

APS (100%)

APS (100%)

Required T	ransmission Enhancements	Annual Revenue Requiremen	it Responsible Customer(s)
	Change reclosing on Armstrong 138 kV		
b1406	breaker 'KITTANNING'		
	to 1 shot at 15 seconds		APS (100%)
	Change reclosing on		At 5 (10070)
	Armstrong 138 kV		
b1407	breaker 'BURMA' to 1		
	shot at 15 seconds		APS (100%)
	Replace the Weirton 138		At 5 (10070)
b1408	kV breaker 'Tidd 224'		
01400	with a 40 kA breaker		APS (100%)
	Replace the Cabot 138		Al 3 (10070)
	kV breaker 'C9 Kiski		
b1409	Valley' with a 40 kA		
	breaker		APS (100%)
	oreaker		Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd (13.46%)
			/ Dayton (2.12%) / DEOK
			(3.37%) / DL (1.76%) / DPL
			(2.55%) / Dominion (12.97%) /
			EKPC (1.81%) / JCPL (3.92%) /
			ME (1.95%) / NEPTUNE*
	Terminal Equipment		(0.24%) / OVEC (0.07%) /
b1507.2	upgrade at Doubs		PECO (5.39%) / PENELEC
	substation		(1.84%) / PEPCO (3.71%) / PPL
			(4.78%) / PSEG (6.40%) / RE
			(4.78%) / PSEG (0.40%) / RE $(0.27%)$
			(0.2770)
			DFAX Allocation:
			APS ( <del>20.09</del> 20.37%) / BGE
			$(\frac{13.4612.89\%}{})$ / Dominion
			( <del>52.77</del> <u>53.5</u> 2%) / PEPCO
			$(\frac{13.68}{13.22}\%)$

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / Mt. Storm – Doubs ME (1.95%) / NEPTUNE\* transmission line rebuild (0.24%) / OVEC (0.07%) / b1507.3 in Maryland – Total line PECO (5.39%) / PENELEC mileage for APS is 2.71 (1.84%) / PEPCO (3.71%) / PPL miles (4.78%) / PSEG (6.40%) / RE (0.27%)**DFAX Allocation:** APS (<del>20.09</del>20.37%) / BGE (<del>13.46</del>12.89%) / Dominion (<del>52.77</del>53.52%) / PEPCO (13.6813.22%)Install 59.4 MVAR b1510 capacitor at Waverly APS (100%) Install a 230 kV breaker b1672 at Carbon Center APS (100%) Replace Doubs circuit b0539 breaker DJ11 APS (100%) Replace Doubs circuit b0540 breaker DJ12 APS (100%) Replace Doubs circuit b0541 breaker DJ13 APS (100%) Replace Doubs circuit b0542 breaker DJ20 APS (100%) Replace Doubs circuit b0543 breaker DJ21 APS (100%) Remove instantaneous

reclose from Eastalco circuit breaker D-26

b0544

APS (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Remove instantaneous b0545 reclose from Eastalco circuit breaker D-28 APS (100%) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / Install 200 MVAR NEPTUNE\* (0.24%) / OVEC (0.07%) / capacitor at Meadow b0559 Brook 500 kV PECO (5.39%) / PENELEC (1.84%) / substation PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** APS (<del>30.25</del>33.17%) / <del>BGE (8.80%) /</del> Dominion (46.8051.31%) / PEPCO (14.1515.52%)**Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE\* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / Install 250 MVAR PEPCO (3.71%) / PPL (4.78%) / PSEG b0560 capacitor at Kemptown (6.40%) / RE (0.27%) 500 kV substation **DFAX Allocation:** AEC (5.01%) / AEP (4.39%) / APS (9.26%) / BGE (4.43%) / DL (0.02%) / DPL (6.91%) / Dominion (10.82%) / JCPL (11.64%) / ME (2.94%) / NEPTUNE\* (1.12%) / PECO (14.51%) / PEPCO (6.11%) / PPL (6.39%) / PSEG (15.86%) / RE (0.59%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Tr	ansmission Enhancements	Annual Revenue Requireme	*
b1803	Build a 300 MVAR Switched Shunt at Doubs 500 kV and increase (~50 MVAR) in size the existing Switched Shunt at Doubs 500 kV		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%)
			APS (20.0920.37%) / BGE (13.4612.89%) / Dominion (52.7753.52%) / PEPCO (13.6813.22%)
b1804	Install a new 600 MVAR SVC at Meadowbrook 500 kV		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%)
b1816.1	Replace relaying at the Mt. Airy substation on the Carroll - Mt. Airy		APS (100%)

230 kV line		

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Tr	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b1816.2	Adjust the control settings of all existing capacitors at Mt Airy 34.5 kV, Monocacy 138 kV, Ringgold 138 kV served by Potomac Edison's Eastern 230 kV network to ensure that all units will be on during the identified N-1-1 contingencies		APS (100%)
b1816.3	Replace existing unidirectional LTC controller on the No. 4, 230/138 kV transformer at Carroll substation with a bidirectional unit		APS (100%)
b1816.4	Isolate and bypass the 138 kV reactor at Germantown Substation		APS (100%)
b1816.6	Replace 336.4 ACSR conductor on the Catoctin - Carroll 138 kV line using 556.5 ACSR (26/7) or equivalent on existing structures (12.7 miles), 800 A wave traps at Carroll and Catoctin with 1200 A units, and 556.5 ACSR SCCIR (Sub-conductor) line risers and bus traps with 795 ACSR or equivalent		APS (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace the 1200 A wave trap, line risers, breaker risers with 1600 b1822 A capacity terminal equipment at Reid 138 kV SS APS (100%) Replace the 800 A wave trap with a 1200 A wave b1823 trap at Millville 138 kV substation APS (100%) Reconductor Grant Point - Guilford 138 kV line b1824 approximately 8 miles of 556 ACSR with 795 **ACSR** APS (100%) Replace the 800 Amp line trap at Butler 138 b1825 kV Sub on the Cabot East 138 kV line APS (100%) Change the CT ratio at b1826 Double Toll Gate 138 kV SS on MDT line APS (100%) Change the CT ratio at b1827 Double Toll Gate 138 kV SS on MBG line APS (100%) Reconductor the Bartonville – Stephenson 3.03 mile 138 kV line of b1828.1 556 ACSR with 795 **ACSR** APS (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Reconductor the Stonewall – Stephenson 2.08 mile 138 kV line of b1828.2 556 ACSR with 795 ACSR APS (100%) Replace the existing 138 kV 556.5 ACSR substation conductor risers with 954 ACSR at b1829 the Redbud 138 kV substation, including but not limited to the line side disconnect leads APS (100%) Replace 1200 A wave trap and 1024 ACAR breaker risers at Halfway 138 kV substation, and b1830 replace 1024 ACAR breaker risers at Paramount 138 kV substation APS (100%) Replace the 1200 A line side and bus side disconnect switches with 1600 A switches, replace b1832 bus side, line side, and disconnect leads at Lime Kiln SS on the Doubs -Lime Kiln 1 (207) 230 kV line terminal APS (100%) Replace the 1200 A line side and bus side disconnect switches with 1600 A switches, replace b1833 bus side, line side, and disconnect leads at Lime Kiln SS on the Doubs -Lime Kiln 2 (231) 230 kV line terminal APS (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Reconductor 14.3 miles of 556 ACSR with 795 ACSR from Old Chapel to Millville 138 kV and b1835 APS (37.68%) / Dominion upgrade line risers at Old Chapel 138 kV and (34.46%) / PEPCO (13.69%) / BGE (11.45%) / ME (2.01%) / Millville 138 kV and PENELEC (0.53%) / DL replace 1200 A wave trap at Millville 138 kV (0.18%)Replace 1200 A wave b1836 trap with 1600 A wave trap at Reid 138 kV SS APS (100%) Replace 750 CU breaker risers with 795 ACSR at Marlowe 138 kV and b1837 replace 1200 A wave traps with 1600 A wave traps at Marlowe 138 kV and Bedington 138 kV APS (100%) Replace the 1200 A Bedington 138 kV line air switch and the 1200 A 138 kV bus tie air b1838 switch at Nipetown 138 kV with 1600 A switches APS (100%) Install additional 33 MVAR capacitors at b1839 Grand Point 138 kV SS and Guildford 138 kV SS APS (100%)

Required	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
	Construct a 138 kV line		
b1840	between Buckhannon		
01040	and Weston 138 kV		
	substations		APS (100%)
	Replace line trap at		
b1902	Stonewall on the		
01902	Stephenson 138 kV line		
	terminal		APS (100%)
	Loop the Homer City-		
	Handsome Lake 345 kV		
b1941	line into the Armstrong		
01941	substation and install a		
	345/138 kV transformer		APS (67.86%) / PENELEC
	at Armstrong		(32.14%)
	Change the CT ratio at		
b1942	Millville to improve the		
01772	Millville – Old Chapel		
	138 kV line ratings		APS (100%)
	Convert Moshannon		APS (41.06%) / DPL (6.68%) /
b1964	substation to a 4 breaker		JCPL (5.48%) / ME (10.70%) /
01704	230 kV ring bus		NEPTUNE* (0.53%) / PECO
			(15.53%) / PPL (20.02%)
	Install a 44 MVAR 138		
b1965	kV capacitor at Luxor		
	substation		APS (100%)
	Upgrade the AP portion		
	of the Elrama – Mitchell		
b1986	138 kV line by replace		
01700	breaker risers on the		
	Mitchell 138 kV bus on		
	the Elrama terminal		APS (100%)
	Reconductor the Osage-		
	Collins Ferry 138 kV		
b1987	line with 795 ACSS.		
- 170,	Upgrade terminal		
	equipment at Osage and		
	Collins Ferry		APS (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Raise structures between Lake Lynn and West Run to eliminate the b1988 clearance de-rates on the West Run – Lake Lynn 138 kV line APS (100%) Raise structures between Collins Ferry and West Run to eliminate the b1989 clearance de-rates on the Collins Ferry - West Run 138 kV line APS (100%) Replace Weirt 138 kV breaker 'Sb2095 TORONTO226' with 63 kA rated breaker APS (100%) Revise the reclosing of b2096 Weirt 138 kV breaker '2&5 XFMR' APS (100%) Replace Ridgeley 138 b2097 kV breaker '#2 XFMR OCB' APS (100%) Revise the reclosing of Ridgeley 138 kV breaker b2098 'AR3' with 40 kA rated breaker APS (100%) Revise the reclosing of b2099 Ridgeley 138 kV breaker 'RC1' APS (100%) Replace Ridgeley 138 kV breaker 'WC4' with b2100 40 kA rated breaker APS (100%) Replace Ridgeley 138 kV breaker '1 XFMR b2101 OCB' with 40 kA rated breaker APS (100%) Replace Armstrong 138 kV breaker b2102 'GARETTRJCT' with 40 kA rated breaker APS (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace Armstrong 138 b2103 kV breaker 'BURMA' with 40 kA rated breaker APS (100%) Replace Armstrong 138 kV breaker b2104 'KITTANNING' with 40 kA rated breaker APS (100%) Replace Armstrong 138 kV breaker b2105 'KISSINGERJCT' with 40 kA rated breaker APS (100%) Replace Wylie Ridge b2106 345 kV breaker 'WK-1' with 63 kA rated breaker APS (100%) Replace Wylie Ridge b2107 345 kV breaker 'WK-2' with 63 kA rated breaker APS (100%) Replace Wylie Ridge b2108 345 kV breaker 'WK-3' with 63 kA rated breaker APS (100%) Replace Wylie Ridge b2109 345 kV breaker 'WK-4' with 63 kA rated breaker APS (100%) Replace Wylie Ridge 345 kV breaker 'WK-6' b2110 with 63 kA rated breaker APS (100%) Replace Wylie Ridge b2111 138 kV breaker 'WK-7' with 63 kA rated breaker APS (100%) Replace Wylie Ridge b2112 345 kV breaker 'WK-5' APS (100%) Replace Weirton 138 kV b2113 breaker 'NO 6 XFMR' with 63 kA rated breaker APS (100%) Replace Armstrong 138 kV breaker 'Bus-Tie' b2114 (Status On-Hold pending retirement) APS (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Add a new 138 kV line b2124.1 exit APS (100%) Construct a 138 kV ring b2124.2 bus and install a 138/69 kV autotransformer APS (100%) Add new 138 kV line exit and install a 138/25 kV b2124.3 transformer APS (100%) Construct approximately b2124.4 5.5 miles of 138 kV line APS (100%) Convert approximately b2124.5 7.5 miles of 69 kV to 138 kV APS (100%) Install a 75 MVAR 230 b2156 kV capacitor at Shingletown Substation APS (100%) Replace 800A wave trap b2165 at Stonewall with a 1200 A wave trap APS (100%) Reconductor the Millville - Sleepy Hollow 138 kV 4.25 miles of 556 ACSR with 795 ACSR, upgrade b2166 line risers at Sleepy Hollow, and change 1200 A CT tap at Millville to 800 APS (100%) For Grassy Falls 138 kV Capacitor bank adjust turn-on voltage to 1.0 pu with a high limit of 1.04 pu, For Crupperneck and b2168 Powell Mountain 138 kV Capacitor Banks adjust turn-on voltage to 1.01 pu with a high limit of 1.035 APS (100%) pu

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace/Raise structures on the Yukon-Smithton b2169 138 kV line section to eliminate clearance de-APS (100%) Replace/Raise structures on the Smithton-Shepler b2170 Hill Jct 138 kV line section to eliminate clearance de-rate APS (100%) Replace/Raise structures on the Parsons-William b2171 138 kV line section to eliminate clearance de-APS (100%) Replace/Raise structures on the Parsons - Loughs b2172 Lane 138 kV line section to eliminate clearance de-rate APS (100%)

#### SCHEDULE 12 – APPENDIX

(17) American Electric Power Service Corporation on behalf of its affiliate companies: AEP Appalachian Transmission Company, Inc.; AEP Indiana Michigan Transmission Company, Inc.; AEP Kentucky Transmission Company, Inc.; AEP Ohio Transmission Company, Inc.; AEP West Virginia Transmission Company, Inc.; Appalachian Power Company; Indiana Michigan Power Company; Kentucky Power Company; Kingsport Power Company; Ohio Power Company and Wheeling Power Company

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Install a 765/138 kV b0318 AEP (99.00%) / PEPCO (1.00%) transformer at Amos Replace entrance conductors, wave traps, and risers at the Tidd 345 kV station on the Tidd – Canton b0324 Central 345 kV circuit AEP (100%) Replace Cook 345 kV b0447 breaker M2 AEP (100%) Replace Cook 345 kV b0448 breaker N2 AEP (100%) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE\* (0.24%) / OVEC (0.07%) / PECO (5.39%) / As specified under Construct an Amos – PENELEC (1.84%) / PEPCO the procedures b0490 Bedington 765 kV circuit (3.71%) / PPL (4.78%) / PSEG detailed in (AEP equipment) (6.40%) / RE (0.27%) Attachment H-19B **DFAX Allocation:** AEC (5.01%) / AEP (4.39%) / APS (9.26%) / BGE (4.43%) / DL (0.02%) / DPL (6.91%) / Dominion (10.82%) / JCPL (11.64%) / ME (2.94%) / NEPTUNE\* (1.12%) / PECO (14.51%) / PEPCO (6.11%) / PPL (6.39%) / PSEG (15.86%) / RE (0.59%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required 7	Transmission Enhancements	Annual Revenue Requ	uirement	Responsible Customer(s)
b0490.2	Replace Amos 138 kV breaker 'B'		Load- AEC (1.4 (5.64% (4.12%) (2.12%) (1.76%) (12.97% (3.92%) (0.24% (5.39%) PEPCC	-Ratio Share Allocation: 67%) / AEP (13.94%) / APS %) / ATSI (8.02%) / BGE / ComEd (13.46%) / Dayton %) / DEOK (3.37%) / DL / DPL (2.55%) / Dominion %) / EKPC (1.81%) / JCPL / ME (1.95%) / NEPTUNE* ) / OVEC (0.07%) / PECO %) / PENELEC (1.84%) / D (3.71%) / PPL (4.78%) / G (6.40%) / RE (0.27%)
			AEC (5. (9.26%) / / DPL (6. JCPL NEP' (14.51%)	DFAX Allocation: .01%) / AEP (4.39%) / APS / BGE (4.43%) / DL (0.02%) 91%) / Dominion (10.82%) / (11.64%) / ME (2.94%) / TUNE* (1.12%) / PECO %) / PEPCO (6.11%) / PPL %) / PSEG (15.86%) / RE (0.59%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required 7	Transmission Enhancements	Annual Revenue Req	uirement	Responsible Customer(s)
			Load-	-Ratio Share Allocation:
			AEC (1.	67%) / AEP (13.94%) / APS
			`	%) / ATSI (8.02%) / BGE
			`	/ ComEd (13.46%) / Dayton
				%) / DEOK (3.37%) / DL
			,	/ DPL (2.55%) / Dominion
			/	%) / EKPC (1.81%) / JCPL
			`	/ ME (1.95%) / NEPTUNE*
				) / OVEC (0.07%) / PECO
			`	%) / PENELEC (1.84%) /
1.0400.2	Replace Amos 138 kV		`	O (3.71%) / PPL (4.78%) /
b0490.3	breaker 'B1'			G (6.40%) / RE (0.27%)
				DFAX Allocation:
			AEC (5	.01%) / AEP (4.39%) / APS
			(9.26%)	BGÉ (4.43%) / DL (0.02%)
			/ DPL (6.	91%) / Dominion (10.82%) /
			,	(11.64%) / ME (2.94%) /
			NEP'	TUNE* (1.12%) / PECO
			(14.519	%) / PEPCO (6.11%) / PPL
			`	%) / PSEG (15.86%) / RE
				(0.59%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required 7	Transmission Enhancements	Annual Revenue Req	uirement	Responsible Customer(s)
ь0490.4	Replace Amos 138 kV breaker 'C'		AEC (1.6 (5.64%) (4.12%) / (2.12%) (1.76%) / (12.97%) (3.92%) / (0.24%) (5.39%) PEPCO	Ratio Share Allocation: 7%) / AEP (13.94%) / APS 6) / ATSI (8.02%) / BGE ComEd (13.46%) / Dayton 6) / DEOK (3.37%) / DL / DPL (2.55%) / Dominion 6) / EKPC (1.81%) / JCPL ME (1.95%) / NEPTUNE* / OVEC (0.07%) / PECO 6) / PENELEC (1.84%) / 0 (3.71%) / PPL (4.78%) / 6 (6.40%) / RE (0.27%)
			AEC (5.0 (9.26%) / / DPL (6.9 JCPL ( NEPT (14.51%	DFAX Allocation: 01%) / AEP (4.39%) / APS BGE (4.43%) / DL (0.02%) 01%) / Dominion (10.82%) / (11.64%) / ME (2.94%) / TUNE* (1.12%) / PECO 6) / PEPCO (6.11%) / PPL 6) / PSEG (15.86%) / RE (0.59%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required 7	Transmission Enhancements	Annual Revenue Req	uirement	Responsible Customer(s)
b0490.5	Replace Amos 138 kV breaker 'C1'		AEC (1 (5.649) (4.12%) (2.129) (1.76%) (12.979) (3.92%) (0.24%) (5.399) PEPCO	-Ratio Share Allocation: 67%) / AEP (13.94%) / APS %) / ATSI (8.02%) / BGE / ComEd (13.46%) / Dayton %) / DEOK (3.37%) / DL / DPL (2.55%) / Dominion %) / EKPC (1.81%) / JCPL / ME (1.95%) / NEPTUNE* 1) / OVEC (0.07%) / PECO %) / PENELEC (1.84%) / D (3.71%) / PPL (4.78%) / G (6.40%) / RE (0.27%)
			AEC (5. (9.26%) / / DPL (6. JCPL NEP (14.51%)	DFAX Allocation: .01%) / AEP (4.39%) / APS / BGE (4.43%) / DL (0.02%) 91%) / Dominion (10.82%) / (11.64%) / ME (2.94%) / TUNE* (1.12%) / PECO %) / PEPCO (6.11%) / PPL %) / PSEG (15.86%) / RE (0.59%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required 7	Transmission Enhancements	Annual Revenue Requi	rement Responsible Customer(s)
			Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE
b0490.6	Replace Amos 138 kV breaker 'D'		(4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)
			DFAX Allocation: AEC (5.01%) / AEP (4.39%) / APS (9.26%) / BGE (4.43%) / DL (0.02%) / DPL (6.91%) / Dominion (10.82%) / JCPL (11.64%) / ME (2.94%) / NEPTUNE* (1.12%) / PECO (14.51%) / PEPCO (6.11%) / PPL (6.39%) / PSEG (15.86%) / RE (0.59%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required T	Transmission Enhancements	Annual Revenue Requ	uirement	Responsible Customer(s)
ь0490.7	Replace Amos 138 kV breaker 'D2'		AEC (1.6 (5.64%) (4.12%) (2.12%) (1.76%) (12.97%) (3.92%) (0.24%) (5.39%) PEPCC	Ratio Share Allocation:  67%) / AEP (13.94%) / APS  6) / ATSI (8.02%) / BGE  / ComEd (13.46%) / Dayton  6) / DEOK (3.37%) / DL  / DPL (2.55%) / Dominion  6) / EKPC (1.81%) / JCPL  / ME (1.95%) / NEPTUNE*  0) / OVEC (0.07%) / PECO  6) / PENELEC (1.84%) /  0 (3.71%) / PPL (4.78%) /  G (6.40%) / RE (0.27%)
			AEC (5.9.26%) / DPL (6.9.30	DFAX Allocation: 01%) / AEP (4.39%) / APS BGE (4.43%) / DL (0.02%) 91%) / Dominion (10.82%) / (11.64%) / ME (2.94%) / FUNE* (1.12%) / PECO 6) / PEPCO (6.11%) / PPL 6) / PSEG (15.86%) / RE (0.59%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required'	Transmission Enhancements	Annual Revenue Req	uirement	Responsible Customer(s)
Required	Transmission Emiancements	Aimuai Revenue Req	Load- AEC (1.0 (5.64% (4.12%) (2.12% (1.76%))	-Ratio Share Allocation: 67%) / AEP (13.94%) / APS %) / ATSI (8.02%) / BGE / ComEd (13.46%) / Dayton %) / DEOK (3.37%) / DL // DPL (2.55%) / Dominion
b0490.8	Replace Amos 138 kV breaker 'E'		(3.92%) (0.24%) (5.39%) PEPCO	%) / EKPC (1.81%) / JCPL / ME (1.95%) / NEPTUNE* d) / OVEC (0.07%) / PECO %) / PENELEC (1.84%) / D (3.71%) / PPL (4.78%) / G (6.40%) / RE (0.27%)
			AEC (5. (9.26%) / / DPL (6. JCPL NEP' (14.51%)	DFAX Allocation: .01%) / AEP (4.39%) / APS / BGE (4.43%) / DL (0.02%) 91%) / Dominion (10.82%) / (11.64%) / ME (2.94%) / TUNE* (1.12%) / PECO %) / PEPCO (6.11%) / PPL %) / PSEG (15.86%) / RE (0.59%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required 7	Transmission Enhancements	Annual Revenue Req	uirement	Responsible Customer(s)
b0490.9	Replace Amos 138 kV breaker 'E2'		AEC (1 (5.649) (4.12%) (2.129) (1.76%) (12.979) (3.92%) (0.24%) (5.399) PEPCO	-Ratio Share Allocation: 67%) / AEP (13.94%) / APS 2%) / ATSI (8.02%) / BGE / ComEd (13.46%) / Dayton 2%) / DEOK (3.37%) / DL 1 / DPL (2.55%) / Dominion 2%) / EKPC (1.81%) / JCPL / ME (1.95%) / NEPTUNE* 20) / OVEC (0.07%) / PECO 2%) / PENELEC (1.84%) / 20 (3.71%) / PPL (4.78%) / 30 (6.40%) / RE (0.27%)
			AEC (5. (9.26%) / / DPL (6. JCPL NEP (14.51%)	DFAX Allocation: .01%) / AEP (4.39%) / APS / BGE (4.43%) / DL (0.02%) .91%) / Dominion (10.82%) / (11.64%) / ME (2.94%) / TUNE* (1.12%) / PECO %) / PEPCO (6.11%) / PPL %) / PSEG (15.86%) / RE (0.59%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required	Transmission Enhancements	Annual Revenue Requir	rement	Responsible Customer(s)
b0504	Add two advanced technology circuit breakers at Hanging Rock 765 kV to improve operational performance		AEC (1. (5.64 (4.12%) (2.12 (1.76% (12.97 (3.71 PEN (3.71	-Ratio Share Allocation: 67%) / AEP (13.94%) / APS %) / ATSI (8.02%) / BGE / ComEd (13.46%) / Dayton %) / DEOK (3.37%) / DL ) / DPL (2.55%) / Dominion %) / EKPC (1.81%) / JCPL 8.92%) / ME (1.95%) / TUNE* (0.24%) / OVEC 07%) / PECO (5.39%) / [ELEC (1.84%) / PEPCO %) / PPL (4.78%) / PSEG 6.40%) / RE (0.27%)  DFAX Allocation:
b0570	Reconductor East Side Lima  – Sterling 138 kV		AEP (4	AEP (100%) 41.99%) / ComEd (58.01%)
b0571	Reconductor West Millersport – Millersport 138 kV			3.83%) / ComEd (19.26%) / Dayton (6.91%)
b0748	Establish a new 69 kV circuit between the Canal Road and East Wooster stations, establish a new 69 kV circuit between the West Millersburg and Moreland Switch stations (via Shreve), add reactive support via cap banks			AEP (100%)
b0838	Hazard Area 138 kV and 69 kV Improvement Projects			AEP (100%)
b0839	Replace existing 450 MVA transformer at Twin Branch 345 / 138 kV with a 675 MVA transformer		AEP (	(99.73%) / Dayton (0.27%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required T	Fransmission Enhancements	Annual Revenue Requireme	ent Responsible Customer(s)
b0840	String a second 138 kV circuit on the open tower		
	position between Twin Branch and East Elkhart		AEP (100%)
b0840.1	Establish a new 138/69- 34.5 kV Station to interconnect the existing 34.5 kV network		AEP (100%)
b0917	Replace Baileysville 138 kV breaker 'P'		AEP (100%)
b0918	Replace Riverview 138 kV breaker '634'		AEP (100%)
b0919	Replace Torrey 138 kV breaker 'W'		AEP (100%)
b1032.1	Construct a new 345/138kV station on the Marquis-Bixby 345 kV line near the intersection with Ross - Highland 69 kV		AEP (89.97%) / Dayton (10.03%)
b1032.2	Construct two 138 kV outlets to Delano 138 kV station and to Camp Sherman station		AEP (89.97%) / Dayton (10.03%)
b1032.3	Convert Ross - Circleville 69kV to 138 kV		AEP (89.97%) / Dayton (10.03%)
b1032.4	Install 138/69 kV transformer at new station and connect in the Ross - Highland 69 kV line		AEP (89.97%) / Dayton (10.03%)
b1033	Add a third delivery point from AEP's East Danville Station to the City of Danville		AEP (100%)

Required Transmission Enhancements

Establish new South

Annual Revenue Requirement Responsible Customer(s)

b1034.1	Canton - West Canton 138 kV line (replacing Torrey - West Canton) and Wagenhals – Wayview 138 kV	AEP (96.01%) / APS (0.62%) / ComEd (0.19%) / Dayton (0.44%) / DL (0.13%) / PENELEC (2.61%)
b1034.2	Loop the existing South Canton - Wayview 138 kV circuit in-and-out of West Canton	AEP (96.01%) / APS (0.62%) / ComEd (0.19%) / Dayton (0.44%) / DL (0.13%) / PENELEC (2.61%)
b1034.3	Install a 345/138 kV 450 MVA transformer at Canton Central	AEP (96.01%) / APS (0.62%) / ComEd (0.19%) / Dayton (0.44%) / DL (0.13%) / PENELEC (2.61%)
b1034.4	Rebuild/reconductor the Sunnyside - Torrey 138 kV line	AEP (96.01%) / APS (0.62%) / ComEd (0.19%) / Dayton (0.44%) / DL (0.13%) / PENELEC (2.61%)
b1034.5	Disconnect/eliminate the West Canton 138 kV terminal at Torrey Station	AEP (96.01%) / APS (0.62%) / ComEd (0.19%) / Dayton (0.44%) / DL (0.13%) / PENELEC (2.61%)
b1034.6	Replace all 138 kV circuit breakers at South Canton Station and operate the station in a breaker and a half configuration	AEP (96.01%) / APS (0.62%) / ComEd (0.19%) / Dayton (0.44%) / DL (0.13%) / PENELEC (2.61%)
b1034.7	Replace all obsolete 138 kV circuit breakers at the Torrey and Wagenhals stations	AEP (96.01%) / APS (0.62%) / ComEd (0.19%) / Dayton (0.44%) / DL (0.13%) / PENELEC (2.61%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Install additional 138 kV circuit breakers at the West Canton, South Canton, b1034.8 Canton Central, and AEP (96.01%) / APS (0.62%) / Wagenhals stations to ComEd (0.19%) / Dayton accommodate the new (0.44%) / DL (0.13%) / **PENELEC** (2.61%) circuits Establish a third 345 kV breaker string in the West Millersport Station. Construct a new West b1035 Millersport – Gahanna 138 kV circuit. Miscellaneous improvements to 138 kV transmission system AEP (100%) Upgrade terminal equipment at Poston b1036 Station and update remote end relays AEP (100%) Sag check Bonsack-Cloverdale 138 kV, Cloverdale-Centerville 138 kV, Centerville-Ivy Hill b1037 138 kV, Ivy Hill–Reusens 138 kV, Bonsack–Reusens 138 kV and Reusens-Monel-Gomingo-Joshua Falls 138 kV AEP (100%) Check the Crooksville -Muskingum 138 kV sag b1038 and perform the required

work to improve the emergency rating

AEP (100%)

Required 1	ransmission Enhancements	Annual Revenue Requireme	ent Responsible Customer(s)
	Perform a sag study for the		
	Madison – Cross Street 138		
b1039	kV line and perform the		
	required work to improve		
	the emergency rating		AEP (100%)
	Rebuild an 0.065 mile		
	section of the New Carlisle		
b1040	– Olive 138 kV line and		
	change the 138 kV line		
	switches at New Carlisle		AEP (100%)
	Perform a sag study for the		
b1041	Moseley - Roanoke 138 kV		
01041	to increase the emergency		
	rating		AEP (100%)
	Perform sag studies to raise		
b1042	the emergency rating of		
	Amos – Poca 138 kV		AEP (100%)
	Perform sag studies to raise		
b1043	the emergency rating of		
	Turner - Ruth 138 kV		AEP (100%)
	Perform sag studies to raise		
b1044	the emergency rating of		
01044	Kenova – South Point 138		
	kV		AEP (100%)
b1045	Perform sag studies of Tri		
01043	State - Darrah 138 kV		AEP (100%)
	Perform sag study of		
b1046	Scottsville – Bremo 138 kV		
01040	to raise the emergency		
	rating		AEP (100%)
	Perform sag study of Otter		
b1047	Switch - Altavista 138 kV		
0104/	to raise the emergency		
	rating		AEP (100%)

Required I	ransmission Enhancements	Annual Revenue Requireme	ent Responsible Customer(s)
	Reconductor the Bixby -		
b1048	Three C - Groves and		
01046	Bixby - Groves 138 kV		
	tower line		AEP (100%)
	Upgrade the risers at the		
	Riverside station to		
b1049	increase the rating of		
	Benton Harbor – Riverside		
	138 kV		AEP (100%)
	Rebuilding and reconductor		
b1050	the Bixby – Pickerington		
01030	Road - West Lancaster 138		
	kV line		AEP (100%)
	Perform a sag study for the		
	Kenzie Creek – Pokagon		
b1051	138 kV line and perform		
01031	the required work to		
	improve the emergency		
	rating		AEP (100%)
	Unsix-wire the existing		
b1052	Hyatt - Sawmill 138 kV		
01032	line to form two Hyatt -		
	Sawmill 138 kV circuits		AEP (100%)
	Perform a sag study and		
b1053	remediation of 32 miles		
01033	between Claytor and Matt		
	Funk.		AEP (100%)
	Add 28.8 MVAR 138 kV		
	capacitor bank at Huffman		
b1091	and 43.2 MVAR 138 kV		
01071	Bank at Jubal Early and		
	52.8 MVAR 138 kV Bank		
	at Progress Park Stations		AEP (100%)

Required I	ransmission Enhancements	Annual Revenue Requireme	ent Responsible Customer(s)
	Add 28.8 MVAR 138 kV		
	capacitor bank at Sullivan		
b1092	Gardens and 52.8 MVAR		
	138 kV Bank at Reedy		
	Creek Stations		AEP (100%)
	Add a 43.2 MVAR		
b1093	capacitor bank at the		
01073	Morgan Fork 138 kV		
	Station		AEP (100%)
	Add a 64.8 MVAR		
b1094	capacitor bank at the West		
	Huntington 138 kV Station		AEP (100%)
b1108	Replace Ohio Central 138		
01100	kV breaker 'C2'		AEP (100%)
b1109	Replace Ohio Central 138		
01109	kV breaker 'D1'		AEP (100%)
1 1 1 1 0	Replace Sporn A 138 kV		
b1110	breaker 'J'		AEP (100%)
1 1 1 1 1	Replace Sporn A 138 kV		
b1111	breaker 'J2'		AEP (100%)
1 1 1 1 2	Replace Sporn A 138 kV		` ,
b1112	breaker 'L'		AEP (100%)
1 1 1 1 2	Replace Sporn A 138 kV		
b1113	breaker 'L1'		AEP (100%)
1 1 1 1 1	Replace Sporn A 138 kV		( )
b1114	breaker 'L2'		AEP (100%)
	Replace Sporn A 138 kV		(100/0)
b1115	breaker 'N'		AEP (100%)
	Replace Sporn A 138 kV		(10070)
b1116	breaker 'N2'		AEP (100%)
	Perform a sag study on		ALI (10070)
b1227	Altavista – Leesville 138		
01227	kV circuit		AEP (100%)
	K + CHCult	1	11L1 (100/0)

Required'	Transmission Enhancements	Annual Revenue Requirement	nt Responsible Customer(s)
	Replace the existing 138/69-		
	12 kV transformer at West		
b1231	Moulton Station with a		
	138/69 kV transformer and a		
	69/12 kV transformer		AEP (96.69%) / Dayton (3.31%)
b1375	Replace Roanoke 138 kV		
01375	breaker 'T'		AEP (100%)
b1376	Replace Roanoke 138 kV		
01370	breaker 'E'		AEP (100%)
b1377	Replace Roanoke 138 kV		
01377	breaker 'F'		AEP (100%)
b1378	Replace Roanoke 138 kV		
01370	breaker 'G'		AEP (100%)
b1379	Replace Roanoke 138 kV		
01377	breaker 'B'		AEP (100%)
b1380	Replace Roanoke 138 kV		
01360	breaker 'A'		AEP (100%)
b1381	Replace Olive 345 kV		
01361	breaker 'E'		AEP (100%)
b1382	Replace Olive 345 kV		
01362	breaker 'R2'		AEP (100%)
	Perform a sag study on the		
b1416	Desoto – Deer Creek 138 kV		
01410	line to increase the		
	emergency rating		AEP (100%)
	Perform a sag study on the		
b1417	Delaware – Madison 138 kV		
01417	line to increase the		
	emergency rating		AEP (100%)
	Perform a sag study on the		
b1418	Rockhill – East Lima 138 kV		
01410	line to increase the		
	emergency rating		AEP (100%)

Required '	Transmission Enhancements	Annual Revenue Requireme	nt Responsible Customer(s)
	Perform a sag study on the		
b1419	Findlay Center – Fostoria Ctl		
01419	138 kV line to increase the		
	emergency rating		AEP (100%)
	A sag study will be required		
	to increase the emergency		
	rating for this line.		
b1420	Depending on the outcome of	?	
	this study, more action may		
	be required in order to		
	increase the rating		AEP (100%)
	Perform a sag study on the		
b1421	Sorenson – McKinley 138 kV		
01421	line to increase the		
	emergency rating		AEP (100%)
	Perform a sag study on John		
	Amos – St. Albans 138 kV		
b1422	line to allow for operation up		
	to its conductor emergency		
	rating		AEP (100%)
	A sag study will be performed	1	
	on the Chemical – Capitol		
b1423	Hill 138 kV line to determine		
	if the emergency rating can be	e	
	utilized		AEP (100%)
	Perform a sag study for		
b1424	Benton Harbor – West Street		
01424	– Hartford 138 kV line to		
	improve the emergency rating	5	AEP (100%)
	Perform a sag study for the		
	East Monument – East		
b1425	Danville 138 kV line to allow	,	
01423	for operation up to the		
	conductor's maximum		
	operating temperature		AEP (100%)

required	Transmission Emiancements	Almuai Revenue Requirement	Responsible Customer(s)
	Perform a sag study for the		
	Reusens – Graves 138 kV line		
b1426	to allow for operation up to		
	the conductor's maximum		
	operating temperature		AEP (100%)
	Perform a sag study on Smith		
	Mountain – Leesville –		
b1427	Altavista – Otter 138 kV and		
	on Boones – Forest – New		
	London – JohnsMT – Otter		AEP (100%)
	Perform a sag study on Smith		
	Mountain – Candlers		
b1428	Mountain 138 kV and Joshua		
	Falls – Cloverdale 765 kV to		
	allow for operation up to		AEP (100%)
	Perform a sag study on		
	Fremont – Clinch River 138		
b1429	kV to allow for operation up		
	to its conductor emergency		
	ratings		AEP (100%)
	Install a new 138 kV circuit		`
	breaker at Benton Harbor		
b1430	station and move the load		
	from Watervliet 34.5 kV		
	station to West street 138 kV		AEP (100%)
	Perform a sag study on the		,
	Kenova – Tri State 138 kV		
b1432	line to allow for operation up		
	to their conductor emergency		
	rating		AEP (100%)
	Replace risers in the West		\ /
	Huntington Station to		
1 1 422	increase the line ratings		
b1433	which would eliminate the		
	overloads for the		
	contingencies listed		AEP (100%)

Required	Transmission Emiancements	Annual Revenue Requirement	Responsible Customer(s)
	Perform a sag study on the		
	line from Desoto to Madison		
b1434	Replace bus and risers at		
	Daleville station and replace		
	bus and risers at Madison		AEP (100%)
	Replace the 2870 MCM		
b1435	ACSR riser at the Sporn		
	station		AEP (100%)
	Perform a sag study on the		
	Sorenson – Illinois Road 138		
b1436	kV line to increase the		
01430	emergency MOT for this line		
	Replace bus and risers at		
	Illinois Road		AEP (100%)
	Perform sag study on Rock		
	Cr. – Hummel Cr. 138 kV to		
	increase the emergency MOT		
b1437	for the line, replace bus and		
01437	risers at Huntington J., and		
	replace relays for Hummel		
	Cr. – Hunt – Soren. Line at		
	Soren		AEP (100%)
	Replacement of risers at		
	McKinley and Industrial Park		
	stations and performance of a	ı	
b1438	sag study for the 4.53 miles of	of	
01436	795 ACSR section is		
	expected to improve the		
	Summer Emergency rating to	,	
	335 MVA		AEP (100%)
	By replacing the risers at		
	Lincoln both the Summar		
b1439	Normal and Summer		
	Emergency ratings will		
	improve to 268 MVA		AEP (100%)

Required	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
	By replacing the breakers at		
b1440	Lincoln the Summer		
01110	Emergency rating will		
	improve to 251 MVA		AEP (100%)
	Replacement of risers at		
	South Side and performance		
	of a sag study for the 1.91		
b1441	miles of 795 ACSR section is	S	
	expected to improve the		
	Summer Emergency rating to	•	
	335 MVA		AEP (100%)
	Replacement of 954 ACSR		
	conductor with 1033 ACSR		
b1442	and performance of a sag		
	study for the 4.54 miles of 2-		
	636 ACSR section is		. 77 (1000)
	expected		AEP (100%)
	Station work at Thelma and		
b1443	Busseyville Stations will be		
	performed to replace bus and		A ED (1000/)
	risers		AEP (100%)
	Perform electrical clearance		
	studies on Clinch River –		
b1444	Clinchfield 139 kV line		
	(a.k.a. sag studies) to		
	determine if the emergency		A ED (1000/)
	ratings can be utilized		AEP (100%)
	Perform a sag study on the		
1 1 4 4 5	Addison (Buckeye CO-OP) -	-	
b1445	Thinever and North Crown		
	City – Thivener 138 kV sag		A ED (1009/)
	study and switch		AEP (100%)

Required'	Fransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b1446	Perform a sag study on the Parkersburg (Allegheny Power) – Belpre (AEP) 138 kV		AEP (100%)
b1447	Dexter – Elliot tap 138 kV sag check		AEP (100%)
b1448	Dexter – Meigs 138 kV Electrical Clearance Study		AEP (100%)
b1449	Meigs tap – Rutland 138 kV sag check		AEP (100%)
b1450	Muskingum – North Muskingum 138 kV sag check		AEP (100%)
b1451	North Newark – Sharp Road 138 kV sag check		AEP (100%)
b1452	North Zanesville – Zanesvill 138 kV sag check	e	AEP (100%)
b1453	North Zanesville – Powelson and Ohio Central – Powelson 138 kV sag check		AEP (100%)
b1454	Perform an electrical clearance study on the Ross - Delano – Scioto Trail 138 kV line to determine if the emergency rating can be utilized		AEP (100%)
b1455	Perform a sag check on the Sunny – Canton Central – Wagenhals 138 kV line to determine if all circuits can be operated at their summer emergency rating	ре	AEP (100%)

Required'	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
	The Tidd – West Bellaire 345		
	kV circuit has been de-rated		
	to its normal rating and would	1	
b1456	need an electrical clearance		
	study to determine if the		
	emergency rating can be		
	utilized		AEP (100%)
	The Tiltonsville – Windsor		
	138 kV circuit has been		
	derated to its normal rating		
b1457	and would need an electrical		
	clearance study to determine		
	if the emergency rating could		
	be utilized		AEP (100%)
	Install three new 345 kV		
	breakers at Bixby to separate		
	the Marquis 345 kV line and		
L1450	transformer #2. Operate		
b1458	Circleville – Harrison 138 kV		
	and Harrison – Zuber 138 kV		
	up to conductor emergency		
	ratings		AEP (100%)
	Several circuits have been de-	-	
	rated to their normal		
	conductor ratings and could		
b1459	benefit from electrical		
	clearance studies to determine	e	
	if the emergency rating could		
	be utilized		AEP (100%)
b1460	Replace 2156 & 2874 risers		
01400	-		AEP (100%)
	Replace meter, metering CTs		
b1461	and associated equipment at		
	the Paden City feeder		AEP (100%)
	Replace relays at both South		
b1462	Cadiz 138 kV and Tidd 138		
	kV		AEP (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Reconductor the Bexley b1463 Groves 138 kV circuit AEP (100%) b1464 Corner 138 kV upgrades AEP (100%) AEC (0.71%) / AEP (75.06%) / APS (1.25%) / BGE (1.81%) / ComEd (5.91%) / Dayton (0.86%) / Add a 3rd 2250 MVA DL (1.23%) / DPL (0.95%) / Dominion (3.89%) / JCPL (1.58%) / b1465.1 765/345 kV transformer at NEPTUNE\* (0.15%) / HTP\*\*\* Sullivan station (0.07%) / PECO (2.08%) / PEPCO (1.66%) / ECP\*\* (0.07%) / PSEG (2.62%) / RE (0.10%) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Replace the 100 MVAR 765 Dominion (12.97%) / EKPC kV shunt reactor bank on (1.81%) / JCPL (3.92%) / ME b1465.2 Rockport – Jefferson 765 kV (1.95%) / NEPTUNE\* (0.24%) / line with a 300 MVAR bank OVEC (0.07%) / PECO (5.39%) / at Rockport Station PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** AEP (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

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		Load-Ratio Share Allocation	
		AEC (1.67%) / AEP (13.94%) / A	
		(5.64%) / ATSI (8.02%) / BGI	
		(4.12%) / ComEd (13.46%) / Day	
		(2.12%) / DEOK (3.37%) / DI	L
	Transpose the Rockport –	(1.76%) / DPL (2.55%) / Domin	ion
	Sullivan 765 kV line and the	(12.97%) / EKPC (1.81%) / JCI	PL
b1465.3	Rockport – Jefferson 765	(3.92%) / ME (1.95%) / NEPTU	NE*
	kV line	(0.24%) / OVEC (0.07%) / PEC	CO
	KV IIIIe	(5.39%) / PENELEC (1.84%)	/
		PEPCO (3.71%) / PPL (4.78%)	)/
		PSEG (6.40%) / RE (0.27%)	_
		DFAX Allocation:	
		AEP (100%)	
		Load-Ratio Share Allocation	
		AEC (1.67%) / AEP (13.94%) / A	-
	Make switching improvements at Sullivan and Jefferson 765 kV stations		
		(5.64%) / ATSI (8.02%) / BGI	
		(4.12%) / ComEd (13.46%) / Day	,
		(2.12%) / DEOK (3.37%) / DI	
		(1.76%) / DPL (2.55%) / Domin	
b1465.4		(12.97%) / EKPC (1.81%) / JCI	
01403.4		(3.92%) / ME (1.95%) / NEPTUN	
		(0.24%) / OVEC (0.07%) / PEC	
		(5.39%) / PENELEC (1.84%)	
		PEPCO (3.71%) / PPL (4.78%)	/
		PSEG (6.40%) / RE (0.27%)	
		DFAX Allocation:	
		AEP (100%)	
	Create an in and out loop at		
b1466.1	Adams Station by removing		
01400.1	the hard tap that currently		
	exists	AEP (100%)	
1 1 4 6 6 2	Upgrade the Adams	<u> </u>	
b1466.2	transformer to 90 MVA	AEP (100%)	
	D : 1 T : C :	11.0	

<sup>\*</sup>Neptune Regional Transmission System, LLC

Responsible Customer(s) Required Transmission Enhancements Annual Revenue Requirement At Seaman Station install a b1466.3 new 138 kV bus and two new 138 kV circuit breakers AEP (100%) Convert South Central Cob1466.4 op's New Market 69 kV Station to 138 kV AEP (100%) The Seaman – Highland circuit is already built to 138 kV, but is currently b1466.5 operating at 69 kV, which would now increase to 138 kV AEP (100%) At Highland Station, install a new 138 kV bus, three b1466.6 new 138 kV circuit breakers and a new 138/69 kV 90 MVA transformer AEP (100%) Using one of the bays at Highland, build a 138 kV b1466.7 circuit from Hillsboro -Highland 138 kV, which is approximately 3 miles AEP (100%) Install a 14.4 MVAr Capacitor Bank at New b1467.1 Buffalo station AEP (100%) Reconfigure the 138 kV bus at LaPorte Junction station to eliminate a contingency b1467.2 resulting in loss of two 138 kV sources serving the

LaPorte area

AEP (100%)

Required T	Fransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
	Expand Selma Parker Station		
b1468.1	and install a 138/69/34.5 kV		
	transformer		AEP (100%)
	Rebuild and convert 34.5 kV		
b1468.2	line to Winchester to 69 kV,		
	including Farmland Station		AEP (100%)
b1468.3	Retire the 34.5 kV line from		
01400.5	Haymond to Selma Wire		AEP (100%)
	Conversion of the		
b1469.1	Newcomerstown –		
01707.1	Cambridge 34.5 kV system		
	to 69 kV operation		AEP (100%)
	Expansion of the Derwent 69	9	
b1469.2	kV Station (including		
01707.2	reconfiguration of the 69 kV		
	system)		AEP (100%)
	Rebuild 11.8 miles of 69 kV		
b1469.3	line, and convert additional		
01407.5	34.5 kV stations to 69 kV		
	operation		AEP (100%)
	Build a new 138 kV double		
b1470.1	circuit off the Kanawha –		
014/0.1	Bailysville #2 138 kV circui	t	
	to Skin Fork Station		AEP (100%)
b1470.2	Install a new 138/46 kV		
014/0.2	transformer at Skin Fork		AEP (100%)
	Replace 5 Moab's on the		
b1470.3	Kanawha – Baileysville line		
014/0.3	with breakers at the Sundial		
	138 kV station		AEP (100%)
	Perform a sag study on the		
	East Lima – For Lima –		
b1471	Rockhill 138 kV line to		
	increase the emergency		
	rating		AEP (100%)

Required'	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
	Perform a sag study on the		
b1472	East Lima – Haviland 138 kV	7	
014/2	line to increase the		
	emergency rating		AEP (100%)
	Perform a sag study on the		
	East New Concord –		
b1473	Muskingum River section of		
	the Muskingum River – West		
	Cambridge 138 kV circuit		AEP (100%)
	Perform a sag study on the		
b1474	Ohio Central – Prep Plant tap		
	138 kV circuit		AEP (100%)
	Perform a sag study on the		
b1475	S73 – North Delphos 138 kV		
017/3	line to increase the		
	emergency rating		AEP (100%)
	Perform a sag study on the		
b1476	S73 – T131 138 kV line to		
	increase the emergency rating	5	AEP (100%)
	The Natrium – North Martin		
	138 kV circuit would need an	1	
b1477	electrical clearance study		
	among other equipment		
	upgrades		AEP (100%)
	Upgrade Strouds Run –		
b1478	Strounds Tap 138 kV relay		
	and riser		AEP (100%)
b1479	West Hebron station upgrade		
01477	west freeton station upgrade	3	AEP (100%)
	Perform upgrades and a sag		
	study on the Corner –		
b1480	Layman 138 kV section of th	e	
	Corner – Muskingum River		
	138 kV circuit		AEP (100%)

Required 7	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
	Perform a sag study on the		
	West Lima – Eastown Road		
b1481	– Rockhill 138 kV line and		
01401	replace the 138 kV risers at		
	Rockhill station to increase		
	the emergency rating		AEP (100%)
	Perform a sag study for the		
b1482	Albion – Robison Park 138		
01462	kV line to increase its		
	emergency rating		AEP (100%)
	Sag study 1 mile of the		
	Clinch River – Saltville 138		
b1483	kV line and replace the riser	S	
01403	and bus at Clinch River,		
	Lebanon and Elk Garden		
	Stations		AEP (100%)
	Perform a sag study on the		
b1484	Hacienda – Harper 138 kV		
01707	line to increase the		
	emergency rating		AEP (100%)
	Perform a sag study on the		
b1485	Jackson Road - Concord		
01403	183 kV line to increase the		
	emergency rating		AEP (100%)
	The Matt Funk – Poages Mi	11	
b1486	– Starkey 138 kV line		
	requires		AEP (100%)
	Perform a sag study on the		
b1487	New Carlisle – Trail Creek		
01707	138 kV line to increase the		
	emergency rating		AEP (100%)
	Perform a sag study on the		
b1488	Olive – LaPorte Junction 13	8	
01400	kV line to increase the		
	emergency rating		AEP (100%)

Required T	ransmission Enhancements Ann	nual Revenue Requirement	Responsible Customer(s)
	A sag study must be performed		
	for the 5.40 mile Tristate –		
b1489	Chadwick 138 kV line to		
	determine if a higher		
	emergency rating can be used		AEP (100%)
b1490.1	Establish a new 138/69 kV		
01490.1	Butler Center station		AEP (100%)
	Build a new 14 mile 138 kV		
b1490.2	line from Auburn station to		
01490.2	Woods Road station VIA		
	Butler Center station		AEP (100%)
	Replace the existing 40 MVA		
b1490.3	138/69 kV transformer at		
01490.3	Auburn station with a 90 MVA		
	138/96 kV transformer		AEP (100%)
	Improve the switching		
b1490.4	arrangement at Kendallville		
	station		AEP (100%)
	Replace bus and risers at		
	Thelma and Busseyville		
b1491	stations and perform a sag		
	study for the Big Sandy –		
	Busseyville 138 kV line		AEP (100%)
	Reconductor 0.65 miles of the		
b1492	Glen Lyn – Wythe 138 kV line		
	with $3 - 1590$ ACSR		AEP (100%)
	Perform a sag study for the		
b1493	Bellfonte – Grantston 138 kV		
01493	line to increase its emergency		
	rating		AEP (100%)
	Perform a sag study for the		
<b>h</b> 1404	North Proctorville – Solida –		
b1494	Bellefonte 138 kV line to		
	increase its emergency rating		AEP (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) AEC (0.41%) / AEP (87.22%) / BGE (1.03%) / ComEd (3.38%) / Dayton (1.23%) / DL (1.46%) / DPL (0.54%) / JCPL (0.90%) / Add an additional 765/345 kV b1495 NEPTUNE\* (0.09%) / HTP transformer at Baker Station (0.04%) / PECO (1.18%) / PEPCO (0.94%) / ECP\*\* (0.04%) / PSEG (1.48%) / RE (0.06%) Replace 138 kV bus and risers b1496 at Johnson Mountain Station AEP (100%) Replace 138 kV bus and risers b1497 at Leesville Station AEP (100%) Replace 138 kV risers at b1498 Wurno Station AEP (100%) Perform a sag study on Sporn A – Gavin 138 kV to b1499 determine if the emergency rating can be improved AEP (100%) The North East Canton – Wagenhals 138 kV circuit would need an electrical b1500 clearance study to determine if the emergency rating can be utilized AEP (100%) The Moseley – Reusens 138 kV circuit requires a sag study to determine if the emergency b1501 rating can be utilized to address a thermal loading issue for a category C3 AEP (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Reconductor the Conesville East – Conesville Prep Plant Tap 138 kV section of b1502 the Conesville – Ohio Central to fix Reliability N-1-1 thermal overloads AEP (100%) AEP (93.61%) / ATSI (2.99%) / ComEd (2.07%) / HTP (0.03%) / Establish Sorenson 345/138 PENELEC (0.31%) / ECP\*\* b1659 kV station as a 765/345 kV (0.03%) / PSEG (0.92%) / RE station (0.04%)Replace Sorenson 138 kV b1659.1 breaker 'L1' AEP (100%) Replace Sorenson 138 kV b1659.2 breaker 'L2' breaker AEP (100%) Replace Sorenson 138 kV b1659.3 breaker 'M1' AEP (100%) Replace Sorenson 138 kV b1659.4 breaker 'M2' AEP (100%) Replace Sorenson 138 kV b1659.5 breaker 'N1' AEP (100%) Replace Sorenson 138 kV b1659.6 breaker 'N2' AEP (100%) Replace Sorenson 138 kV b1659.7 breaker 'O1' AEP (100%) Replace Sorenson 138 kV b1659.8 breaker 'O2' AEP (100%) Replace Sorenson 138 kV b1659.9 breaker 'M' AEP (100%) Replace Sorenson 138 kV b1659.10 breaker 'N' AEP (100%)

<sup>\*\*</sup>East Coast Power, L.L.C.

Required Tr	ansmission Enhancements	Annual Revenue Requir	rement Responsible Customer(s)
b1659.11	Replace Sorenson 138 kV breaker 'O'		AEP (100%)
b1659.12	Replace McKinley 138 kV breaker 'L1'		AEP (100%)
b1659.13	Establish 765 kV yard at Sorenson and install four 765 kV breakers		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation:
			AEP (79.31%) / Dayton (9.10%) / DEOK (11.59%)
b1659.14	Build approximately 14 miles of 765 kV line from existing Dumont - Marysville line		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)
			DFAX Allocation: AEP (69.56%) / ATSI (17.59%) / Dayton (7.73%) / DL (4.96%) / EKPC (0.16%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required T	ransmission Enhancements	Annual Revenue Requirement Responsible Customer(s)
b1660	Install a 765/500 kV transformer at Cloverdale	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: BGE (44.5443.47%) / Dayton (0.16%) / DEOK (0.40%) / Dominion (1.041.05%) / EKPC (0.24%) / PEPCO (53.6254.68%)
b1661	Install a 765 kV circuit breaker at Wyoming station	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: AEP (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

b1662	Rebuild 4 miles of 46 kV line to 138 kV from Pemberton to Cherry Creek		A	EP (100%)	
b1662.1	Circuit Breakers are installed at Cherry Creek (facing Pemberton) and at Pemberton (facing Tams Mtn. and Cherry Creek)		A	EP (100%)	

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Install three 138 kV breakers at Grandview Station (facing b1662.2 Cherry Creek, Hinton, and Bradley Stations) AEP (100%) Remove Sullivan Switching b1662.3 Station (46 kV) AEP (100%) Install a new 765/138 kV b1663 transformer at Jackson Ferry substation AEP (100%) Establish a new 10 mile double circuit 138 kV line b1663.1 between Jackson Ferry and Wythe AEP (100%) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton Install 2 765 kV circuit (2.12%) / DEOK (3.37%) / DL breakers, breaker disconnect (1.76%) / DPL (2.55%) / Dominion switches and associated bus (12.97%) / EKPC (1.81%) / JCPL b1663.2 work for the new 765 kV (3.92%) / ME (1.95%) / NEPTUNE\* breakers, and new relays for (0.24%) / OVEC (0.07%) / PECO the 765 kV breakers at (5.39%) / PENELEC (1.84%) / Jackson's Ferry PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** AEP (100%) Install switched capacitor b1664 banks at Kenwood 138 kV stations AEP (100%) Install a second 138/69 kV b1665 transformer at Thelma station AEP (100%) Construct a single circuit 69 kV line from West b1665.1 Paintsville to the new Paintsville station AEP (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

b1665.2 Install new 7.2 MVAR, 46 kV bank at Kenwood Station  Build an 8 breaker 138 kV station tapping both circuits of the Fostoria - East Lima 138 kV line  Establish Melmore as a switching station with both 138 kV circuits terminating at Melmore. Extend the double circuit 138 kV line from Melmore to Fremont Center  AEP (100%)	
bank at Kenwood Station  Build an 8 breaker 138 kV station tapping both circuits of the Fostoria - East Lima 138 kV line  Establish Melmore as a switching station with both 138 kV circuits terminating at Melmore. Extend the double circuit 138 kV line from	
b1666  station tapping both circuits of the Fostoria - East Lima 138 kV line  Establish Melmore as a switching station with both 138 kV circuits terminating at Melmore. Extend the double circuit 138 kV line from	
of the Fostoria - East Lima 138 kV line  Establish Melmore as a switching station with both 138 kV circuits terminating at Melmore. Extend the double circuit 138 kV line from	
b1667  of the Fostoria - East Lima 138 kV line  Establish Melmore as a switching station with both 138 kV circuits terminating at Melmore. Extend the double circuit 138 kV line from	
b1667  Establish Melmore as a switching station with both 138 kV circuits terminating at Melmore. Extend the double circuit 138 kV line from	
b1667 switching station with both 138 kV circuits terminating at Melmore. Extend the double circuit 138 kV line from	%)
b1667  138 kV circuits terminating at Melmore. Extend the double circuit 138 kV line from	
Melmore. Extend the double circuit 138 kV line from	
Melmore. Extend the double circuit 138 kV line from	
Melmore to Fremont Center AFP (100%)	
b1668 Revise the capacitor setting at	
Riverside 138 kV station AEP (100%)	
b1669 Capacitor setting changes at	
Ross 138 kV stations AEP (100%)	
b1670 Capacitor setting changes at	
Wooster 138 kV station AEP (100%)	
b1671 Install four 138 kV breakers	
in Danville area  AEP (100%)	
b1676 Replace Natrium 138 kV	
breaker 'G (rehab)'  AEP (100%)	
Replace Huntley 138 kV	
b1677   Replace Huntey 138 KV   breaker '106'   AEP (100%)	
Replace Kammer 138 kV	
b1678   Replace Rammer 138 kV   breaker 'G'   AEP (100%)	
Replace Kammer 138 kV	
b1679   Replace Kammer 138 kV   breaker 'H'   AEP (100%)	
Replace Kammer 138 kV	
b1680   Replace Kammer 138 kV   breaker 'J'   AEP (100%)	
Replace Kammer 138 kV	
b1681   Replace Rammer 138 kV   breaker 'K'   AEP (100%)	
Replace Kammer 138 kV	
b1682   Replace Rammer 138 kV   breaker 'M'   AEP (100%)	

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace Kammer 138 kV b1683 breaker 'N' AEP (100%) Replace Clinch River 138 kV b1684 breaker 'E1' AEP (100%) Replace Lincoln 138 kV b1685 breaker 'D' AEP (100%) Advance s0251.7 (Replace Corrid 138 kV breaker b1687 '104S') AEP (100%) Advance s0251.8 (Replace b1688 Corrid 138 kV breaker '104C') AEP (100%) Perform sag study on Altavista - Leesville 138 kV b1712.1 Dominion (75.30%) / PEPCO line (24.70%)Rebuild the Altavista -Dominion (75.30%) / PEPCO b1712.2 Leesville 138 kV line (24.70%)Perform a sag study of the Bluff Point - Jauy 138 kV line. Upgrade breaker, b1733 wavetrap, and risers at the terminal ends AEP (100%) Perform a sag study of Randoph - Hodgins 138 kV b1734 line. Upgrade terminal equipment AEP (100%) Perform a sag study of R03 -Magely 138 kV line. b1735 Upgrade terminal equipment AEP (100%) Perform a sag study of the Industrial Park - Summit 138 b1736 kV line AEP (100%) Sag study of Newcomerstown - Hillview b1737 138 kV line. Upgrade terminal equipment AEP (100%)

Required'	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b1738	Perform a sag study of the Wolf Creek - Layman 138 kV lineUpgrade terminal equipment including a 138	7	
	kV breaker and wavetrap		AEP (100%)
b1739	Perform a sag study of the Ohio Central - West Trinway 138 kV line		AEP (100%)
b1741	Replace Beatty 138 kV breaker '2C(IPP)'		AEP (100%)
b1742	Replace Beatty 138 kV breaker '1E'		AEP (100%)
b1743	Replace Beatty 138 kV breaker '2E'		AEP (100%)
b1744	Replace Beatty 138 kV breaker '3C'		AEP (100%)
b1745	Replace Beatty 138 kV breaker '2W'		AEP (100%)
b1746	Replace St. Claire 138 kV breaker '8'		AEP (100%)
b1747	Replace Cloverdale 138 kV breaker 'C'		AEP (100%)
b1748	Replace Cloverdale 138 kV breaker 'D1'		AEP (100%)
b1780	Install two 138 kV breakers and two 138 kV circuit switchers at South Princeton Station and one 138 kV breaker and one 138 kV circuit switcher at Switchbac Station		AEP (100%)
ь1781	Install three 138 kV breakers and a 138 kV circuit switcher at Trail Fork Station in Pineville, WV		AEP (100%)

Required T	Transmission Enhancements	Annual Revenue Requireme	ent Responsible Customer(s)
	Install a 46 kV Moab at		
b1782	Montgomery Station facing		
01/82	Carbondale (on the London -		
	Carbondale 46 kV circuit)		AEP (100%)
	Add two 138 kV Circuit		
	Breakers and two 138 kV		
b1783	circuit switchers on the		
	Lonesome Pine - South		
	Bluefield 138 kV line		AEP (100%)
	Install a 52.8 MVAR		
b1784	capacitor bank at the Clifford	1	
	138 kV station		AEP (100%)
	Perform a sag study of 4		
b1811.1	miles of the Waterford -		
	Muskingum line		AEP (100%)
	Rebuild 0.1 miles of		
b1811.2	Waterford - Muskingum 345		
	kV with 1590 ACSR		AEP (100%)
	Reconductor the AEP portion	n	
	of the South Canton -		
	Harmon 345 kV with 954		
b1812	ACSR and upgrade terminal		
01012	equipment at South Canton.		
	Expected rating is 1800		
	MVA S/N and 1800 MVA		
	S/E		AEP (100%)
	Install (3) 345 kV circuit		
b1817	breakers at East Elkhart		
0101/	station in ring bus designed		
	as a breaker and half scheme		AEP (100%)

Required 7	Fransmission Enhancements Annu	al Revenue Requireme	ent Responsible Customer(s)
	Expand the Allen station by		
	installing a second 345/138 kV		
	transformer and adding four 138		
b1818	kV exits by cutting in the		
	Lincoln - Sterling and Milan -		
	Timber Switch 138 kV double		AEP (88.30%) / ATSI (8.86%) /
	circuit tower line		Dayton (2.84%)
	Rebuild the Robinson Park -		
	Sorenson 138 kV line corridor as		
b1819	a 345 kV double circuit line with		
	one side operated at 345 kV and		AEP (87.18%) / ATSI (10.06%) /
	one side at 138 kV		Dayton (2.76%)
	Perform a sag study for Hancock		
	- Cave Spring - Roanoke 138 kV		
	circuit to reach new SE ratings		
b1859	of 272 MVA (Cave Spring-		
	Hancock), 205 MVA (Cave		
	Spring-Sunscape), 245 MVA		
	(ROANO2-Sunscape)		AEP (100%)
	Perform a sag study on the		
	Crooksville - Spencer Ridge		
	section (14.3 miles) of the		
b1860	Crooksville-Poston-Strouds Run		
	138 kV circuit to see if any		
	remedial action needed to reach		. == (4.000)
	the SE rating (175 MVA)		AEP (100%)
	Reconductor 0.83 miles of the		
b1861	Dale - West Canton 138 kV Tie-		
01001	line and upgrade risers at West		. == (4.000)
	Canton 138 kV		AEP (100%)
	Perform a sag study on the Grant		
	- Greentown 138 kV circuit and		
b1862	replace the relay CT at Grant		
	138 kV station to see if any		
	remedial action needed to reach		A ED (1000)
	the new ratings of 251/286 MVA		AEP (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Perform a sag study of the Kammer - Wayman SW 138 kV line to see if any remedial b1863 action needed to reach the new SE rating of 284 MVA AEP (100%) Add two additional 345/138 AEP (87.22%) / APS (8.22%) / b1864.1 kV transformers at Kammer ATSI (3.52%) / DL (1.04%) Add second West Bellaire -AEP (87.22%) / APS (8.22%) / b1864.2 Brues 138 kV circuit ATSI (3.52%) / DL (1.04%) Replace Kammer 138 kV b1864.3 breaker 'E' AEP (100%) Perform a sag study on the Kanawha - Carbondale 138 kV line to see if any remedial b1865 action needed to reach the new ratings of 251/335 MVA AEP (100%) Perform a sag study on the Clinch River-Lock Hart-Dorton 138 kV line, increase the Relay Compliance Trip b1866 Limit at Clinch River on the C.R.-Dorton 138 kV line to 310 and upgrade the risers with 1590 ACSR AEP (100%) Perform a sag study on the Newcomerstown - South Coshocton 138 kV line to see b1867 if any remedial action is needed to reach the new SE rating of 179 MVA AEP (100%) Perform sag study on the East Lima - new Liberty 138 kV line to see if any remedial b1868 action is needed to reach the new SE rating of 219 MVA AEP (100%)

Annual Revenue Requirement

Required Transmission Enhancements

station in Indiana

b1873

Install two 138 kV circuit breakers at Cedar Creek

Station and primary side circuit switcher on the 138/69/46 kV transformer

Perform a sag study of the Ohio Central - South Coshocton 138 kV circuit to b1869 see if any remedial action needed to reach the new SE ratings of 250 MVA AEP (100%) Replace the Ohio Central transformer #1 345/138/12 b1870 kV 450 MVA for a AEP (68.16%) / ATSI (25.27%) / 345/138/34.5 kV 675 MVA Dayton (3.88%) / PENELEC (1.59%) / DEOK (1.10%) transformer Perform a sag study on the Central - West Coshocton b1871 138 kV line (improving the emergency rating of this line to 254 MVA) AEP (100%) Add a 57.6 MVAr capacitor b1872 bank at East Elkhart 138 kv

Responsible Customer(s)

AEP (100%)

AEP (100%)

required		Annual Revenue Requirement	Responsible Customer(s)
	Install two 138 kV circuit		
b1874	breakers and one 138 kV		
01074	circuit switcher at Magely		
	138 kV station in Indiana		AEP (100%)
	Build 25 miles of new 138 kV	<i>I</i>	
	line from Bradley Station		
	through Tower 117 Station		
b1875	and terminating at McClung		
01075	138 kV station. Existing 69		
	kV distribution transformers		
	will be replaced with 138 kV		
	transformers		APS (100%)
	Install a 14.4 MVAr capacito	r	
b1876	bank at Capital Avenue		
01070	(AKA Currant Road) 34.5 kV	7	
	bus		AEP (100%)
	Relocate 138 kV Breaker G t	О	
b1877	the West Kingsport - Industry	7	
010//	Drive 138 kV line and		
	Remove 138 kV MOAB		AEP (100%)
	Perform a sag study on the		
	Lincoln - Robinson Park 138		
b1878	kV line (Improve the		
	emergency rating to 244		
	MVA)		AEP (100%)
	Perform a sag study on the		
	Hansonville - Meadowview		
b1879	138 kV line (Improve the		
	emergency rating to 245		
	MVA)		AEP (100%)
	Rebuild the 15 miles of the		
	Moseley - Roanoke 138 kV		
b1880	line. This project would		
01000	consist of rebuilding both		
	circuits on the double circuit		
	line		AEP (100%)

Required	Transmission Enhancements Ann	ual Revenue Requirement	t Responsible Customer(s)
	Replace existing 600 Amp		
	switches, station risers and		
	increase the CT ratios associated		
b1881	with breaker 'G' at Sterling 138		
	kV Station. It will increase the		
	rating to 296 MVA S/N and 384		
	MVA S/E		AEP (100%)
	Perform a sag study on the Bluff		
	Point - Randolf 138 kV line to		
b1882	see if any remedial action needed		
	to reach the new SE rating of 255		
	MVA		AEP (100%)
	Switch the breaker position of		
b1883	transformer #1 and SW Lima at		
	East Lima 345 kV bus		AEP (100%)
	Perform a sag study on Strawton		
	station - Fisher Body - Deer		
b1884	Creek 138 kV line to see if any		
	remedial action needed to reach		
	the new SE rating of 250 MVA		AEP (100%)
	Establish a new 138/69 kV source		
	at Carrollton and construct two		
b1887	new 69 kV lines from Carrollton		
01007	to tie into the Dennison - Miller		
	SW 69 kV line and to East Dover		
	69 kV station respectively		AEP (100%)
	Install a 69 kV line breaker at		
b1888	Blue Pennant 69 kV Station		
01000	facing Bim Station and 14.4		
	MVAr capacitor bank		AEP (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Install a 43.2 MVAR capacitor b1889 bank at Hinton 138 kV station (APCO WV) AEP (100%) Rebuild the Ohio Central - West Trinway (4.84 miles) section of the Academia - Ohio Central 138 b1901 kV circuit. Upgrade the Ohio Central riser, Ohio Central switch and the West Trinway riser AEP (100%) Construct new 138/69 Michiana Station near Bridgman by tapping b1904.1 the new Carlisle - Main Street 138 kV and the Bridgman -Buchanan Hydro 69 kV line AEP (100%) Establish a new 138/12 kV New Galien station by tapping the b1904.2 Olive - Hickory Creek 138 kV line AEP (100%) Retire the existing Galien station and move its distribution load to b1904.3 New Galien station. Retire the Buchanan Hydro - New Carlisile 34.5 kV line AEP (100%) Implement an in and out scheme at Cook 69 kV by eliminating the b1904.4 Cook 69 kV tap point and by installing two new 69 kV circuit breakers AEP (100%) Rebuild the Bridgman - Cook 69 b1904.5 kV and the Derby - Cook 69 kV lines AEP (100%) Perform a sag study on the Brues b1946 - West Bellaire 138 kV line AEP (100%) A sag study of the Dequine -Meadowlake 345 kV line #1 line b1947 may improve the emergency rating to 1400 MVA AEP (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Establish a new 765/345 interconnection at Sporn. Install a 765/345 kV b1948 transformer at Mountaineer ATSI (61.08%) / DL (21.87%) / and build <sup>3</sup>/<sub>4</sub> mile of 345 kV to Dominion (13.97%) / PENELEC Sporn (3.08%)Perform a sag study on the Grant Tap – Deer Creek 138 b1949 kV line and replace bus and risers at Deer Creek station AEP (100%) Perform a sag study on the Kammer – Ormet 138 kV line b1950 of the conductor section AEP (100%) Perform a sag study of the Maddox- Convoy 345 kV line b1951 to improve the emergency rating to 1400 MVA AEP (100%) Perform a sag study of the Maddox - T130 345 kV line b1952 to improve the emergency rating to 1400 MVA AEP (100%) Perform a sag study of the Meadowlake - Olive 345 kV b1953 line to improve the emergency rating to 1400 MVA AEP (100%) Perform a sag study on the Milan - Harper 138 kV line b1954 and replace bus and switches at Milan Switch station AEP (100%) Perform a sag study of the R-049 - Tillman 138 kV line b1955 may improve the emergency rating to 245 MVA AEP (100%)

Required	Transmission Emiancements P	illiuai Keveliue Kequilellielli — Kespoli	sible Custoffier(s)
	Perform a sag study of the		
	Tillman - Dawkins 138 kV		
b1956	line may improve the		
	emergency rating to 245		
	MVA	A	EP (100%)
	Terminate Transformer #2 at	AEP (69.41	%) / ATSI (23.11%) /
b1957	SW Lima in a new bay	ECP** (0.1	7%) / HTP (0.19%) /
01937	position	PENELE	C (2.42%) / PSEG
	position	(4.52%	%) / RE (0.18%)
	Perform a sag study on the		
b1958	Brookside - Howard 138 kV		
01930	line and replace bus and risers		
	at AEP Howard station	A	EP (100%)
	Sag Study on 7.2 miles SE		
b1960	Canton-Canton Central 138		
	kV ckt	A	EP (100%)
	Sag study on the Southeast		
b1961	Canton – Sunnyside 138 kV		
	line	A	EP (100%)

<sup>\*\*</sup>East Coast Power, L.L.C.

required	Tansinission Linancements A	illidai Revende Requiren	1
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd (13.46%) /
			Dayton (2.12%) / DEOK (3.37%) /
			DL (1.76%) / DPL (2.55%) /
			Dominion (12.97%) / EKPC
b1962	Add four 765 kV breakers at		(1.81%) / JCPL (3.92%) / ME
	Kammer		(1.95%) / NEPTUNE* (0.24%) /
			OVEC (0.07%) / PECO (5.39%) /
			PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			DFAX Allocation:
			AEP (100%)
	Build approximately 1 mile of		, , ,
	circuit comprising of 2-954		
b1963	ACSR to get the rating of		
	Waterford-Muskinum 345 kV		
	higher		AEP (100%)
			APS (33.51%) / ATSI (32.21%) /
	Reconductor 13 miles of the		DL (18.64%) / Dominion (6.01%) /
b1970	Kammer – West Bellaire 345		ECP** (0.10%) / HTP (0.11%) /
017/0	kV circuit		JCPL (1.68%) / NEPTUNE*
			(0.18%) / PENELEC (4.58%) /
			PSEG (2.87%) / RE (0.11%)
	Perform a sag study to		
b1971	improve the emergency rating		
,-	on the Bridgville –		A ED (1000()
	Chandlersville 138 kV line		AEP (100%)
1 1072	Replace disconnect switch on		
b1972	the South Canton 765/345 kV		A ED (1000/)
<b>43.</b> T /	transformer	TIC	AEP (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Perform a sag study to improve the emergency b1973 rating on the Carrollton – Sunnyside 138 kV line AEP (100%) Perform a sag study to improve the emergency b1974 rating on the Bethel Church – West Dover 138 kV line AEP (100%) Replace a switch at South b1975 Millersburg switch station AEP (100%) ATSI (37.04%) / AEP (34.35%) / DL (10.41%) / Dominion (6.19%) Reconductor or rebuild / APS (3.94%) / PENELEC Sporn - Waterford b2017 (3.09%) / JCPL (1.39%) / Dayton Muskingum River 345 kV (1.20%) / NEPTUNE\* (0.14%) / line HTP (0.09%) / ECP\*\* (0.08%) / PSEG (2.00%) / RE (0.08%) ATSI (58.58%) / AEP (14.16%) / APS (12.88%) / DL (7.93%) / Loop Conesville - Bixby 345 b2018 kV circuit into Ohio Central PENELEC (5.73%) / Dayton (0.72%)AEP (93.74%) / APS (4.40%) / Establish Burger 345/138 kV b2019 DL (1.11%) / ATSI (0.74%) / station PENELEC (0.01%) AEP (88.39%) / APS (7.12%) / Rebuild Amos - Kanawah b2020 ATSI (2.89%) / DEOK (1.58%) / River 138 kV corridor PEPCO (0.02%) AEP (91.92%) / DEOK (3.60%) / Add 345/138 transformer at APS (2.19%) / ATSI (1.14%) / b2021 Sporn, Kanawah River & DL (1.08%) / PEPCO (0.04%) / Muskingum River stations BGE (0.03%) Replace Kanawah 138 kV b2021.1 breaker 'L' AEP (100%) Replace Muskingum 138 kV b2021.2 breaker 'HG' AEP (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

Required Tr	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b2021.3	Replace Muskingum 138 kV breaker 'HJ'		AEP (100%)
b2021.4	Replace Muskingum 138 kV breaker 'HE'		AEP (100%)
b2021.5	Replace Muskingum 138 kV breaker 'HD'		AEP (100%)
b2021.6	Replace Muskingum 138 kV breaker 'HF'		AEP (100%)
b2021.7	Replace Muskingum 138 kV breaker 'HC'		AEP (100%)
b2021.8	Replace Sporn 138 kV breaker 'D1'		AEP (100%)
b2021.9	Replace Sporn 138 kV breaker 'D2'		AEP (100%)
b2021.10	Replace Sporn 138 kV breaker 'F1'		AEP (100%)
b2021.11	Replace Sporn 138 kV breaker 'F2'		AEP (100%)
b2021.12	Replace Sporn 138 kV breaker 'G'		AEP (100%)
b2021.13	Replace Sporn 138 kV breaker 'G2'		AEP (100%)
b2021.14	Replace Sporn 138 kV breaker 'N1'		AEP (100%)
b2021.15	Replace Kanawah 138 kV breaker 'M'		AEP (100%)
b2022	Terminate Tristate - Kyge Creek 345 kV line at Spor		AEP (97.99%) / DEOK (2.01%)
b2027	Perform a sag study of the Tidd - Collier 345 kV line		AEP (100%)

Required	Transmission Enhancements	Annual Revenue Requirement	nt Responsible Customer(s)
	Perform a sag study on East		
b2028	Lima - North Woodcock 138		
	kV line to improve the rating		AEP (100%)
	Perform a sag study on		
b2029	Bluebell - Canton Central 13	8	
	kV line to improve the rating		AEP (100%)
1.2020	Install 345 kV circuit		
b2030	breakers at West Bellaire		AEP (100%)
	Sag study on Tilton - W.		
b2031	Bellaire section 1 (795		
	ACSR), about 12 miles		AEP (100%)
1 2022	Rebuild 138 kV Elliot tap -		ATSI (73.02%) / Dayton
b2032	Poston line		(19.39%) / DL (7.59%)
	Perform a sag study of the		(-,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
b2033	Brues - W. Bellaire 138 kV		
02000	line		AEP (100%)
	Adjust tap settings for		(10070)
b2046	Muskingum River		
020.0	transformers		AEP (100%)
			(200.3)
b2047	Replace relay at Greenlawn		AEP (100%)
	Replace both 345/138 kV		
b2048	transformers with one bigger		
	transformer		AEP (92.49%) / Dayton (7.51%)
b2049	Damla as malay		
02049	Replace relay		AEP (100%)
b2050	Perform sag study		
02030	Ferform sag study		AEP (100%)
	Install 3 138 kV breakers and		
b2051	a circuit switcher at Dorton		
	station		AEP (100%)
			AEP (67.17%) / ATSI (27.37%) /
b2052	Replace transformer		Dayton (3.73%) / PENELEC
			(1.73%)
b2054	Perform a sag study of Sporn		
02034	- Rutland 138 kV line		AEP (100%)

Required	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
	Replace George Washington		
b2069	138 kV breaker 'A' with 63		
	kA rated breaker		AEP (100%)
	Replace Harrison 138 kV		
b2070	breaker '6C' with 63 kA rated	1	
	breaker		AEP (100%)
	Replace Lincoln 138 kV		
b2071	breaker 'L' with 63 kA rated		
	breaker		AEP (100%)
	Replace Natrum 138 kV		
b2072	breaker 'I' with 63 kA rated		
	breaker		AEP (100%)
	Replace Darrah 138 kV		
b2073	breaker 'B' with 63 kA rated		
	breaker		AEP (100%)
	Replace Wyoming 138 kV		
b2074	breaker 'G' with 80 kA rated		
	breaker		AEP (100%)
	Replace Wyoming 138 kV		
b2075	breaker 'G1' with 80 kA rated	1	
	breaker		AEP (100%)
	Replace Wyoming 138 kV		
b2076	breaker 'G2' with 80 kA rated	1	
	breaker		AEP (100%)
	Replace Wyoming 138 kV		
b2077	breaker 'H' with 80 kA rated		
	breaker		AEP (100%)
	Replace Wyoming 138 kV		
b2078	breaker 'H1' with 80 kA rated	1	
	breaker		AEP (100%)
	Replace Wyoming 138 kV		
b2079	breaker 'H2' with 80kA rated		
	breaker		AEP (100%)
	Replace Wyoming 138 kV		
b2080	breaker 'J' with 80 kA rated		
	breaker		AEP (100%)

rtequirea		Annual Revenue Requirement	responsible Customer(s)
	Replace Wyoming 138 kV		
b2081	breaker 'J1' with 80 kA rated		
	breaker		AEP (100%)
	Replace Wyoming 138 kV		
b2082	breaker 'J2' with 80 kA rated		
	breaker		AEP (100%)
	Replace Natrum 138 kV		
b2083	breaker 'K' with 63 kA rated		
	breaker		AEP (100%)
	Replace Tanner Creek 345		
b2084	kV breaker 'P' with 63 kA		
	rated breaker		AEP (100%)
	Replace Tanner Creek 345		, ,
b2085	kV breaker 'P2' with 63 kA		
	rated breaker		AEP (100%)
	Replace Tanner Creek 345		
b2086	kV breaker 'Q1' with 63 kA		
	rated breaker		AEP (100%)
	Replace South Bend 138 kV		
b2087	breaker 'T' with 63 kA rated		
	breaker		AEP (100%)
b2088	Replace Tidd 138 kV breaker		
02088	'L' with 63 kA rated breaker		AEP (100%)
1.2000	Replace Tidd 138 kV breaker		
b2089	'M2' with 63 kA rated breaker		AEP (100%)
	Replace McKinley 138 kV		
b2090	breaker 'A' with 40 kA rated		
	breaker		AEP (100%)
	Replace West Lima 138 kV		
b2091	breaker 'M' with 63 kA rated		
	breaker		AEP (100%)
	Replace George Washington		
b2092	138 kV breaker 'B' with 63		
	kA rated breaker		AEP (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace Turner 138 kV breaker 'W' with 63 kA rated b2093 breaker AEP (100%) Build a new 138 kV line from Falling Branch to Merrimac b2135 and add a 138/69 kV transformer at Merrimac Station AEP (100%) Add a fourth circuit breaker to the station being built for the U4-038 project b2160 (Conelley), rebuild U4-038 -Grant Tap line as double circuit tower line AEP (100%) Rebuild approximately 20 miles of the Allen - S073 double circuit 138 kV line (with one circuit from Allen b2161 Tillman - Timber Switch -S073 and the other circuit from Allen - T-131 - S073) utilizing 1033 ACSR AEP (100%) Perform a sag study to improve the emergency rating b2162 of the Belpre - Degussa 138 kV line AEP (100%) Replace breaker and wavetrap b2163 at Jay 138 kV station AEP (100%)

## **SCHEDULE 12 – APPENDIX**

## (20) Virginia Electric and Power Company

Required	I ransmission Enhancements An	nual Revenue Requirement*** Responsible Customer(s)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd (13.46%)
		/ Dayton (2.12%) / DEOK
		(3.37%) / DL (1.76%) / DPL
		(2.55%) / Dominion (12.97%) /
		EKPC (1.81%) / JCPL (3.92%) /
	Upgrade Mt. Storm -	ME (1.95%) / NEPTUNE*
b0217	Doubs 500 kV	(0.24%) / OVEC (0.07%) / PECO
	Doubs 500 kV	(5.39%) / PENELEC (1.84%) /
		PEPCO (3.71%) / PPL (4.78%) /
		PSEG (6.40%) / RE (0.27%)
		DFAX Allocation:
		APS ( <del>20.09</del> <u>20.37</u> %) / BGE
		( <del>13.46</del> <u>12.89</u> %) / Dominion
		( <del>52.77</del> <u>53.52</u> %) / PEPCO
		( <del>13.68</del> <u>13.22</u> %)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd (13.46%)
		/ Dayton (2.12%) / DEOK
		(3.37%) / DL (1.76%) / DPL
		(2.55%) / Dominion (12.97%) /
	Install 150 MVAR	EKPC (1.81%) / JCPL (3.92%) /
b0222	capacitor at Loudoun 500	ME (1.95%) / NEPTUNE*
	kV	(0.24%) / OVEC (0.07%) / PECO
		(5.39%) / PENELEC (1.84%) /
		PEPCO (3.71%) / PPL (4.78%) /
		PSEG (6.40%) / RE (0.27%)
		DFAX Allocation:
		BGE ( <del>8.29</del> <u>7.44</u> %) / Dominion
		( <del>79.93</del> <u>80.66</u> %) / ( <del>11.78</del> <u>11.90</u> %)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*\*</sup> The Annual Revenue Requirement for all Virginia Electric and Power Company projects in this Section 20 shall be as specified in Attachment 7 to Appendix A of Attachment H-16A and under the procedures detailed in Attachment H-16B.

## Virginia Electric and Power Company (cont.)

required i	Taristilission Emilancements	7 Hilliaal Ite vellae Itequilellik	chi Responsible Cusiomer(s)
b0223	Install 150 MVAR capacitor at Asburn 230 kV		Dominion (100%)
b0224	Install 150 MVAR capacitor at Dranesville 230 kV		Dominion (100%)
b0225	Install 33 MVAR capacitor at Possum Pt. 115 kV		Dominion (100%)
b0226	Install 500/230 kV transformer at Clifton and Clifton 500 kV 150 MVAR capacitor	As specified in Attachment 7 to Appendix A of Attachment H-16A and under the procedures detailed in Attachment H-16B	APS (3.69%) / BGE (3.54%) / Dominion (85.73%) / PEPCO (7.04%)
b0227	Install 500/230 kV transformer at Bristers; build new 230 kV Bristers-Gainsville circuit, upgrade two Loudoun-Brambleton circuits		AEC (0.71%) / APS (3.36%) / BGE (10.93%) / DPL (1.66%) / Dominion (67.38%) / ME (0.89%) / PECO (2.33%) / PEPCO (12.20%) / PPL (0.54%)
b0227.1	Loudoun Sub – upgrade 6-230 kV breakers		Dominion (100%)

## Virginia Electric and Power Company (cont.)

Required I	ransmission Ennancements	Annual Revenue Requirement Responsible Customer(s)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd (13.46%)
		/ Dayton (2.12%) / DEOK
		(3.37%) / DL (1.76%) / DPL
	THISIAH MUKA MEAKELS AV T	(2.55%) / Dominion (12.97%) /
b0231	500 kV bus work at	EKPC (1.81%) / JCPL (3.92%) /
	Suffolk	ME (1.95%) / NEPTUNE*
		(0.24%) / OVEC (0.07%) / PECO
		(5.39%) / PENELEC (1.84%) /
		PEPCO (3.71%) / PPL (4.78%) /
		PSEG (6.40%) / RE (0.27%)
		DFAX Allocation:
		Dominion (100%)
	Install 500/230 kV	
	Transformer, 230 kV	
	breakers, & 230 kV bus	
b0231.2	work at Suffolk	Dominion (100%)
	Install 150 MVAR	
b0232	capacitor at Lynnhaven	
	230 kV	Dominion (100%)
	Install 150 MVAR	
b0233	capacitor at Landstown	
	230 kV	Dominion (100%)
	Install 150 MVAR	
b0234	capacitor at Greenwich	
	230 kV	Dominion (100%)
	Install 150 MVAR	
b0235	capacitor at Fentress 230	
	kV	Dominion (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required T	Fransmission Enhancements	Annual Revenue Require	ement Responsible Customer(s)
	Reconductor Endless		
b0307	Caverns – Mt. Jackson		
	115 kV		Dominion (100%)
	Replace L breaker and		
b0308	switches at Endless		
	Caverns 115 kV		Dominion (100%)
1.0200	Install SPS at Earleys 115		
b0309	kV		Dominion (100%)
	Reconductor Club House		_ :::::::: ( : : : : )
b0310	– South Hill and Chase		
00310	City – South Hill 115 kV		Dominion (100%)
	Reconductor Idylwood to		Dominion (10070)
b0311	Arlington 230 kV		Dominion (100%)
	Reconductor Gallows to		Dominion (10070)
b0312			Danisian (1000/)
	Ox 230 kV		Dominion (100%)
b0325	Install a 2 <sup>nd</sup> Everetts		
00323	230/115 kV transformer		Dominion (100%)
	Uprate/resag Remington-		Dominion (10070)
b0326	Brandywine-Culppr 115		
00320	kV		Dominion (100%)
	K V		Dollillion (10078)
1.0227	Build 2 <sup>nd</sup> Harrisonburg –		
b0327	Valley 230 kV		APS (19.79%) / Dominion
	<b>J</b> - 1		(76.18%) / PEPCO (4.03%)
			<b>Load-Ratio Share Allocation:</b>
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd (13.46%)
			/ Dayton (2.12%) / DEOK
			(3.37%) / DL (1.76%) / DPL
			(2.55%) / Dominion (12.97%) /
	Build new Meadow Brook		EKPC (1.81%) / JCPL (3.92%) /
b0328.1	– Loudoun 500 kV circuit		ME (1.95%) / NEPTUNE*
	(30 of 50 miles)		(0.24%) / OVEC (0.07%) / PECO
			(5.39%) / PENELEC (1.84%) /
			PEPCO (3.71%) / PPL (4.78%) /
			PSEG (6.40%) / RE (0.27%)
		<u> </u>	
			DFAX Allocation:
			BGE ( <del>8.29</del> 7.44%) / Dominion
			( <del>79.93</del> <u>80.66</u> %) / ( <del>11.78</del> <u>11.90</u> %)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required I	ransmission Enhancements An	nual Revenue Requirement Responsible Customer(s)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd (13.46%)
		/ Dayton (2.12%) / DEOK
		(3.37%) / DL (1.76%) / DPL
		(2.55%) / Dominion (12.97%) /
		EKPC (1.81%) / JCPL (3.92%) /
	Upgrade Mt. Storm 500	ME (1.95%) / NEPTUNE*
b0328.3	kV substation	(0.24%) / OVEC (0.07%) / PECO
	KV Substation	(5.39%) / PENELEC (1.84%) /
		PEPCO (3.71%) / PPL (4.78%) /
		PSEG (6.40%) / RE (0.27%)
		DFAX Allocation:
		APS (30.2533.17%) / BGE
		$\frac{(8.80\%)}{(8.80\%)}$ Dominion
		(46.8051.31%) / PEPCO
		( <del>14.15</del> 15.52%)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd (13.46%)
		/ Dayton (2.12%) / DEOK
		(3.37%) / DL (1.76%) / DPL
		(2.55%) / Dominion (12.97%) /
	Hannada I andama 500 lay	EKPC (1.81%) / JCPL (3.92%) /
b0328.4	Upgrade Loudoun 500 kV substation	ME (1.95%) / NEPTUNE*
	Substation	(0.24%) / OVEC (0.07%) / PECO
		(5.39%) / PENELEC (1.84%) /
		PEPCO (3.71%) / PPL (4.78%) /
		PSEG (6.40%) / RE (0.27%)
		DFAX Allocation:
		BGE ( <del>8.29</del> 7.44%) / Dominion
		( <del>79.93</del> 80.66%) / ( <del>11.78</del> 11.90%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required 1	Tansinission Emiancements	Allitual Revenue Requir	1 7
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd (13.46%)
			/ Dayton (2.12%) / DEOK
	Build Carson – Suffolk		(3.37%) / DL (1.76%) / DPL
	500 kV, install 2 <sup>nd</sup> Suffolk		(2.55%) / Dominion (12.97%) /
b0329	500/230 kV transformer &		EKPC (1.81%) / JCPL (3.92%) /
3002	build Suffolk – Fentress		ME (1.95%) / NEPTUNE*
	230 kV circuit		(0.24%) / OVEC (0.07%) / PECO
			(5.39%) / PENELEC (1.84%) /
			PEPCO (3.71%) / PPL (4.78%) /
			PSEG (6.40%) / RE (0.27%)
			DFAX Allocation:
			Dominion (100%)
	Replace Thole Street 115		
b0329.1	kV breaker '48T196'		Daminian (1000/)
			Dominion (100%)
b0329.2	Replace Chesapeake 115		
	kV breaker 'T242'		Dominion (100%)
1 0220 2	Replace Chesapeake 115		
b0329.3	kV breaker '8722'		Dominion (100%)
	D 1 C1 1 117		Dominion (10070)
b0329.4	Replace Chesapeake 115		
	kV breaker '16422'		Dominion (100%)
	Install 2 <sup>nd</sup> Suffolk 500/230		
b0329.5	kV transformer & build		
00329.3	Suffolk – Thrasher 230		
	kV circuit		Dominion (100%)††
b0330	Install Crewe 115 kV		
	breaker and shift load		
	from line 158 to 98		Dominion (100%)
	Upgrade/resag Shell Bank		
b0331	– Whealton 115 kV (Line		
	165)		Dominion (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>††</sup>Cost allocations associated with below 500 kV elements of the project

Requirea	Transmission Enhancements Ann	iuai Revenue Requirement	Responsible Customer(s)
b0332	Uprate/resag Chesapeake – Cradock 115 kV		Dominion (100%)
b0333	Replace wave trap on Elmont – Replace (Line #231)		Dominion (100%)
b0334	Uprate/resag Iron Bridge- Walmsley-Southwest 230 kV		Dominion (100%)
b0335	Build Chase City – Clarksville 115 kV		Dominion (100%)
b0336	Reconductor one span of Chesapeake – Dozier 115 kV close to Dozier substation		Dominion (100%)
b0337	Build Lexington 230 kV ring bus		Dominion (100%)
b0338	Replace Gordonsville 230/115 kV transformer for larger one		Dominion (100%)
b0339	Install Breaker at Dooms 230 kV Sub		Dominion (100%)
b0340	Reconductor one span Peninsula – Magruder 115 kV close to Magruder substation		Dominion (100%)
b0341	Install a breaker at Northern Neck 115 kV		Dominion (100%)
b0342	Replace Trowbridge 230/115 kV transformer		Dominion (100%)
b0403	2 <sup>nd</sup> Dooms 500/230 kV transformer addition		APS (3.35%) / BGE (4.22%) / DPL (1.10%) / Dominion (83.94%) / PEPCO (7.39%)

Kcquiica i	ransmission ennancements. Annual Revenue Require	ment Responsible Customer(s)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) / APS
		(5.64%) / ATSI (8.02%) / BGE
		(4.12%) / ComEd (13.46%) / Dayton
		(2.12%) / DEOK (3.37%) / DL
		(1.76%) / DPL (2.55%) / Dominion
		(12.97%) / EKPC (1.81%) / JCPL
	Retension Pruntytown – Mt.	(3.92%) / ME (1.95%) / NEPTUNE*
b0412	Storm 500 kV to a 3502	(0.24%) / OVEC (0.07%) / PECO
	MVA rating	(5.39%) / PENELEC (1.84%) /
		PEPCO (3.71%) / PPL (4.78%) /
		PSEG (6.40%) / RE (0.27%)
		DFAX Allocation:
		APS ( <del>29.06</del> <u>30.24</u> %) / ATSI (0.01%) /
		BGE ( <del>24.30</del> <u>21.24</u> %) / DEOK
		( <del>10.11</del> <u>10.51</u> %) / PEPCO
		( <del>36.52</del> <u>38.00</u> %)
	Install 150 MVAR	
b0450	Capacitor at Fredricksburg	
	230 kV	Dominion (100%)
b0451	Install 25 MVAR Capacitor	
	at Somerset 115 kV	Dominion (100%)
4 0 4	Install 150 MVAR	
b0452	Capacitor at Northwest 230	D (1000/)
	kV	Dominion (100%)
1.0452.1	Convert Remingtion –	APS (0.31%) / BGE (3.01%) / DPL
b0453.1	Sowego 115 kV to 230 kV	(0.04%) / Dominion (92.75%) / ME
		(0.03%) / PEPCO (3.86%)
1.0452.2	Add Sowego – Gainsville	APS (0.31%) / BGE (3.01%) / DPL
b0453.2	230 kV	(0.04%) / Dominion (92.75%) / ME
		(0.03%) / PEPCO (3.86%)
1.0452.2	Add Sowego 230/115 kV	APS (0.31%) / BGE (3.01%) / DPL
b0453.3	transformer	(0.04%) / Dominion (92.75%) / ME
	December 2.4 miles of	(0.03%) / PEPCO (3.86%)
b0454	Reconductor 2.4 miles of	
b0454	Newport News –	Dominion (100%)
	Chuckatuck 230 kV	Dominion (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required I	ransmission Enhancements Annu	al Revenue Requirement	Responsible Customer(s)
b0455	Add 2 <sup>nd</sup> Endless Caverns 230/115 kV transformer		APS (32.70%) / BGE (7.01%) / DPL (1.80%) / Dominion (50.82%) / PEPCO (7.67%)
b0456	Reconductor 9.4 miles of Edinburg – Mt. Jackson 115 kV		APS (33.69%) / BGE (12.18%) / Dominion (40.08%) / PEPCO (14.05%)
b0457	Replace both wave traps on Dooms – Lexington 500 kV		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: BGE (11.6110.84%) / Dominion
			( <del>69.16</del> <u>70.07</u> %) / EKPC (4.82%) / (PEPCO <u>(</u> 14.41 <u>14.27</u> %)
b0467.2	Reconductor the Dickerson  – Pleasant View 230 kV circuit		AEC (1.75%) / APS (19.70%) / BGE (22.13%) / DPL (3.70%) / JCPL (0.71%) / ME (2.48%) / NEPTUNE* (0.06%) / PECO (5.54%) / PEPCO (41.86%) / PPL (2.07%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required 11	Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s)			
		Load-Ratio Share Allocation:		
		AEC (1.67%) / AEP (13.94%) / APS		
		(5.64%) / ATSI (8.02%) / BGE (4.12%)		
		/ ComEd (13.46%) / Dayton (2.12%) /		
		DEOK (3.37%) / DL (1.76%) / DPL		
		(2.55%) / Dominion (12.97%) / EKPC		
		(1.81%) / JCPL (3.92%) / ME (1.95%) /		
		NEPTUNE* (0.24%) / OVEC (0.07%)		
	Danlaga Mayert Stame 500	/ PECO (5.39%) / PENELEC (1.84%) /		
1-0402 6	Replace Mount Storm 500	PEPCO (3.71%) / PPL (4.78%) / PSÉG		
b0492.6	kV breaker 55072	(6.40%) / RE (0.27%)		
		DFAX Allocation:		
		AEC (5.01%) / AEP (4.39%) / APS		
		(9.26%) / BGE (4.43%) / DL (0.02%) /		
		DPL (6.91%) / Dominion (10.82%) /		
		JCPL (11.64%) / ME (2.94%) /		
		NEPTUNE* (1.12%) / PECO (14.51%)		
		/ PEPCO (6.11%) / PPL (6.39%) /		
		PSEG (15.86%) / RE (0.59%)		
		Load-Ratio Share Allocation:		
	D. 1. M. 4. G. 500	AEC (1.67%) / AEP (13.94%) / APS		
		(5.64%) / ATSI (8.02%) / BGE (4.12%)		
		/ ComEd (13.46%) / Dayton (2.12%) /		
		DEOK (3.37%) / DL (1.76%) / DPL		
		(2.55%) / Dominion (12.97%) / EKPC		
		(1.81%) / JCPL (3.92%) / ME (1.95%) /		
		NEPTUNE* (0.24%) / OVEC (0.07%)		
		/ PECO (5.39%) / PÉNELEC (1.84%) /		
1.0402.7	Replace Mount Storm 500	PEPCO (3.71%) / PPL (4.78%) / PSEG		
b0492.7	kV breaker 55172	(6.40%) / RE (0.27%)		
		DFAX Allocation:		
		AEC (5.01%) / AEP (4.39%) / APS		
		` ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '		
		(9.26%) / BGE (4.43%) / DL (0.02%) / DRI (6.01%) / Deminion (10.82%) /		
		DPL (6.91%) / Dominion (10.82%) /		
		JCPL (11.64%) / ME (2.94%) /		
		NEPTUNE* (1.12%) / PECO (14.51%)		
		/ PEPCO (6.11%) / PPL (6.39%) /		
		PSEG (15.86%) / RE (0.59%)		

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required 1	Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s)			
		Load-Ratio Share Allocation:		
		AEC (1.67%) / AEP (13.94%) / APS		
		(5.64%) / ATSI (8.02%) / BGE (4.12%)		
		/ ComEd (13.46%) / Dayton (2.12%) /		
		DEOK (3.37%) / DL (1.76%) / DPL		
		(2.55%) / Dominion (12.97%) / EKPC		
		(1.81%) / JCPL (3.92%) / ME (1.95%) /		
		NEPTUNE* (0.24%) / OVEC (0.07%)		
	Replace Mount Storm	/ PECO (5.39%) / PENELEC (1.84%) /		
b0492.8	500 kV breaker H1172-	PEPCO (3.71%) / PPL (4.78%) / PSEG		
00492.8	2	(6.40%) / RE (0.27%)		
		DFAX Allocation:		
		AEC (5.01%) / AEP (4.39%) / APS		
		(9.26%) / BGE (4.43%) / DL (0.02%) /		
		DPL (6.91%) / Dominion (10.82%) /		
		JCPL (11.64%) / ME (2.94%) /		
		NEPTUNE* (1.12%) / PECO (14.51%)		
		/ PEPCO (6.11%) / PPL (6.39%) /		
		PSEG (15.86%) / RE (0.59%)		
		Load-Ratio Share Allocation:		
		Load-Ratio Share Allocation:		
		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS		
		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) /		
		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL		
		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC		
		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) /		
	Replace Mount Storm	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC		
h0402.0	Replace Mount Storm 500 kV breaker	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) /		
b0492.9	1 *	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%)		
b0492.9	500 kV breaker	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)		
b0492.9	500 kV breaker	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation:		
b0492.9	500 kV breaker	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: AEC (5.01%) / AEP (4.39%) / APS		
b0492.9	500 kV breaker	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: AEC (5.01%) / AEP (4.39%) / APS (9.26%) / BGE (4.43%) / DL (0.02%) /		
b0492.9	500 kV breaker	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: AEC (5.01%) / AEP (4.39%) / APS (9.26%) / BGE (4.43%) / DL (0.02%) / DPL (6.91%) / Dominion (10.82%) /		
b0492.9	500 kV breaker	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: AEC (5.01%) / AEP (4.39%) / APS (9.26%) / BGE (4.43%) / DL (0.02%) / DPL (6.91%) / Dominion (10.82%) / JCPL (11.64%) / ME (2.94%) /		
b0492.9	500 kV breaker	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: AEC (5.01%) / AEP (4.39%) / APS (9.26%) / BGE (4.43%) / DL (0.02%) / DPL (6.91%) / Dominion (10.82%) / JCPL (11.64%) / ME (2.94%) / NEPTUNE* (1.12%) / PECO (14.51%)		
b0492.9	500 kV breaker	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: AEC (5.01%) / AEP (4.39%) / APS (9.26%) / BGE (4.43%) / DL (0.02%) / DPL (6.91%) / Dominion (10.82%) / JCPL (11.64%) / ME (2.94%) /		

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s)				
		Load-Ratio Share Allocation:		
		AEC (1.67%) / AEP (13.94%) / APS		
		(5.64%) / ATSI (8.02%) / BGE (4.12%)		
		/ ComEd (13.46%) / Dayton (2.12%) /		
		DEOK (3.37%) / DL (1.76%) / DPL		
		(2.55%) / Dominion (12.97%) / EKPC		
		(1.81%) / JCPL (3.92%) / ME (1.95%) /		
		NEPTÚNE* (0.24%) / OVEC (0.07%) /		
	D - 1 M 4 C4	PECO (5.39%) / PÉNELEC (1.84%) /		
1.0402.10	Replace Mount Storm	PEPCO (3.71%) / PPL (4.78%) / PSEG		
b0492.10	500 kV breaker	(6.40%) / RE (0.27%)		
	G2T554	(0.1073)7122 (0.2773)		
		DFAX Allocation:		
		AEC (5.01%) / AEP (4.39%) / APS		
		(9.26%) / BGE (4.43%) / DL (0.02%) /		
		DPL (6.91%) / Dominion (10.82%) /		
		JCPL (11.64%) / ME (2.94%) /		
		NEPTUNE* (1.12%) / PECO (14.51%) /		
		PEPCO (6.11%) / PPL (6.39%) / PSEG		
		(15.86%) / RE (0.59%)		
		Load-Ratio Share Allocation:		
		AEC (1.67%) / AEP (13.94%) / APS		
	Replace Mount Storm	(5.64%) / ATSI (8.02%) / BGE (4.12%)		
		/ ComEd (13.46%) / Dayton (2.12%) /		
		DEOK (3.37%) / DL (1.76%) / DPL		
		(2.55%) / Dominion (12.97%) / EKPC		
		(1.81%) / JCPL (3.92%) / ME (1.95%) /		
		NEPTUNE* (0.24%) / OVEC (0.07%) /		
		PECO (5.39%) / PENELEC (1.84%) /		
10402 11	500 kV breaker	PEPCO (3.71%) / PPL (4.78%) / PSEG		
b0492.11	G1T551	(6.40%) / RE (0.27%)		
		(0.4070)7 RE (0.2770)		
		DFAX Allocation:		
		AEC (5.01%) / AEP (4.39%) / APS		
		(9.26%) / BGÉ (4.43%) / DL (0.02%) /		
		DPL (6.91%) / Dominion (10.82%) /		
		JCPL (11.64%) / ME (2.94%) /		
		NEPTUNE* (1.12%) / PECO (14.51%) /		
		PEPCO (6.11%) / PPL (6.39%) / PSEG		
		(15.86%) / RE (0.59%)		
		(13.80/0)/ KE(0.39/0)		

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required 11	ansmission Ennancements Ann	uai Revenue Requirer	1
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) / APS
			(5.64%) / ATSI (8.02%) / BGE
			(4.12%) / ComEd (13.46%) / Dayton
			(2.12%) / DEOK (3.37%) / DL
			(1.76%) / DPL (2.55%) / Dominion
			(12.97%) / EKPC (1.81%) / JCPL
	Upgrade nameplate rating		(3.92%) / ME (1.95%) / NEPTUNE*
	of Mount Storm 500 kV		(0.24%) / OVEC (0.07%) / PECO
	breakers 55472, 57272,		(5.39%) / PENELEC (1.84%) /
b0492.12	SX172, G3TSX1,		PEPCO (3.71%) / PPL (4.78%) /
00472.12	G1TH11, G3T572, and		PSEG (6.40%) / RE (0.27%)
	SX22		DFAX Allocation:
			AEC (5.01%) / AEP (4.39%) / APS
			(9.26%) / BGE (4.43%) / DL (0.02%)
			/ DPL (6.91%) / Dominion (10.82%) /
			JCPL (11.64%) / ME (2.94%) /
			NEPTUNE* (1.12%) / PECO
			(14.51%) / PEPCO (6.11%) / PPL
			(6.39%) / PSEG (15.86%) / RE
			(0.59%)
			AEC (1.67%) / AEP (13.94%) / APS
			(5.64%) / ATSI (8.02%) / BGE
	MAPP Project – install		(4.12%) / ComEd (13.46%) / Dayton
	new 500 kV transmission		(2.12%) / DEOK (3.37%) / DL
	from Possum Point to		(1.76%) / DPL (2.55%) / Dominion
b0512	Calvert Cliffs and install		(12.97%) / EKPC (1.81%) / JCPL
00312	a DC line from Calvert		(3.92%) / ME (1.95%) / NEPTUNE*
	Cliffs to Vienna and a DC		(0.24%) / OVEC (0.07%) / PECO
	line from Calvert Cliffs to		(5.39%) / PENELEC (1.84%) /
	Indian River		PEPCO (3.71%) / PPL (4.78%) /
			PSEG (6.40%) / RE (0.27%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Tr	Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s)				
		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE			
		(4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL			
b0512.5	Advance n0716 (Ox - Replace 230 kV breaker L242)	(3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)			
		DFAX Allocation: AEC (3.94%) / APS (0.33%) / BGE (34.54%) / DPL (14.69%) / Dominion (0.30%) / JCPL (9.43%) / ME (2.16%) / NEPTUNE* (0.90%) / PECO (10.52%) / PEPCO (2.44%) / PPL (5.50%) / PSEG (14.71%) / RE (0.54%)			
b0512.6	Advance n0717 (Possum Point - Replace 230 kV breaker SC192)	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)			
		DFAX Allocation: AEC (3.94%) / APS (0.33%) / BGE (34.54%) / DPL (14.69%) / Dominion (0.30%) / JCPL (9.43%) / ME (2.16%) / NEPTUNE* (0.90%) / PECO (10.52%) / PEPCO (2.44%) / PPL (5.50%) / PSEG (14.71%) / RE (0.54%)			

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Install dual primary protection schemes on Gosport lines 62 and 51 at b0583 the remote terminals Dominion (100%) (Chesapeake on the 62 line and Reeves Ave on the 51 line) Install a second 500/115 b0756 kV autotransformer at Dominion (100%) Chancellor 500 kV **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / Install two 500 kV EKPC (1.81%) / JCPL (3.92%) / b0756.1 breakers at Chancellor 500 ME (1.95%) / NEPTUNE\* kV (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)**DFAX Allocation:** Dominion (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required 1	Fransmission Enhancements Ann	ual Revenue Requirement	Responsible Customer(s)
	Reconductor one mile of		
b0757	Chesapeake – Reeves		
	Avenue 115 kV line		Dominion (100%)
	Install a second		
b0758	Fredericksburg 230/115		
	kV autotransformer		Dominion (100%)
	Build 115 kV line from		
	Kitty Hawk to Colington		
1.07.00	115 kV (Colington on the		
b0760	existing line and Nag's		
	Head and Light House DP		
	on new line)		Dominion (100%)
	Install a second 230/115		, ,
b0761	kV transformer at Possum		
	Point		Dominion (100%)
	Build a new Elko station		
1.07(2	and transfer load from		
b0762	Turner and Providence		
	Forge stations		Dominion (100%)
	Rebuild 17.5 miles of the		
b0763	line for a new summer		
	rating of 262 MVA		Dominion (100%)
	Increase the rating on 2.56		
	miles of the line between		
b0764	Greenwich and Thompson		
	Corner; new rating to be		
	257 MVA		Dominion (100%)
	Add a second Bull Run		, ,
b0765	230/115 kV		
	autotransformer		Dominion (100%)
	Increase the rating of the		, , ,
1.07//	line between Loudoun and		
b0766	Cedar Grove to at least		
	150 MVA		Dominion (100%)
	Extend the line from Old		Ì
b0767	Church – Chickahominy		
	230 kV		Dominion (100%)

Required T	ransmission Enhancements Ann	ual Revenue Requirement	Responsible Customer(s)
b0768	Loop line #251 Idylwood  – Arlington into the GIS sub		Dominion (100%)
b0769	Re-tension 15 miles of the line for a new summer rating of 216 MVA		Dominion (100%)
ь0770	Add a second 230/115 kV autotransformer at Lanexa		Dominion (100%)
b0770.1	Replace Lanexa 115 kV breaker '8532'		Dominion (100%)
b0770.2	Replace Lanexa 115 kV breaker '9232'		Dominion (100%)
b0771	Build a parallel Chickahominy – Lanexa 230 kV line		Dominion (100%)
b0772	Install a second Elmont 230/115 kV autotransformer		Dominion (100%)
b0772.1	Replace Elmont 115 kV breaker '7392'		Dominion (100%)
b0774	Install a 33 MVAR capacitor at Bremo 115 kV		Dominion (100%)
b0775	Reconductor the Greenwich – Virginia Beach line to bring it up to a summer rating of 261 MVA; Reconductor the Greenwich – Amphibious Base line to bring it up to 291 MVA		Dominion (100%)

Required i	ransmission Enhancements Ani	nuai Revenue Requirement	t Responsible Customer(s)
b0776	Re-build Trowbridge – Winfall 115 kV		Dominion (100%)
b0777	Terminate the Thelma – Carolina 230 kV circuit into Lakeview 230 kV		Dominion (100%)
b0778	Install 29.7 MVAR capacitor at Lebanon 115 kV		Dominion (100%)
b0779	Build a new 230 kV line from Yorktown to Hayes but operate at 115 kV initially		Dominion (100%)
b0780	Reconductor Chesapeake  – Yadkin 115 kV line		Dominion (100%)
b0781	Reconductor and replace terminal equipment on line 17 and replace the wave trap on line 88		Dominion (100%)
b0782	Install a new 115 kV capacitor at Dupont Waynesboro substation		Dominion (100%)
b0784	Replace wave traps on North Anna to Ladysmith 500 kV		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0785	Rebuild the Chase City – Crewe 115 kV line		(5.79%) Dominion (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required '	Transmission Enhancements Annual Revenue Requir	ement Responsible Customer(s)
	Reconductor the Moran	
b0786	DP – Crewe 115 kV	
	segment	Dominion (100%)
	Upgrade the Chase City –	
b0787	Twitty's Creek 115 kV	
	segment	Dominion (100%)
	Reconductor the line from	
b0788	Farmville – Pamplin 115	
	kV	Dominion (100%)
	Close switch 145T183 to	
	network the lines. Rebuild	
b0793	the section of the line #145	
	between Possum Point –	
	Minnieville DP 115 kV	Dominion (100%)
b0815	Replace Elmont 230 kV	
00013	breaker '22192'	Dominion (100%)
1.001.6	Replace Elmont 230 kV	,
b0816	breaker '21692'	Dominion (100%)
	Replace Elmont 230 kV	Deminen (10070)
b0817	breaker '200992'	Dominion (100%)
		Dominion (100%)
b0818	Replace Elmont 230 kV	7 (1000)
	breaker '2009T2032'	Dominion (100%)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd (13.46%)
		/ Dayton (2.12%) / DEOK
		(3.37%) / DL (1.76%) / DPL
	At Mt. Storm, replace the	(2.55%) / Dominion (12.97%) /
1.000=	existing MOD on the 500	EKPC (1.81%) / JCPL (3.92%) /
b0837	kV side of the transformer	ME (1.95%) / NEPTUNE*
	with a circuit breaker	(0.24%) / OVEC (0.07%) /
		PECO (5.39%) / PENELEC
		(1.84%) / PEPCO (3.71%) / PPL
		(4.78%) / PSEG (6.40%) / RE
		(0.27%)
		DEAV Allegation
		DFAX Allocation:
		Dominion (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required	Transmission Emiancements Am	iuai Kevenue Requirement	Responsible Customer(s)
b0888	Replace Loudoun 230 kV Cap breaker 'SC352'		Dominion (100%)
b0892	Replace Chesapeake 115 kV breaker SX522		Dominion (100%)
b0893	Replace Chesapeake 115 kV breaker T202		Dominion (100%)
b0894	Replace Possum Point 115 kV breaker SX-32		Dominion (100%)
b0895	Replace Possum Point 115 kV breaker L92-1		Dominion (100%)
b0896	Replace Possum Point 115 kV breaker L92-2		Dominion (100%)
b0897	Replace Suffolk 115 kV breaker T202		Dominion (100%)
b0898	Replace Peninsula 115 kV breaker SC202		Dominion (100%)
b0921	Reconductor Brambleton - Cochran Mill 230 kV line with 201 Yukon conductor		Dominion (100%)
b0923	Install 50-100 MVAR variable reactor banks at Carson 230 kV		Dominion (100%)
b0924	Install 50-100 MVAR variable reactor banks at Dooms 230 kV		Dominion (100%)
b0925	Install 50-100 MVAR variable reactor banks at Garrisonville 230 kV		Dominion (100%)
b0926	Install 50-100 MVAR variable reactor banks at Hamilton 230 kV		Dominion (100%)
b0927	Install 50-100 MVAR variable reactor banks at Yadkin 230 kV		Dominion (100%)

	Tansinission Emiancements Amilu	an the venue the quiterness.	Responsible Customer(s)
	Install 50-100 MVAR		
	variable reactor banks at		
	Carolina, Dooms,		
b0928	Everetts, Idylwood, N.		
	Alexandria, N. Anna,		
	Suffolk and Valley 230		
	kV substations		Dominion (100%)
b1056	Build a 2nd Shawboro –		
01030	Elizabeth City 230 kV line		Dominion (100%)
	Add a third 230/115 kV		
b1058	transformer at Suffolk		
	substation		Dominion (100%)
	Replace Suffolk 115 kV		
b1058.1	breaker 'T122' with a 40		
	kA breaker		Dominion (100%)
	Convert Suffolk 115 kV		
	straight bus to a ring bus		
b1058.2	for the three 230/115 kV		
	transformers and three 115		
	kV lines		Dominion (100%)
	Rebuild the existing 115		
	kV corridor between		
b1071	Landstown - Va Beach		
010/1	Substation for a double		
	circuit arrangement (230		
	kV & 115 kV)		Dominion (100%)
	Replace existing North		
b1076	Anna 500-230 kV		
01070	transformer with larger		
	unit		Dominion (100%)
	Replace Cannon Branch		
b1087	230-115 kV with larger		
	transformer		Dominion (100%)

Required	Transmission Ennancements An	nuai Revenue Requirement	Responsible Customer(s)
	Build new Radnor Heights		
	Sub, add new underground		
	circuit from Ballston -		
b1088	Radnor Heights, Tap the		
01000	Glebe - Davis line and		
	create circuits from Davis		
	- Radnor Heights and		
	Glebe - Radnor Heights		Dominion (100%)
	Install 2nd Burke to		
b1089	Sideburn 230 kV		
	underground cable		Dominion (100%)
	Install a 150 MVAR 230		
b1090	kV capacitor and one 230		
	kV breaker at Northwest		Dominion (100%)
	Reconductor Chase City		
b1095	115 kV bus and add a new		
	tie breaker		Dominion (100%)
	Construct 10 mile double		
b1096	ckt. 230 kV tower line		
01030	from Loudoun to		
	Middleburg		Dominion (100%)
h1102	Replace Bremo 115 kV		
b1102	breaker '9122'		Dominion (100%)
1 4 4 0 7	Replace Bremo 115 kV		
b1103	breaker '822'		Dominion (100%)
	Build a 4-6 mile long 230		2011111011 (10070)
	kV line from Hopewell to		
b1172	Bull Hill (Ft Lee) and		
	install a 230-115 kV Tx		Dominion (100%)
ı	1 1111 11 11 11 11 11 11 11 11 11 11 11	·	20111111011 (100/0)

Required T	ransmission Enhancements Ani	nual Revenue Requirement	<u> </u>
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd (13.46%)
			/ Dayton (2.12%) / DEOK
			(3.37%) / DL (1.76%) / DPL
	Build new Brambleton		(2.55%) / Dominion (12.97%) /
	500 kV three breaker ring		EKPC (1.81%) / JCPL (3.92%) /
b1188	bus connected to the		ME (1.95%) / NEPTUNE*
	Loudoun to Pleasant View		(0.24%) / OVEC (0.07%) /
	500 kV line		PECO (5.39%) / PENELEC
			(1.84%) / PEPCO (3.71%) / PPL
			(4.78%) / PSEG (6.40%) / RE
			(0.27%)
			, ,
			DFAX Allocation:
			Dominion (100%)
	Replace Loudoun 230 kV		
b1188.1	breaker '200852' with a		
	63 kA breaker		Dominion (100%)
	Replace Loudoun 230 kV		
b1188.2	breaker '2008T2094' with		
	a 63 kA breaker		Dominion (100%)
	Replace Loudoun 230 kV		
b1188.3	breaker '204552' with a		
	63 kA breaker		Dominion (100%)
	Replace Loudoun 230 kV		
b1188.4	breaker '209452' with a		
	63 kA breaker		Dominion (100%)
	Replace Loudoun 230 kV		
b1188.5	breaker 'WT2045' with a		
	63 kA breaker		Dominion (100%)
	Install one 500/230 kV		AEC (0.22%) / BGE (7.90%) /
11100 E	transformer and two 230		DPL (0.59%) / Dominion
b1188.6	kV breakers at		(75.58%) / ME (0.22%) / PECO
	Brambleton		(0.73%) / PEPCO (14.76%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required	Fransmission Enhancements Annual Revenue Requirement	Responsible Customer(s)
b1224	Install 2nd Clover 500/230 kV transformer and a 150 MVAr capacitor	BGE (7.56%) / DPL (1.03%) / Dominion (78.21%) / ME (0.77%) / PECO (1.39%) / PEPCO (11.04%)
b1225	Replace Yorktown 115 kV breaker 'L982-1'	Dominion (100%)
b1226	Replace Yorktown 115 kV breaker 'L982-2'	Dominion (100%)
b1279	Line #69 Uprate – Increase rating on Locks – Purdy 115 kV to serve additional load at the Reams delivery point	Dominion (100%)
b1306	Reconfigure 115 kV bus at Endless Caverns substation such that the existing two 230/115 kV transformers at Endless Caverns operate in	Dominion (100%)
b1307	Install a 2nd 230/115 kV transformer at Northern Neck Substation	Dominion (100%)
b1308	Improve LSE's power factor factor in zone to .973 PF, adjust LTC's at Gordonsville and Remington, move existing shunt capacitor banks	Dominion (100%)
b1309	Install a 230 kV line from Lakeside to Northwest utilizing the idle line and 60 line ROW's and reconductor the existing 221 line between Elmont and Northwest	Dominion (100%)

Required	Transmission Enhancements Ann	iuai Revenue Requirement	Responsible Customer(s)
	Install a 115 kV breaker at		
b1310	Broadnax substation on the		
01310	South Hill side of		
	Broadnax		Dominion (100%)
	Install a 230 kV 3000 amp		
b1311	breaker at Cranes Corner		
01311	substation to sectionalize		
	the 2104 line into two lines		Dominion (100%)
	Loop the 2054 line in and		
	out of Hollymeade and		
b1312	place a 230 kV breaker at		
01312	Hollymeade. This creates		
	two lines: Charlottesville -		
	Hollymeade		Dominion (100%)
	Resag wire to 125C from		
	Chesterfield – Shockoe		
b1313	and replace line switch		
01313	1799 with 1200 amp		
	switch. The new rating		
	would be 231 MVA		Dominion (100%)
	Rebuild the 6.8 mile line		
b1314	#100 from Chesterfield to		
01314	Harrowgate 115 kV for a		
	minimum 300 MBA rating		Dominion (100%)

Required	Fransmission Enhancements Annual Revenue Requiremen	t Responsible Customer(s)
	Convert line #64	
	Trowbridge to Winfall to	
b1315	230 kV and install a 230	
	kV capacitor bank at	
	Winfall	Dominion (100%)
	Rebuild 10.7 miles of 115	
b1316	kV line #80, Battleboro –	
	Heartsease DP	Dominion (100%)
	LSE load power factor on	
	the #47 line will need to	
	meet MOA requirements	
b1317	of .973 in 2015 to further	
	resolve this issue through	
	at least 2019	Dominion (100%)
	Install a 115 kV bus tie	Delimier (10070)
	breaker at Acca substation	
b1318	between the Line #60 and	
	Line #95 breakers	Dominion (100%)
	Resag line #222 to 150 C	Dominion (10070)
	and upgrade any	
	associated equipment to a	
b1319	2000A rating to achieve a	
	706 MVA summer line	
	rating	Dominion (100%)
	Install a 230 kV, 150	Dominion (10070)
b1320	MVAR capacitor bank at	
01320	Southwest substation	Dominion (100%)
	Build a new 230 kV line	Dominion (10070)
1,1221	North Anna – Oak Green	
b1321	and install a 224 MVA	DCE (0.950/) / Daminian
	230/115 kV transformer at	BGE (0.85%) / Dominion
	Oak Green	(97.96%) / PEPCO (1.19%)
	Rebuild the 39 Line	
b1322	(Dooms – Sherwood) and	
	the 91 Line (Sherwood –	D :: (1000()
	Bremo)	Dominion (100%)
	Install a 224 MVA	
	230/115 kV transformer at	
b1323	Staunton. Rebuild the 115	
	kV line #43 section	
	Staunton - Verona	Dominion (100%)

required	Transmission Emianecinche Amidai Reven	ue requirement   responsible eustomen(s)
	Install a 115 kV capacitor	
b1324	bank at Oak Ridge. Install	
	a capacitor bank at New	
01324	Bohemia. Upgrade	
	230/34.5 kV transformer	
	#3 at Kings Fork	Dominion (100%)
	Rebuild 15 miles of line	
b1325	#2020 Winfall – Elizabeth	
01323	City with a minimum 900	
	MVA rating	Dominion (100%)
	Install a third 168 MVA	
	230/115 kV transformer at	
1.1006	Kitty Hawk with a	
b1326	normally open 230 kV	
	breaker and a low side 115	
	kV breaker	Dominion (100%)
	Rebuild the 20 mile	
1 1227	section of line #22	
b1327	between Kerr Dam –	
	Eatons Ferry substations	Dominion (100%)
	Uprate the 3.63 mile line	
	section between Possum	
b1328	and Dumfries substations,	AEC (0.66%) / APS (3.59%) /
	replace the 1600 amp	DPL (0.91%) / Dominion
	wave trap at Possum Point	(92.94%) / PECO (1.90%)
	Install line-tie breakers at	
b1329	Sterling Park substation	
	and BECO substation	Dominion (100%)
	Install a five breaker ring	
	bus at the expanded Dulles	
1.1220	substation to accommodate	
b1330	the existing Dulles	
	Arrangement and support	
	the Metrorail	Dominion (100%)
	Build a 230 kV line from	2 (11111611 (10070)
	Shawboro to Aydlett tap	
b1331	and connect Aydlett to the	
	new line	Dominion (100%)
	Build Cannon Branch to	Dominion (10070)
b1332	Nokesville 230 kV line	Daminian (1000/)
	INUNCSVIIIC 230 K V IIIIC	Dominion (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Advance n1728 (Replace Possum Point 230 kV b1333 breaker H9T237 with an Dominion (100%) 80 kA breaker) Advance n1748 (Replace Ox 230 kV breaker 22042 b1334 with a 63 kA breaker) Dominion (100%) Advance n1749 (Replace Ox 230 kV breaker b1335 220T2603 with a 63 kA breaker) Dominion (100%) Advance n1750 (Replace Ox 230 kV breaker 24842 b1336 with a 63 kA breaker) Dominion (100%) Advance n1751 (Replace Ox 230 kV breaker b1337 248T2013 with a 63 kA breaker) Dominion (100%) Loop Line #2095 in and b1503.1 out of Waxpool approximately 1.5 miles Dominion (100%) Construct a new 230 kV line from Brambleton to BECO Substation of approximately 11 miles b1503.2 with approximately 10 miles utilizing the vacant side of existing Line #2095 structures Dominion (100%) Install a one 230 kV breaker, Future 230 kV b1503.3 ring-bus at Waxpool Substation Dominion (100%) The new Brambleton -BECO line will feed b1503.4 Shellhorn Substation load and Greenway TX's #2&3 load Dominion (100%)

Required 1	ransmission Ennancements Anr	iuai Revenue Requirement	Responsible Customer(s)
	At Gainesville Substation,		
b1506.1	create two 115 kV		
	straight-buses with a		
	normally open tie-breaker		Dominion (100%)
	Upgrade Line 124 (radial		
	from Loudoun) to a		
	minimum continuous		
b1506.2	rating of 500 MVA and		
	network it into the 115 kV		
	bus feeding NOVEC's DP		
	at Gainesville		Dominion (100%)
	Install two additional 230		
	kV breakers in the ring at		
	Gainesville (may require		
b1506.3	substation expansion) to		
	accommodate conversion		
	of NOVEC's Gainesville		
	to Wheeler line		Dominion (100%)
	Convert NOVEC's		
	Gainesville-Wheeler line		
	from 115 kV to 230 kV		
1,1506 A	(will require Gainsville		
b1506.4	DP Upgrade replacement		
	of three transformers total		
	at Atlantic and Wheeler		
	Substations)		Dominion (100%)

Required 1	ransmission Enhancements Ann	iuai Revenue Requirement	1
			<b>Load-Ratio Share Allocation:</b>
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd (13.46%)
	!		/ Dayton (2.12%) / DEOK
			(3.37%) / DL (1.76%) / DPL
			(2.55%) / Dominion (12.97%) /
			EKPC (1.81%) / JCPL (3.92%) /
			ME (1.95%) / NEPTUNE*
b1507	Rebuild Mt Storm –		(0.24%) / OVEC (0.07%) /
01307	Doubs 500 kV		PECO (5.39%) / PENELEC
			(1.84%) / PEPCO (3.71%) / PPL
			(4.78%) / PSEG (6.40%) / RE
			(0.27%)
			(**= / ` - /
			<b>DFAX Allocation:</b>
			APS ( <del>20.09</del> <u>20.37</u> %) / BGE
			( <del>13.46</del> <u>12.89</u> %) / Dominion
			( <del>52.77</del> <u>53.52</u> %) / PEPCO
			( <del>13.68</del> <u>13.22</u> %)
	Mt Storm - Doubs 500 kV		
b1507.1	transmission line rebuild		APS (20.37%) / BGE (12.89%) /
01307.1	in both West Virginia and		Dominion (53.52%) / PEPCO
	<u>Virginia</u>		<u>(13.22%)</u>
	Build a 2nd 230 kV Line		
b1508.1	Harrisonburg to Endless		APS (37.05%) / Dominion
	Caverns		(62.95%)
b1508.2	Install a 3rd 230-115 kV		APS (37.05%) / Dominion
01300.2	Tx at Endless Caverns		(62.95%)
	Upgrade a 115 kV shunt		
b1508.3	capacitor banks at Merck		APS (37.05%) / Dominion
	and Edinburg		(62.95%)
	Advance n1752 (Replace		
b1536	OX 230 breaker 24342		
	with an (63 kA breaker)		Dominion (100%)
	Advance n1753 (Replace		
b1537	OX 230 breaker		
0133/	243T2097 with an 63 kA		
	breaker)		Dominion (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required	I ransmission Enhancements An	nuai Revenue Requirement	Responsible Customer(s)
b1538	Replace Loudoun 230 kV breaker '29552'		Dominion (100%)
b1571	Replace Acca 115 kV breaker '6072' with 40 kA		Dominion (100%)
b1647	Upgrade the name plate rating at Morrisville 500 kV breaker 'H1T573' with 50 kA breaker		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b1648	Upgrade name plate rating at Morrisville 500 kV breaker 'H2T545' with 50 kA breaker		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
			Dominion (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required	I ransmission Enhancements An	
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd (13.46%)
		/ Dayton (2.12%) / DEOK
		(3.37%) / DL (1.76%) / DPL
		(2.55%) / Dominion (12.97%) /
	Replace Morrisville 500	EKPC (1.81%) / JCPL (3.92%) /
b1649	kV breaker 'H1T580' with	ME (1.95%) / NEPTUNE*
	50 kA breaker	(0.24%) / OVEC (0.07%) /
		PECO (5.39%) / PENELEC
		(1.84%) / PEPCO (3.71%) / PPL
		(4.78%) / PSEG (6.40%) / RE
		(0.27%)
		DEAN All (*
		DFAX Allocation:
		Dominion (100%)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd (13.46%)
		/ Dayton (2.12%) / DEOK
		(3.37%) / DL (1.76%) / DPL
	Replace Morrisville 500	(2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) /
b1650	kV breaker 'H2T569' with	ME (1.95%) / NEPTUNE*
01030	50 kA breaker	(0.24%) / OVEC (0.07%) /
	30 K/Y OTCARCI	PECO (5.39%) / PENELEC
		` '
		(1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE
		(0.27%)
		DFAX Allocation:
		Dominion (100%)
	Replace Loudoun 230 kV	((
b1651	breaker '295T2030' with	
	63 kA breaker	Dominion (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required	Transmission Enhancements Am	nual Revenue Requirement Responsible Customer(s)
	Replace Ox 230 kV	
b1652	breaker '209742' with 63	
	kA breaker	Dominion (100%)
	Replace Clifton 230 kV	
b1653	breaker '26582' with 63	
	kA breaker	Dominion (100%)
	Replace Clifton 230 kV	
b1654	breaker '26682' with 63	
01001	kA breaker	Dominion (100%)
	Replace Clifton 230 kV	Bolimion (10070)
b1655	breaker '205182' with 63	
01033	kA breaker	Dominion (100%)
		Dominion (100%)
1.1656	Replace Clifton 230 kV	
b1656	breaker '265T266' with 63	D : : (1000/)
	kA breaker	Dominion (100%)
1.1655	Replace Clifton 230 kV	
b1657	breaker '2051T2063' with	D : (1000/)
	63 kA breaker	Dominion (100%)
		<b>Load-Ratio Share Allocation:</b>
	Rebuild Loudoun - Brambleton 500 kV	AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd (13.46%)
		/ Dayton (2.12%) / DEOK
		(3.37%) / DL (1.76%) / DPL
		(2.55%) / Dominion (12.97%) /
		EKPC (1.81%) / JCPL (3.92%) /
b1694		ME (1.95%) / NEPTUNE*
		(0.24%) / OVEC (0.07%) / PECO
		(5.39%) / PENELEC (1.84%) /
		PEPCO (3.71%) / PPL (4.78%) /
		PSEG (6.40%) / RE (0.27%)
		DFAX Allocation:
		BGE (13.48%) / Dominion
		(73.11%) / PEPCO (13.41%)
	Install a breaker and a half scheme with a minimum	AEC (0.46%) / APS (4.18%) /
		BGE (2.02%) / DPL (0.80%) /
1.4.63.5		Dominion (88.45%) / JCPL
b1696	of eight 230 kV breakers	(0.64%) / ME (0.50%) /
	for five existing lines at Idylwood 230 kV	NEPTUNE* (0.06%) / PECO
		(1.55%) / PEPCO (1.34%)
		(1.3370)/11100(1.3470)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required I	ransmission Enhancements Ani	nuai Revenue Requirement	Responsible Customer(s)
			AEC (1.35%) / APS (15.65%) /
b1697	Build a 2nd Clark - Idylwood 230 kV line and install 230 kV gas-hybrid breakers at Clark		BGE (10.53%) / DPL (2.59%) /
			Dominion (46.97%) / JCPL
			(2.36%) / ME (1.91%) /
			NEPTUNE* (0.23%) / PECO
	breakers at Clark		(4.48%) / PEPCO (11.23%) /
			PSEG (2.59%) / RE (0.11%)
	Install a 2nd 500/230 kV transformer at Brambleton		APS (4.21%) / BGE (13.28%) /
b1698			DPL (1.09%) / Dominion
	transformer at Bramoreton		(59.38%) / PEPCO (22.04%)
	Install a 500 kV breaker at Brambleton		Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd (13.46%)
			/ Dayton (2.12%) / DEOK
			(3.37%) / DL (1.76%) / DPL
			(2.55%) / Dominion (12.97%) /
			EKPC (1.81%) / JCPL (3.92%) /
b1698.1			ME (1.95%) / NEPTUNE*
			(0.24%) / OVEC (0.07%) /
			PECO (5.39%) / PENELEC
			(1.84%) / PEPCO (3.71%) / PPL
			(4.78%) / PSEG (6.40%) / RE
			(0.27%)
			DEAY Allocations
			DFAX Allocation:
			Dominion (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

required 1	Taristilission Enhancements Amitua	ii ixevenue ixequirement	Responsible Customer(s)
b1698.6	Replace Brambleton 230		
01096.0	kV breaker '2094T2095'		Dominion (100%)
	Reconfigure Line #203 to		
	feed Edwards Ferry sub		
b1699	radial from Pleasant View		
01099	230 kV and install new		
	breaker bay at Pleasant		
	View Sub		Dominion (100%)
	Install a 230/115 kV		
	transformer at the new		
b1700	Liberty substation to		
	relieve Gainesville		
	Transformer #3		Dominion (100%)
	Reconductor line #2104		APS (8.66%) / BGE (10.95%) /
b1701	(Fredericksburg - Cranes		Dominion (63.30%) / PEPCO
	Corner 230 kV)		(17.09%)
b1724	Install a 2nd 138/115 kV		
01/24	transformer at Edinburg		Dominion (100%)
	Replace the 115/34.5 kV		
b1728	transformer #1 at Hickory		
01/28	with a 230/34.5 kV		
	transformer		Dominion (100%)
	Add 4 breaker ring bus at		
	Burton 115 kV substation		
	and construct a 115 kV		
b1729	line approximately 3.5		
	miles from Oakwood 115		
	kV substation to Burton		
	115 kV substation		Dominion (100%)

Required	Transmission Enhancements Ani	idai Kevende Kequitement	Responsible Customer(s)
	Install a 230/115 kV		
b1730	transformer at a new		
	Liberty substation		Dominion (100%)
	Uprate or rebuild Four		
	Rivers – Kings Dominion		
b1731	115 kV line or Install		
01/31	capacitors or convert load		
	from 115 kV system to		
	230 kV system		Dominion (100%)
	Split Wharton 115 kV		
	capacitor bank into two		
	smaller units and add		
	additional reactive support		
b1790	in area by correcting		
	power factor at Pantego		
	115 kV DP and FivePoints		
	115 kV DP to minimum of		
	0.973		Dominion (100%)
	Wreck and rebuild 2.1		
b1791	mile section of Line #11		APS (5.83%) / BGE (6.25%) /
01/71	section between		Dominion (78.38%) / PEPCO
	Gordonsville and Somerset		(9.54%)
	Rebuild line #33 Halifax		
b1792	to Chase City, 26 miles.		
01/72	Install 230 kV 4 breaker		
	ring bus		Dominion (100%)
	Wreck and rebuild		
	remaining section of Line		
b1793	#22, 19.5 miles and		
	replace two pole H frame		
	construction built in 1930		Dominion (100%)
	Split 230 kV Line #2056		
	(Hornertown - Rocky		
	Mount) and double tap line		
b1794	to Battleboro Substation.		
01/94	Expand station, install a		
	230 kV 3 breaker ring bus		
	and install a 230/115 kV		
	transformer		Dominion (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Reconductor segment of Line #54 (Carolina to b1795 Woodland 115 kV) to a minimum of 300 MVA Dominion (100%) Install 115 kV 25 MVAR b1796 capacitor bank at Kitty **Hawk Substation** Dominion (100%) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE\* Wreck and rebuild 7 miles (0.24%) / OVEC (0.07%) / PECO of the Dominion owned b1797 (5.39%) / PENELEC (1.84%) / section of Cloverdale -PEPCO (3.71%) / PPL (4.78%) / Lexington 500 kV PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** AEP (1.27%) / APS (<del>23.58</del>24.46%) / ATSI (0.69%) / BGE (<del>32.30</del>31.13%) / Dayton (0.27%) / DEOK (0.66%) / Dominion (1.92%) / EKPC (0.38%) / PEPCO (38.9339.22%) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion Build a 450 MVAR SVC (12.97%) / EKPC (1.81%) / JCPL and 300 MVAR switched (3.92%) / ME (1.95%) / NEPTUNE\* b1798 shunt at Loudoun 500 kV (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** BGE (8.297.44%) / Dominion (79.9380.66%) / (11.7811.90%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required 7	Transmission Enhancements	Annual Revenue Requirement Responsible Customer(s)
b1799	Build 150 MVAR Switched Shunt at Pleasant View 500 kV	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b1805	Install a 250 MVAR SVC at the existing Mt. Storm 500 kV substation	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b1809	Replace Brambleton 230 kV Breaker '22702'	Dominion (100%)
b1810	Replace Brambleton 230 kV Breaker '227T2094'	Dominion (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required 1	ransmission Enhancements A	
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd (13.46%)
		/ Dayton (2.12%) / DEOK
		(3.37%) / DL (1.76%) / DPL
	Surry to Skiffes Creek	(2.55%) / Dominion (12.97%) /
b1905.1	500 kV Line (7 miles	EKPC (1.81%) / JCPL (3.92%) /
01703.1	overhead)	ME (1.95%) / NEPTUNE*
	overnead)	(0.24%) / OVEC (0.07%) / PECO
		(5.39%) / PENELEC (1.84%) /
		PEPCO (3.71%) / PPL (4.78%) /
		PSEG (6.40%) / RE (0.27%)
		DFAX Allocation:
		Dominion (100%)
	Surry 500 kV Station Work	Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd (13.46%)
		/ Dayton (2.12%) / DEOK
		(3.37%) / DL (1.76%) / DPL
		(2.55%) / Dominion (12.97%) /
b1905.2		EKPC (1.81%) / JCPL (3.92%) /
01700.2		ME (1.95%) / NEPTUNE*
		(0.24%) / OVEC (0.07%) / PECO
		(5.39%) / PENELEC (1.84%) /
		PEPCO (3.71%) / PPL (4.78%) /
		PSEG (6.40%) / RE (0.27%)
		DFAX Allocation:
		Dominion (100%)
	Skiffes Creek 500-230	( ,
b1905.3	kV Tx and Switching	Dominion (99.84%) / PEPCO
	Station	(0.16%)
	New Skiffes Creek -	Dominion (99.84%) / PEPCO
b1905.4	Whealton 230 kV line	(0.16%)
	Whealton 230 kV	Dominion (99.84%) / PEPCO
b1905.5	breakers	(0.16%)
	or cancer b	(0.10/0)

<sup>\*</sup> Neptune Regional Transmission System, LLC

## Virginia Electric and Power Company (cont.)

required 1	ransmission enhancements A	initial Revenue Requirement Responsible Customer(s)
b1905.6	Yorktown 230 kV work	Dominion (99.84%) / PEPCO (0.16%)
b1905.7	Lanexa 115 kV work	Dominion (99.84%) / PEPCO (0.16%)
b1905.8	Surry 230 kV work	Dominion (99.84%) / PEPCO (0.16%)
b1905.9	Kings Mill, Peninmen, Toano, Waller, Warwick	Dominion (99.84%) / PEPCO (0.16%)
b1906.1	At Yadkin 500 kV, install six 500 kV breakers	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b1906.2	Install a 2nd 230/115 kV TX at Yadkin	Dominion (100%)
b1906.3	Install a 2nd 230/115 kV TX at Chesapeake	Dominion (100%)
b1906.4	Uprate Yadkin – Chesapeake 115 kV	Dominion (100%)
b1906.5	Install a third 500/230 kV TX at Yadkin	Dominion (100%)
b1907	Install a 3rd 500/230 kV TX at Clover	APS (5.83%) / BGE (4.74%) / Dominion (81.79%) / PEPCO (7.64%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

### **Virginia Electric and Power Company (cont.)**

required		iai revenae reganei	Hent Responsible Editioner(s)
b1908	Rebuild Lexington – Dooms 500 kV		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation:
			BGE ( <del>11.61</del> 10.84%) / Dominion ( <del>69.16</del> 70.07%) / EKPC (4.82%) / (PEPCO ( <del>14.41</del> 14.27%)
b1909	Uprate Bremo – Midlothian 230 kV to its maximum operating temperature		APS (6.31%) / BGE (3.81%) / Dominion (81. 90%) / PEPCO (7.98%)
b1910	Build a Suffolk – Yadkin 230 kV line (14 miles) and install 4 breakers		Dominion (100%)
b1911	Add a second Valley 500/230 kV TX		APS (14.85%) / BGE (3.10%) / Dominion (74.12%) / PEPCO (7.93%)
b1912	Install a 500 MVAR SVC at Landstown 230 kV		DEOK (0.46%) / Dominion (99.54%)
b2053	Rebuild 28 mile line		AEP (100%)
b2125	Install four additional 230 kV 100 MVAR variable shunt reactor banks at Clifton, Gallows Road, Garrisonville, and Virginia Hills substations		Dominion (100%)
b2126	Install two additional 230 kV 100 MVAR variable shunt reactor banks at Churchland and Shawboro substations		Dominion (100%)
L		l	2 3 1 1 1 1 1 1 1 1 1 1 1 1 1

<sup>\*</sup> Neptune Regional Transmission System, LLC

## Virginia Electric and Power Company (cont.)

Required	I ransmission Enhancements An	nuai Revenue Requirement	Responsible Customer(s)
	Add a motor to an existing		
	switch at Prince George to		
	allow for Sectionalizing		
b2181	scheme for line #2124 and		
	allow for Brickhouse DP		
	to be re-energized from the		
	115 kV source		Dominion (100%)
	Install 230 kV 4-breaker		
	ring at Enterprise 230 kV		
b2182	to isolate load from		
	transmission system when		
	substation initially built		Dominion (100%)
	Add a motor to an existing		
1,2102	switch at Keene Mill to		
b2183	allow for a sectionalizing		
	scheme		Dominion (100%)
	Install a 230 kV breaker at		
	Tarboro to split line #229.		
b2184	Each will feed an		
02104	autotransformer at		
	Tarboro. Install switches		
	on each autotransformer		Dominion (100%)
	Uprate Line #69 segment		
	Reams DP to Purdy (19		
b2185	miles) from 41 MVA to		
02103	162 MVA by replacing 5		
	structures and re-sagging		
	the line from 50C to 75C		Dominion (100%)
	Install a 2nd 230-115 kV		
	transformer at Earleys		
	connected to the existing		
b2186	115 kV and 230 kV ring		
	busses. Add a 115 kV		
	breaker and 230 kV		
	breaker to the ring busses		Dominion (100%)
	Install 4 - 230 kV breakers		
b2187	at Shellhorn 230 kV to		
	isolate load		Dominion (100%)

### SCHEDULE 12 – APPENDIX A

## (2) Baltimore Gas and Electric Company

Required I	ransmission Enhancements Ar	nnual Kevenue Requirement	Responsible Customer(s)
	Install a 115 kV tie		
	breaker at Wagner to		
b2219	create a separation from		
	line 110535 and		
	transformer 110-2		BGE (100%)
b2220	Install four 115 kV		
02220	breakers at Chestnut Hill		BGE (100%)
	Install an SPS to trip		
b2221	approximately 19 MW		
02221	load at Green St. and		
	Concord		BGE (100%)
	Install a 230/115 kV		
	transformer at Raphael		
	Rd and construct		
	approximately 3 miles of		
b2307	115 kV line from		
	Raphael Rd. to		
	Joppatowne. Construct a		
	115 kV three breaker		
	ring at Joppatowne		BGE (100%)
	Build approximately 3		
	miles of 115 kV		
	underground line from		
	Bestgate tap to Waugh		
b2308	Chapel. Create two		
	breaker bay at Waugh		
	Chapel to accommodate		
	the new underground		
	circuit		BGE (100%)
	Build a new Camp Small		
b2396	115 kV station and install		
	30 MVAR capacitor		BGE (100%)

### **Baltimore Gas and Electric Company (cont.)**

Required I	ransmission Enhancements Ar	nnual Revenue Requirement	Responsible Customer(s)
	Install a tie breaker at		
b2396.1	Mays Chapel 115 kV		
	substation		BGE (100%)
	Upgrade the Riverside		
	115 kV substation strain		
	bus conductors on		
	circuits 115012 and		
b2567	115011 with double		
	bundled 1272 ACSR to		
	achieve ratings of		
	491/577 MVA SN/SE on		
	both transformer leads		BGE (100%)
	Reconductor Northwest –		
	Northwest #2 115 kV		
b2568	110574 substation tie		
02308	circuit with 2167 ACSR		
	to achieve ratings of		
	400/462 MVA SN/SE		BGE (100%)
	Conastone 230 kV		
	substation tie-in work		
	(install a new circuit		AEP (6.46%) / APS (8.74%) /
b2752.6	breaker at Conastone		BGE (19.74%) / ComEd (2.16%)
02/32.0	230 kV and upgrade any		/ Dayton (0.59%) / DEOK
	required terminal		(1.02%) / DL (0.01%) /
	equipment to terminate		Dominion (39.95%) / EKPC
	the new circuit)		(0.45%) / PEPCO (20.88%)
	Reconductor/Rebuild the		AEP (6.46%) / APS (8.74%) /
	two Conastone –		BGE (19.74%) / ComEd (2.16%)
b2752.7	Northwest 230 kV lines		/ Dayton (0.59%) / DEOK
02132.1	and upgrade terminal		(1.02%) / DL (0.01%) /
	equipment on both ends		Dominion (39.95%) / EKPC
			(0.45%) / PEPCO (20.88%)
	Replace the Conastone		
b2752.8	230 kV '2322 B5'		
02,02.0	breaker with a 63 kA		
	breaker		BGE (100%)

### **Baltimore Gas and Electric Company (cont.)**

Required 1	Talishiission Emilancements Ai	muai Revenue Requirement	Responsible Customer(s)
b2752.9	Replace the Conastone 230 kV '2322 B6' breaker with a 63 kA breaker		BGE (100%)
b2766.1	Upgrade substation equipment at Conastone 500 kV to increase facility rating to 2826 MVA normal and 3525 MVA emergency		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

### **Baltimore Gas and Electric Company (cont.)**

Required 1	ransmission Enhancements Ar	inuai Revenue Requirement	Responsible Customer(s)
b2816	Re-connect the Crane – Windy Edge 110591 & 110592 115 kV circuits into the Northeast Substation with the addition of a new 115 kV 3-breaker bay		BGE (100%)
b2992.1	Reconductor the Conastone to Graceton 230 kV 2323 & 2324 circuits. Replace 7 disconnect switches at Conastone substation		AEP (2.25%) / APS (2.58%) / BGE (44.61%) / ComEd (0.51%) / Dayton (0.40%) / DEOK (1.39%) / DL (0.14%) / Dominion (27.05%) / EKPC (0.52%) / PENELEC (0.02%) / PEPCO (20.53%)
b2992.2	Add Bundle conductor on the Graceton – Bagley – Raphael Road 2305 & 2313 230 kV circuits		AEP (2.25%) / APS (2.58%) / BGE (44.61%) / ComEd (0.51%) / Dayton (0.40%) / DEOK (1.39%) / DL (0.14%) / Dominion (27.05%) / EKPC (0.52%) / PENELEC (0.02%) / PEPCO (20.53%)
b2992.3	Replacing short segment of substation conductor on the Windy Edge to Glenarm 110512 115 kV circuit		AEP (2.25%) / APS (2.58%) / BGE (44.61%) / ComEd (0.51%) / Dayton (0.40%) / DEOK (1.39%) / DL (0.14%) / Dominion (27.05%) / EKPC (0.52%) / PENELEC (0.02%) / PEPCO (20.53%)
b2992.4	2337 230 kV circuits		AEP (2.25%) / APS (2.58%) / BGE (44.61%) / ComEd (0.51%) / Dayton (0.40%) / DEOK (1.39%) / DL (0.14%) / Dominion (27.05%) / EKPC (0.52%) / PENELEC (0.02%) / PEPCO (20.53%)
b3228	Replace two (2) relays at Center substation to increase ratings on the Westport to Center 110552 115 kV circuit		BGE (100%)
b3305	Replace Pumphrey 230/115 kV transformer		BGE (100%)

#### SCHEDULE 12 – APPENDIX A

# (5) Mid-Atlantic Interstate Transmission, LLC for the Metropolitan Edison Company Zone

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) **Load-Ratio Share** Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion Loop the 2026 (TMI -(12.97%) / EKPC (1.81%) / Hosensack 500 kV) line b2006.1.1 JCPL (3.92%) / ME (1.95%) / in to the Lauschtown NEPTUNE\* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) DFAX Allocation: BGE (19.51%)/PPL (80.49100%) Upgrade relay at South Reading on the 1072 230 b2006.2.1 V line PPL (100%) Replace the South Reading 69 kV '81342' b2006.4 breaker with 40 kA breaker ME (100%) Replace the South Reading 69 kV '82842' b2006.5 breaker with 40 kA breaker ME (100%) APS (8.30%) / BGE (14.70%) / DEOK (0.48%) / Dominion Install 2nd Hunterstown b2452 230/115 kV transformer (36.92%) / ME (23.85%) / PEPCO (15.75%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

# Mid-Atlantic Interstate Transmission, LLC for the Metropolitan Edison Company Zone (cont.)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) APS (8.30%) / BGE (14.70%) Reconductor / DEOK (0.48%) / Dominion b2452.1 Hunterstown - Oxford (36.92%) / ME (23.85%) / 115 kV line PEPCO (15.75%) Replace the Hunterstown b2452.3 115 kV breaker '96192' with 40 kA ME (100%) Install a 36.6 MVAR 115 b2588 kV capacitor at North Bangor substation ME (100%) Convert Middletown Junction 230 kV b2637 substation to nine bay double breaker configuration. ME (100%) Install a 28.8 MVAR b2644 115 kV capacitor at the Mountain substation ME (100%) AEP (12.91%) / APS (19.04%)/ ATSI (1.24%)/ Lincoln Substation: ComEd (0.35%) / Dayton Upgrade the bus b2688.1 (1.45%) / DEOK (2.30%) / DL conductor and replace (1.11%)/ Dominion (44.85%) / CTs EKPC (0.78%)/ PEPCO (15.85%) / RE (0.12%) Germantown Substation: Replace 138/115 kV transformer with a AEP (12.91%) / APS 135/180/224 MVA bank. (19.04%)/ ATSI (1.24%)/ ComEd (0.35%) / Dayton b2688.2 Replace Lincoln 115 kV (1.45%) / DEOK (2.30%) / DL breaker, install new 138 kV breaker, upgrade bus (1.11%)/ Dominion (44.85%) / conductor and EKPC (0.78%)/ PEPCO

adjust/replace CTs

(15.85%) / RE (0.12%)

# Mid-Atlantic Interstate Transmission, LLC for the Metropolitan Edison Company Zone (cont.)

Annual Revenue Requirement Responsible Customer(s) Required Transmission Enhancements Upgrade terminal AEP (6.46%) / APS (8.74%) / BGE (19.74%) / ComEd equipment at Hunterstown 500 kV on (2.16%) / Dayton (0.59%) / b2743.4 DEOK (1.02%) / DL (0.01%) / the Conemaugh -Hunterstown 500 kV Dominion (39.95%) / EKPC circuit (0.45%) / PEPCO (20.88%) Upgrade terminal AEP (6.46%) / APS (8.74%) / equipment and required BGE (19.74%) / ComEd relay communication at (2.16%) / Dayton (0.59%) / b2752.4 TMI 500 kV: on the DEOK (1.02%) / DL (0.01%) / Beach Bottom - TMI Dominion (39.95%) / EKPC (0.45%) / PEPCO (20.88%) 500 kV circuit Replace relay at West Boyertown 69 kV station b2749 on the West Boyertown – North Boyertown 69 kV circuit ME (100%) Upgrade bus conductor at Gardners 115 kv substation; Upgrade bus b2765 conductor and adjust CT ratios at Carlisle Pike 115 kV ME (100%) Upgrade limiting 115 kV switches on the 115 kV side of the 230/115 kV b2950 Northwood substation and adjust setting on limiting ZR relay ME (100%) Replace bus conductor at b3136 Smith 115 kV substation ME (100%) Rebuild the Hunterstown AEP (16.60%) / APS (8.09%) / Lincoln 115 kV Line BGE (2.74%) / Dayton (2.00%) / DEOK (0.35%) / DL No. 962 (approx. 2.6) b3145 miles). Upgrade limiting (1.31%) / Dominion (52.77%) terminal equipment at / EKPC (1.54%) / OVEC Hunterstown and Lincoln (0.06%) / PEPCO (14.54%) Install a 120.75 kV 79.4 b3311 MVAR capacitor bank at Yorkana 115 kV ME (100%)

### SCHEDULE 12 – APPENDIX A

## (8) PECO Energy Company

Required T	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
	Replace Waneeta 138 kV		
b2130	breaker '15' with 63 kA		
	rated breaker		PECO (100%)
	Replace Waneeta 138 kV		
b2131	breaker '35' with 63 kA		
	rated breaker		PECO (100%)
	Replace Waneeta 138 kV		
b2132	breaker '875' with 63 kA		
	rated breaker		PECO (100%)
	Replace Waneeta 138 kV		
b2133	breaker '895' with 63 kA		
	rated breaker		PECO (100%)
	Plymouth Meeting 230		
b2134	kV breaker '115' with 63		
	kA rated breaker		PECO (100%)
	Install a second		
b2222	Eddystone 230/138 kV		
	transformer		PECO (100%)
	Replace the Eddystone		
b2222.1	138 kV #205 breaker with		
	63 kA breaker		PECO (100%)
	Increase Rating of		
b2222.2	Eddystone #415 138 kV		
	Breaker		PECO (100%)
b2236	50 MVAR reactor at		
02230	Buckingham 230 kV		PECO (100%)
	Replace Whitpain 230 kV		
b2527	breaker '155' with 80 kA		
	breaker		PECO (100%)
	Replace Whitpain 230 kV		
b2528	breaker '525' with 80 kA		
	breaker		PECO (100%)
	Replace Whitpain 230 kV		
b2529	breaker '175' with 80 kA		
	breaker		PECO (100%)
	Replace terminal		
	equipment inside		
b2549	Chichester substation on		
	the 220-36 (Chichester –		
	Eddystone) 230 kV line		PECO (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace terminal equipment inside Nottingham substation on b2550 the 220-05 (Nottingham – Daleville-Bradford) 230 kV line PECO (100%) Replace terminal equipment inside b2551 Llanerch substation on the 130-45 (Eddystone to Llanerch) 138 kV line PECO (100%) Replace the Peach Bottom 500 kV '#225' breaker b2572 with a 63 kA breaker PECO (100%) AEC (3.97%)/ AEP (5.77%)/ APS (4.27%)/ ATSI (6.15%)/ BGE (1.63%)/ ComEd (0.72%)/ Dayton (1.06%)/ Increase ratings of Peach DEOK (1.97%)/ DL (2.25%)/ Bottom 500/230 kV Dominion (0.35%)/ DPL b2694 transformer to 1479 MVA (14.29%)/ ECP\*\* (0.69%)/ normal/1839 MVA EKPC (0.39%)/ HTP\*\*\* (0.96%)/ JCPL (6.84%) MetEd emergency (3.28%)/ NEPTUNE\* (2.14%)/ PECO (16.42%)/ PENELEC (3.94%)/ PPL (8.32%)/ PSEG (14.13%)/ RE (0.44%) AEP (6.46%) / APS (8.74%) / BGE (19.74%) / ComEd Tie in new Furnace Run (2.16%) / Dayton (0.59%) / b2752.2 substation to Peach DEOK (1.02%) / DL (0.01%) / Bottom - TMI 500 kV Dominion (39.95%) / EKPC (0.45%) / PEPCO (20.88%) Upgrade terminal AEP (6.46%) / APS (8.74%) / equipment and required BGE (19.74%) / ComEd relay communication at (2.16%) / Dayton (0.59%) / b2752.3 DEOK (1.02%) / DL (0.01%) / Peach Bottom 500 kV: on Dominion (39.95%) / EKPC the Beach Bottom - TMI 500 kV circuit (0.45%) / PEPCO (20.88%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup> East Coast Power, L.L.C.

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

Required T	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
			Load-Ratio Share
			Allocation:
			AEC (1.67%) / AEP
			(13.94%) / APS (5.64%) /
			ATSI (8.02%) / BGE
			(4.12%) / ComEd (13.46%) /
			Dayton (2.12%) / DEOK
			(3.37%) / DL (1.76%) / DPL
			(2.55%) / Dominion
			(12.97%) / EKPC (1.81%) /
			JCPL (3.92%) / ME (1.95%)
	Upgrade substation		/ NEPTUNE* (0.24%) /
	equipment at Peach		OVEC (0.07%) / PECO
b2766.2	Bottom 500 kV to		(5.39%) / PENELEC
02700.2	increase facility rating to		(1.84%) / PEPCO (3.71%) /
	2826 MVA normal and		PPL (4.78%) / PSEG
	3525 MVA emergency		(6.40%) / RE (0.27%)
			DFAX Allocation:
			AEC ( <del>0.72</del> <u>0.52</u> %) / APS
			( <del>11.06</del> <u>8.38</u> %) / ATSI
			( <del>1.43</del> 2.54%) / BGE
			( <del>34.25</del> <u>17.96</u> %) / DPL
			( <del>1.83</del> <u>2.72</u> %) / <u>JCPL</u>
			(12.73%) / NEPTUNE
			(1.39%) / PECO (1.80%) /
			PEPCO (35.4926.39%) /
			PSEG ( <del>12.92</del> 26.35%) / RE
			(0.501.02%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required T	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b2774	Reconductor the Emilie - Falls 138 kV line, and		
02774	replace station cable and		PEGO (1000/)
	relay		PECO (100%)
b2775	Reconductor the Falls - U.S. Steel 138 kV line		PECO (100%)
4.5.5.0	Replace the Waneeta		
b2850	230 kV "285" with 63 kA breaker		PECO (1000/)
	Replace the Chichester		PECO (100%)
b2852	230 kV "195" with 63 kA		
02032	breaker		PECO (100%)
	Replace the North		
b2854	Philadelphia 230 kV "CS		
	775" with 63 kA breaker		PECO (100%)
1.0055	Replace the North		
b2855	Philadelphia 230 kV "CS		PECO (1009/)
	885" with 63 kA breaker Replace the Parrish		PECO (100%)
b2856	230 kV "CS 715" with 63		
02030	kA breaker		PECO (100%)
	Replace the Parrish		
b2857	230 kV "CS 825" with 63		
	kA breaker		PECO (100%)
	Replace the Parrish 230		
b2858	kV "CS 935" with 63 kA		PEGG (1000()
	breaker		PECO (100%)
b2859	Replace the Plymouth Meeting 230 kV "215"		
02839	with 63 kA breaker		PECO (100%)
	Replace the Plymouth		1 LCO (10070)
b2860	Meeting 230 kV "235"		
	with 63 kA breaker		PECO (100%)
	Replace the Plymouth		. , ,
b2861	Meeting 230 kV "325"		
	with 63 kA breaker		PECO (100%)
1.00.55	Replace the Grays Ferry		
b2862	230 kV "705" with 63 kA		PEGO (1000/)
	breaker		PECO (100%)

Required T	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
	Replace the Grays Ferry		
b2863	230 kV "985" with 63 kA		
	breaker		PECO (100%)
	Replace the Grays Ferry		,
b2864	230 kV "775" with 63 kA		
	breaker		PECO (100%)
	Replace the China Tap		`
b2923	230 kV 'CS 15' breaker		
	with a 63 kA breaker		PECO (100%)
	Replace the Emilie 230		
b2924	kV 'CS 15' breaker with		
	63 kA breaker		PECO (100%)
	Replace the Emilie 230		
b2925	kV 'CS 25' breaker with		
	63 kA breaker		PECO (100%)
	Replace the Chichester		
b2926	230 kV '215' breaker		
	with 63 kA breaker		PECO (100%)
	Replace the Plymouth		
1,2027	Meeting 230 kV '125'		
b2927	breaker with 63 kA		
	breaker		PECO (100%)
	Replace the 230 kV CB		
	#225 at Linwood		
b2985	Substation (PECO) with a		
02983	double circuit breaker		
	(back to back circuit		
	breakers in one device)		PECO (100%)
	Peach Bottom – Furnace		
b3041	Run 500 kV terminal		
	equipment		PECO (100%)
	Replace the Whitpain 230		
b3120	kV breaker "125" with a		
	63 kA breaker		PECO (100%)
	Move 2 MVA load from		
	the Roxborough to Bala		
b3138	substation. Adjust the tap		
	setting on the Master		
	138/69 kV transformer #2		PECO (100%)
b3146	Upgrade the Richmond 69		
03170	kV breaker "140" with 40		PECO (100%)

kA breaker	

#### SCHEDULE 12 – APPENDIX A

(17) American Electric Power Service Corporation on behalf of its affiliate companies: AEP Appalachian Transmission Company, Inc.; AEP Indiana Michigan Transmission Company, Inc.; AEP Kentucky Transmission Company, Inc.; AEP Ohio Transmission Company, Inc.; AEP West Virginia Transmission Company, Inc.; Appalachian Power Company; Indiana Michigan Power Company; Kentucky Power Company; Kingsport Power Company; Ohio Power Company and Wheeling Power Company

Required 11	ansinission Elinancements Annua	ii Kevenue Kequilement	Responsible Customer(s)
	Add a 345 kV breaker at Marysville station and a 0.1		
1.40.4	mile 345 kV line extension		
b1570.4	from Marysville to the new		
	345/69 kV Dayton		
	transformer		AEP (100%)
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
			DEOK (3.37%) / DL (1.76%) /
	Cloverdale: install 6-765		DPL (2.55%) / Dominion
	kV breakers, incremental		(12.97%) / EKPC (1.81%) /
	work for 2 additional		JCPL (3.92%) / ME (1.95%) /
b1660.1	breakers, reconfigure and		NEPTUNE* (0.24%) / OVEC
	relocate miscellaneous		(0.07%) / PECO (5.39%) /
	facilities, establish 500 kV		PENELEC (1.84%) / PEPCO
	station and 500 kV tie with		(3.71%) / PPL (4.78%) / PSEG
	765 kV station		(6.40%) / RE (0.27%)
			DFAX Allocation:
			BGE (44.5443.47%) / Dayton
			(0.16%) / DEOK (0.40%) /
			Dominion ( <del>1.04</del> <u>1.05</u> %) / EKPC
			(0.24%) / PEPCO
			( <del>53.62</del> 54.68%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required 11a	ansmission Ennancements Annua	i Revenue Requirement	Responsible Customer(s)
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
			DEOK (3.37%) / DL (1.76%) /
			DPL (2.55%) / Dominion
			(12.97%) / EKPC (1.81%) /
			JCPL (3.92%) / ME (1.95%) /
	Reconductor the AEP		NEPTUNE* (0.24%) / OVEC
b1797.1	portion of the Cloverdale -		(0.07%) / PECO (5.39%) /
01/9/.1	Lexington 500 kV line with		PENELEC (1.84%) / PEPCO
	2-1780 ACSS		(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			DFAX Allocation:
			AEP (1.27%) / APS
			( <del>23.58</del> <u>24.46</u> %) / ATSI (0.69%) /
			BGE (32.3031.13%) / Dayton
			(0.27%) / DEOK (0.66%) /
			Dominion (1.92%) / EKPC
			(0.38%) / PEPCO
			(38.9339.22%)
1 2055	Upgrade relay at Brues		
b2055	station		AEP (100%)
	Upgrade terminal		
	equipment at Howard on		
b2122.3	the Howard - Brookside		
	138 kV line to achieve		
	ratings of 252/291 (SN/SE)		AEP (100%)
	Perform a sag study on the		X /
b2122.4	Howard - Brookside 138		
	kV line		AEP (100%)
	Install a 300 MVAR		(/
b2229	reactor at Dequine 345 kV		AEP (100%)
	reactor at Dequine 5 15 KV		11L1 (100/0)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Kequileu 11	ansmission Ennancements Annual	Revenue Requirement	Responsible Customer(s)
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
	Replace existing 150		DEOK (3.37%) / DL (1.76%) /
	MVAR reactor at Amos 765		DPL (2.55%) / Dominion
b2230	kV substation on Amos - N.		(12.97%) / EKPC (1.81%) /
02230	Proctorville - Hanging Rock		JCPL (3.92%) / ME (1.95%) /
	with 300 MVAR reactor		NEPTUNE* (0.24%) / OVEC
	with 500 W VIII reactor		(0.07%) / PECO (5.39%) /
			PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			DFAX Allocation:
			AEP (100%)
	Install 765 kV reactor		
b2231	breaker at Dumont 765 kV		
02231	substation on the Dumont -		
	Wilton Center line		AEP (100%)
	Install 765 kV reactor		
	breaker at Marysville 765		
b2232	kV substation on the		
	Marysville - Maliszewski		
	line		AEP (100%)
4.5	Change transformer tap		
b2233	settings for the Baker		/
	765/345 kV transformer		AEP (100%)
	Loop the North Muskingum		
	- Crooksville 138 kV line		
b2252	into AEP's Philo 138 kV		
02232	station which lies		
	approximately 0.4 miles		
	from the line		AEP (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

required 11	ansimission Emancements Amuan N	ce venue recquirement	responsible euswiner(s)
	Install an 86.4 MVAR		
b2253	capacitor bank at Gorsuch		
	138 kV station in Ohio		AEP (100%)
	Rebuild approximately 4.9		
b2254	miles of Corner - Degussa		
	138 kV line in Ohio		AEP (100%)
	Rebuild approximately 2.8		
b2255	miles of Maliszewski -		
	Polaris 138 kV line in Ohio		AEP (100%)
	Upgrade approximately 36		
	miles of 138 kV through		
b2256	path facilities between		
	Harrison 138 kV station and		
	Ross 138 kV station in Ohio		AEP (100%)
	Rebuild the Pokagon -		
	Corey 69 kV line as a		
	double circuit 138 kV line		
b2257	with one side at 69 kV and		
	the other side as an express		
	circuit between Pokagon		
	and Corey stations		AEP (100%)
	Rebuild 1.41 miles of #2		
	CU 46 kV line between		
b2258	Tams Mountain - Slab Fork		
02230	to 138 kV standards. The		
	line will be strung with		
	1033 ACSR		AEP (100%)
	Install a new 138/69 kV		
	transformer at George		
b2259	Washington 138/69 kV		
02237	substation to provide		
	support to the 69 kV system		
	in the area		AEP (100%)

		 1
	Rebuild 4.7 miles of	
	Muskingum River - Wolf	
b2286	Creek 138 kV line and	
02280	remove the 138/138 kV	
	transformer at Wolf Creek	
	Station	AEP (100%)
	Loop in the Meadow Lake -	
b2287	Olive 345 kV circuit into	
	Reynolds 765/345 kV	
	station	AEP (100%)

raganou II	ansmission Emancements Amua	requirement	Responsible Cusiomer(s)
	Establish a new 138/12 kV		
b2344.1	station, transfer and		
	consolidate load from its		
	Nicholsville and Marcellus		
	34.5 kV stations at this new		
	station		AEP (100%)
	Tap the Hydramatic –		
	Valley 138 kV circuit (~		
b2344.2	structure 415), build a new		
	138 kV line (~3.75 miles) to		
	this new station		AEP (100%)
	From this station, construct		
<b>L</b> 22442	a new 138 kV line (~1.95		
02344.3	miles) to REA's Marcellus		
	station		AEP (100%)
	From REA's Marcellus		
	station construct new 138		
122111	kV line (~2.35 miles) to a		
02344.4	tap point on Valley –		
	Hydramatic 138 kV ckt		
	(~structure 434)		AEP (100%)
	Retire sections of the 138		
b2344.4 b2344.5 b2344.6	kV line in between structure		
	415 and 434 (~ 2.65 miles)		AEP (100%)
	Retire AEP's Marcellus		
	34.5/12 kV and Nicholsville		
b2344.6	34.5/12 kV stations and also		
	the Marcellus – Valley 34.5		
	kV line		AEP (100%)
	Construct a new 69 kV line		
b2345.1	from Hartford to Keeler (~8		
	miles)		AEP (100%)
	Rebuild the 34.5 kV lines		
b2345.2	between Keeler - Sister		
02343.2	Lakes and Glenwood tap		
	switch to 69 kV (~12 miles)		AEP (100%)

	Implement in - out at Keeler	Tesponsione Customer(s)
b2345.3	and Sister Lakes 34.5 kV	
023 13.3	stations	AEP (100%)
	Retire Glenwood tap switch	(10070)
	and construct a new	
b2345.4	Rothadew station. These	
020.000	new lines will continue to	
	operate at 34.5 kV	AEP (100%)
	Perform a sag study for	
	Howard - North Bellville -	
b2346	Millwood 138 kV line	
	including terminal	
	equipment upgrades	AEP (100%)
	Replace the North Delphos	
	600A switch. Rebuild	
	approximately 18.7 miles of	
b2347	138 kV line North Delphos	
	- S073. Reconductor the	
	line and replace the existing	
	tower structures	AEP (100%)
	Construct a new 138 kV	
	line from Richlands Station	
b2348	to intersect with the Hales	
	Branch - Grassy Creek 138	
	kV circuit	AEP (100%)
	Change the existing CT	
	ratios of the existing	
b2374	equipment along Bearskin -	
	Smith Mountain 138 kV	
	circuit	AEP (100%)
	Change the existing CT	
	ratios of the existing	
b2375	equipment along East	
	Danville-Banister 138 kV	
	circuit	AEP (100%)

ansinission Emiancements. Annual Revenue Requirement	Responsible Cusionier(s)
Replace the Turner 138 kV breaker 'D'	AEP (100%)
Replace the North Newark 138 kV breaker 'P'	AEP (100%)
Replace the Sporn 345 kV breaker 'DD'	AEP (100%)
Replace the Sporn 345 kV breaker 'DD2'	AEP (100%)
Replace the Muskingum 345 kV breaker 'SE'	AEP (100%)
Replace the East Lima 138 kV breaker 'E1'	AEP (100%)
Replace the Delco 138 kV breaker 'R'	AEP (100%)
Replace the Sporn 345 kV breaker 'AA2'	AEP (100%)
Replace the Sporn 345 kV breaker 'CC'	AEP (100%)
Replace the Sporn 345 kV breaker 'CC2'	AEP (100%)
Replace the Astor 138 kV breaker '102'	AEP (100%)
Replace the Muskingum 345 kV breaker 'SH'	AEP (100%)
Replace the Muskingum 345 kV breaker 'SI'	AEP (100%)
Replace the Hyatt 138 kV breaker '105N'	AEP (100%)
Replace the Muskingum 345 kV breaker 'SG'	AEP (100%)
Replace the Hyatt 138 kV breaker '101C'	AEP (100%)
Replace the Hyatt 138 kV breaker '104N'	AEP (100%)
Replace the Hyatt 138 kV breaker '104S'	AEP (100%)
	Replace the Turner 138 kV breaker 'D' Replace the North Newark 138 kV breaker 'P' Replace the Sporn 345 kV breaker 'DD' Replace the Sporn 345 kV breaker 'DD2' Replace the Muskingum 345 kV breaker 'SE' Replace the East Lima 138 kV breaker 'E1' Replace the Delco 138 kV breaker 'R' Replace the Sporn 345 kV breaker 'AA2' Replace the Sporn 345 kV breaker 'CC' Replace the Sporn 345 kV breaker 'CC2' Replace the Astor 138 kV breaker '102' Replace the Muskingum 345 kV breaker 'SH' Replace the Hyatt 138 kV breaker '105N' Replace the Hyatt 138 kV breaker '101C' Replace the Hyatt 138 kV breaker '104N' Replace the Hyatt 138 kV

Required 11	ansmission Ennancements Annua	i Kevenue Kequirement	Responsible Customer(s)
b2394	Replace the Sporn 345 kV breaker 'CC1'		AEP (100%)
b2409	Install two 56.4 MVAR capacitor banks at the Melmore 138 kV station in Ohio		AEP (100%)
b2410	Convert Hogan Mullin 34.5 kV line to 138 kV, establish 138 kV line between Jones Creek and Strawton, rebuild existing Mullin Elwood 34.5 kV and terminate line into Strawton station, retire Mullin station		AEP (100%)
b2411	Rebuild the 3/0 ACSR portion of the Hadley - Kroemer Tap 69 kV line utilizing 795 ACSR conductor		AEP (100%)
b2423	Install a 300 MVAR shunt reactor at AEP's Wyoming 765 kV station		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

required 11	ansmission enhancements. Annual Reve	nuc requirement	Responsible Customer(s)
	Willow - Eureka 138 kV		
b2444	line: Reconductor 0.26 mile		
	of 4/0 CU with 336 ACSS		AEP (100%)
	Complete a sag study of		
b2445	Tidd - Mahans Lake 138 kV		
	line		AEP (100%)
	Rebuild the 7-mile 345 kV		
b2449	line between Meadow Lake		
02449	and Reynolds 345 kV		
	stations		AEP (100%)
	Add two 138 kV circuit		
b2462	breakers at Fremont station		
02402	to fix tower contingency		
	'408_2'		AEP (100%)
	Construct a new 138/69 kV		
	Yager station by tapping 2-		
b2501	138 kV FE circuits		
	(Nottingham-Cloverdale,		
	Nottingham-Harmon)		AEP (100%)
	Build a new 138 kV line		
b2501.2	from new Yager station to		
	Azalea station		AEP (100%)
	Close the 138 kV loop back		
b2501.3	into Yager 138 kV by		
02301.3	converting part of local 69		
	kV facilities to 138 kV		AEP (100%)
	Build 2 new 69 kV exits to		
	reinforce 69 kV facilities		
b2501.4	and upgrade conductor		
02301.4	between Irish Run 69 kV		
	Switch and Bowerstown 69		
	kV Switch		AEP (100%)

Required 11	ansmission Ennancements Annua	i Kevenue Kequirement	Responsible Customer(s)
	Construct new 138 kV		
	switching station		
	Nottingham tapping 6-138		
	kV FE circuits (Holloway-		
	Brookside, Holloway-		
b2502.1	Harmon #1 and #2,		
	Holloway-Reeds,		
	Holloway-New Stacy,		
	Holloway-Cloverdale). Exit		
	a 138 kV circuit from new		
	station to Freebyrd station		AEP (100%)
b2502.2	Convert Freebyrd 69 kV to		
02302.2	138 kV		AEP (100%)
	Rebuild/convert Freebyrd-		
b2502.3	South Cadiz 69 kV circuit		
	to 138 kV		AEP (100%)
b2502.4	Upgrade South Cadiz to 138		
02302.4	kV breaker and a half		AEP (100%)
	Replace the Sporn 138 kV		
b2530	breaker 'G1' with 80 kA		
	breaker		AEP (100%)
	Replace the Sporn 138 kV		
b2531	breaker 'D' with 80 kA		
	breaker		AEP (100%)
	Replace the Sporn 138 kV		
b2532	breaker 'O1' with 80 kA		
	breaker		AEP (100%)
	Replace the Sporn 138 kV		
b2533	breaker 'P2' with 80 kA		
	breaker		AEP (100%)
	Replace the Sporn 138 kV		
b2534	breaker 'U' with 80 kA		
	breaker		AEP (100%)
	Replace the Sporn 138 kV		
b2535	breaker 'O' with 80 kA		
	breaker		AEP (100%)

	anomiosion Emianeemento 7 mitati	 responsible editioner(b)
b2536	Replace the Sporn 138 kV breaker 'O2' with 80 kA	
	breaker	AEP (100%)
	Replace the Robinson Park	, ,
	138 kV breakers A1, A2,	
b2537	B1, B2, C1, C2, D1, D2,	
	E1, E2, and F1 with 63 kA	
	breakers	AEP (100%)
	Reconductor 0.5 miles	
	Tiltonsville – Windsor 138	
b2555	kV and string the vacant	
02333	side of the 4.5 mile section	
	using 556 ACSR in a six	
	wire configuration	AEP (100%)
	Install two 138 kV prop	
	structures to increase the	
b2556	maximum operating	
	temperature of the Clinch	
	River- Clinch Field 138 kV	A FID (1000()
	line	AEP (100%)
	Temporary operating	
	procedure for delay of	
	upgrade b1464. Open the	
	Corner 138 kV circuit	
	breaker 86 for an overload	
b2581	of the Corner – Washington MP 138 kV line. The tower	
	contingency loss of Belmont – Trissler 138 kV	
	and Belmont – Edgelawn 138 kV should be added to	
		AED (100%)
	Operational contingency	AEP (100%)

		1	(s)
b2591	Construct a new 69 kV line approximately 2.5 miles from		
	Colfax to Drewry's. Construct		
	a new Drewry's station and		
	install a new circuit breaker at		
	Colfax station.		AEP (100%)
	Rebuild existing East		ALI (10070)
	Coshocton – North Coshocton		
	double circuit line which		
b2592	contains Newcomerstown – N.		
02392	Coshocton 34.5 kV Circuit		
	and Coshocton – North		
	Coshocton 69 kV circuit		AEP (100%)
	Rebuild existing West Bellaire		AEI (10070)
	- Glencoe 69 kV line with 138		
b2593	kV & 69 kV circuits and		
02393	install 138/69 kV transformer		
	at Glencoe Switch		AEP (100%)
	Rebuild 1.0 mile of Brantley –		ALI (10070)
	Bridge Street 69 kV Line with		
b2594	1033 ACSR overhead		
	conductor		AEP (100%)
	Rebuild 7.82 mile Elkhorn		7127 (10070)
	City – Haysi S.S 69 kV line		
b2595.1	utilizing 1033 ACSR built to		
	138 kV standards		AEP (100%)
	Rebuild 5.18 mile Moss –		1111 (10070)
	Haysi SS 69 kV line utilizing		
b2595.2	1033 ACSR built to 138 kV		
	standards		AEP (100%)
b2596	Move load from the 34.5 kV		(10070)
	bus to the 138 kV bus by		
	installing a new 138/12 kV XF		
	at New Carlisle station in		
	Indiana		AEP (100%)
<u> </u>	-		()

Required 11	ansmission Ennancements Annua	i Kevenue Kequirement	Responsible Customer(s)
b2597	Rebuild approximately 1		
	mi. section of Dragoon-		
	Virgil Street 34.5 kV line		
	between Dragoon and		
	Dodge Tap switch and		
	replace Dodge switch		
	MOAB to increase thermal		
	capability of Dragoon-		
	Dodge Tap branch		AEP (100%)
	Rebuild approximately 1		
	mile section of the Kline-		
	Virgil Street 34.5 kV line		
b2598	between Kline and Virgil		
02398	Street tap. Replace MOAB		
	switches at Beiger, risers at		
	Kline, switches and bus at		
	Virgil Street.		AEP (100%)
	Rebuild approximately 0.1		
b2599	miles of 69 kV line between		
	Albion and Albion tap		AEP (100%)
b2600	Rebuild Fremont – Pound		
b2600	line as 138 kV		AEP (100%)
b2601	Fremont Station		
02001	Improvements		AEP (100%)
	Replace MOAB towards		
b2601.1	Beaver Creek with 138 kV		
	breaker		AEP (100%)
b2601.2	Replace MOAB towards		
	Clinch River with 138 kV		
	breaker		AEP (100%)
b2601.3	Replace 138 kV Breaker A		
	with new bus-tie breaker		AEP (100%)
b2601.4	Re-use Breaker A as high		
	side protection on		
	transformer #1		AEP (100%)

distrission Emidicements 7 midal Re-	<u> </u>	esponsible editionici(s)
` /		
and 3 at Fremont Station		AEP (100%)
Install 138 kV breaker E2 at		
North Proctorville		AEP (100%)
Construct 2.5 Miles of 138 kV		
1033 ACSR from East		
Huntington to Darrah 138 kV		
substations		AEP (100%)
Install breaker on new line exit		
at Darrah towards East		
Huntington		AEP (100%)
Install 138 kV breaker on new		
line at East Huntington towards		
Darrah		AEP (100%)
Install 138 kV breaker at East		
Huntington towards North		
Proctorville		AEP (100%)
Roone Area Improvements		
Boone Area improvements		AEP (100%)
Purchase approximately a		
Slaughter Creek 46 kV station		
(Wilbur Station)		AEP (100%)
Install 3 138 kV circuit		
		AEP (100%)
circuit 138 kV line on Wilbur –		
Boone 46 kV line with 1590		
ACSS 54/19 conductor @ 482		
Degree design temp. and 1-159		
12/7 ACSR and one 86		
Sq.MM. 0.646" OPGW Static		
wires		AEP (100%)
Bellefonte Transformer		
Addition		AEP (100%)
	Install two (2) circuit switchers on high side of transformers # 2 and 3 at Fremont Station Install 138 kV breaker E2 at North Proctorville Construct 2.5 Miles of 138 kV 1033 ACSR from East Huntington to Darrah 138 kV substations Install breaker on new line exit at Darrah towards East Huntington Install 138 kV breaker on new line at East Huntington towards Darrah Install 138 kV breaker at East Huntington towards North Proctorville Boone Area Improvements  Purchase approximately a 200X300 station site near Slaughter Creek 46 kV station (Wilbur Station) Install 3 138 kV circuit breakers, Cabin Creek to Hernshaw 138 kV circuit Construct 1 mi. of double circuit 138 kV line on Wilbur – Boone 46 kV line with 1590 ACSS 54/19 conductor @ 482 Degree design temp. and 1-159 12/7 ACSR and one 86 Sq.MM. 0.646" OPGW Static wires Bellefonte Transformer	Install two (2) circuit switchers on high side of transformers # 2 and 3 at Fremont Station  Install 138 kV breaker E2 at North Proctorville  Construct 2.5 Miles of 138 kV 1033 ACSR from East Huntington to Darrah 138 kV substations  Install breaker on new line exit at Darrah towards East Huntington  Install 138 kV breaker on new line at East Huntington towards Darrah  Install 138 kV breaker at East Huntington towards North Proctorville  Boone Area Improvements  Purchase approximately a 200X300 station site near Slaughter Creek 46 kV station (Wilbur Station)  Install 3 138 kV circuit breakers, Cabin Creek to Hernshaw 138 kV circuit Construct 1 mi. of double circuit 138 kV line on Wilbur — Boone 46 kV line with 1590 ACSS 54/19 conductor @ 482 Degree design temp. and 1-159 12/7 ACSR and one 86 Sq.MM. 0.646" OPGW Static wires Bellefonte Transformer

AEP Service Corporation on behalf of its Affiliate Companies (AEP Indiana Michigan Transmission Company, AEP Kentucky Transmission Company, AEP Ohio Transmission Company, AEP West Virginia Transmission Company, Appalachian Power Company, Indiana Michigan Power Company, Kentucky Power Company, Kingsport Power Company, Ohio Power Company and Wheeling Power Company) (cont.)

Required 11	ansmission Enhancements Annual Re	evenue Requirement	Responsible Customer(s)
	Remove approximately 11.32		
b2604.1	miles of the 69 kV line		
	between Millbrook Park and		
	Franklin Furnace		AEP (100%)
	At Millbrook Park station,		
	add a new 138/69 kV		
	Transformer #2 (90 MVA)		
	with 3000 A 40 kA breakers		
b2604.2	on the high and low side.		
	Replace the 600 A MOAB		
	switch and add a 3000 A		
	circuit switcher on the high		
	side of Transformer #1		AEP (100%)
	Replace Sciotoville 69 kV		
	station with a new 138/12 kV		
b2604.3	in-out station (Cottrell) with		
02004.3	2000 A line MOABs facing		
	Millbrook Park and East		
	Wheelersburg 138 kV station		AEP (100%)
	Tie Cottrell switch into the		
	Millbrook Park – East		
b2604.4	Wheelersburg 138 kV circuit		
02001.1	by constructing 0.50 mile of		
	line using 795 ACSR 26/7		
	Drake (SE 359 MVA)		AEP (100%)
	Install a new 2000 A 3-way		
b2604.5	PoP switch outside of Texas		
9200	Eastern 138 kV substation		. == (1000()
	(Sadiq switch)		AEP (100%)
b2604.6	Replace the Wheelersburg 69		
	kV station with a new 138/12		
	kV in-out station (Sweetgum)		
	with a 3000 A 40 kA breaker		
	facing Sadiq switch and a		
	2000 A 138 kV MOAB		
	facing Althea		AEP (100%)

AEP Service Corporation on behalf of its Affiliate Companies (AEP Indiana Michigan Transmission Company, AEP Kentucky Transmission Company, AEP Ohio Transmission Company, AEP West Virginia Transmission Company, Appalachian Power Company, Indiana Michigan Power Company, Kentucky Power Company, Kingsport Power Company, Ohio Power Company and Wheeling Power Company) (cont.)

		1	Responsible Customer(s)
b2604.7	Build approximately 1.4 miles of new 138 kV line		
	using 795 ACSR 26/7		
	Drake (SE 359 MVA)		
	between the new Sadiq		
	switch and the new		
	Sweetgum 138 kV station		AEP (100%)
	Remove the existing 69 kV		(10070)
b2604.8	Hayport Road switch		AEP (100%)
	Rebuild approximately 2.3		(200.1)
	miles along existing Right-		
	Of-Way from Sweetgum to		
	the Hayport Road switch 69		
	kV location as 138 kV		
	single circuit and rebuild		
	approximately 2.0 miles		
b2604.9	from the Hayport Road		
02004.7	switch to Althea 69 kV with		
	double circuit 138 kV		
	construction, one side		
	operated at 69 kV to		
	continue service to K.O.		
	Wheelersburg, using 795		
	ACSR 26/7 Drake (SE 359		A F.D. (1000/)
	MVA)		AEP (100%)
	Build a new station (Althea)		
	with a 138/69 kV, 90 MVA transformer. The 138 kV		
b2604.10	side will have a single 2000		
	A 40 kA circuit breaker and		
	the 69 kV side will be a		
	2000 A 40 kA three breaker		
	ring bus		AEP (100%)
b2604.11	Remote end work at		\ /
	Hanging Rock, East		
	Wheelersburg and North		
	Haverhill 138 kV		AEP (100%)

b2605	Rebuild and reconductor Kammer – George Washington 69 kV circuit and George Washington – Moundsville ckt #1, designed for 138 kV. Upgrade limiting equipment at remote ends and at tap stations	AEP (100%)
b2606	Convert Bane – Hammondsville from 23 kV to 69 kV operation	AEP (100%)
b2607	Pine Gap Relay Limit Increase	AEP (100%)
b2608	Richlands Relay Upgrade	AEP (100%)
b2609	Thorofare – Goff Run – Powell Mountain 138 kV Build	AEP (100%)
b2610	Rebuild Pax Branch – Scaraboro as 138 kV	AEP (100%)
b2611	Skin Fork Area Improvements	AEP (100%)
b2611.1	New 138/46 kV station near Skin Fork and other components	AEP (100%)
b2611.2	Construct 3.2 miles of 1033 ACSR double circuit from new Station to cut into Sundial-Baileysville 138 kV line	AEP (100%)
b2634.1	Replace metering BCT on Tanners Creek CB T2 with a slip over CT with higher thermal rating in order to remove 1193 MVA limit on facility (Miami Fort-Tanners Creek 345 kV line)	AEP (100%)

required 11	ansmission Emiancements Annua	i Revenue Requirement	Responsible Customer(s)
b2643	Replace the Darrah 138 kV breaker 'L' with 40 kA		
	rated breaker		AEP (100%)
b2645	Ohio Central 138 kV Loop		AEP (100%)
b2667	Replace the Muskingum 138 kV bus # 1 and 2		AEP (100%)
b2668	Reconductor Dequine to Meadow Lake 345 kV circuit #1 utilizing dual 954 ACSR 54/7 cardinal conductor		AEP (100%)
b2669	Install a second 345/138 kV transformer at Desoto		AEP (100%)
b2670	Replace switch at Elk Garden 138 kV substation (on the Elk Garden – Lebanon 138 kV circuit)		AEP (100%)
b2671	Replace/upgrade/add terminal equipment at Bradley, Mullensville, Pinnacle Creek, Itmann, and Tams Mountain 138 kV substations. Sag study on Mullens – Wyoming and Mullens – Tams Mt. 138 kV circuits		AEP (100%)

1100		
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd
		(13.46%) / Dayton (2.12%) /
		DEOK (3.37%) / DL (1.76%) /
	Install a +/- 450 MVAR	DPL (2.55%) / Dominion
b2687.1		(12.97%) / EKPC (1.81%) /
02087.1	SVC at Jacksons Ferry 765	JCPL (3.92%) / ME (1.95%) /
	kV substation	NEPTUNE* (0.24%) / OVEC
		(0.07%) / PECO (5.39%) /
		PENELEC (1.84%) / PEPCO
		(3.71%) / PPL (4.78%) / PSEG
		(6.40%) / RE (0.27%)
		DFAX Allocation:
		AEP (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

required 11	ansmission Ennancements Annua	Revenue Requirement	Responsible Customer(s)
			<b>Load-Ratio Share Allocation:</b>
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
	Install a 300 MVAR shunt		DEOK (3.37%) / DL (1.76%) /
b2687.2	line reactor on the		DPL (2.55%) / Dominion
	Broadford end of the		(12.97%) / EKPC (1.81%) /
02087.2	Broadford – Jacksons Ferry		JCPL (3.92%) / ME (1.95%) /
	765 kV line		NEPTUNE* (0.24%) / OVEC
	703 KV IIIC		(0.07%) / PECO (5.39%) /
			PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			DFAX Allocation:
			AEP (100%)
	Mitigate violations		
	identified by sag study to		
	operate Fieldale-Thornton-		
b2697.1	Franklin 138 kV overhead		
02077.1	line conductor at its max.		
	operating temperature. 6		
	potential line crossings to		
	be addressed		AEP (100%)
	Replace terminal equipment		
	at AEP's Danville and East		
b2697.2	Danville substations to		
02091.2	improve thermal capacity of		
	Danville – East Danville		
	138 kV circuit		AEP (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required 11	ansmission Ennancements Annual Revenue Requi	rement Responsible Customer(s)
	Replace relays at AEP's	
	Cloverdale and Jackson's	
b2698	Ferry substations to improve	
02098	the thermal capacity of	
	Cloverdale – Jackson's Ferry	
	765 kV line	AEP (100%)
	Construct Herlan station as	
	breaker and a half	
b2701.1	configuration with 9-138 kV	
	CB's on 4 strings and with 2-	
	28.8 MVAR capacitor banks	AEP (100%)
	Construct new 138 kV line	
	from Herlan station to Blue	
b2701.2	Racer station. Estimated	
02/01.2	approx. 3.2 miles of 1234	
	ACSS/TW Yukon and	
	OPGW	AEP (100%)
	Install 1-138 kV CB at Blue	
b2701.3	Racer to terminate new	
	Herlan circuit	AEP (100%)
	Rebuild/upgrade line	
b2714	between Glencoe and	
	Willow Grove Switch 69 kV	AEP (100%)
	Build approximately 11.5	
	miles of 34.5 kV line with	
b2715	556.5 ACSR 26/7 Dove	
02713	conductor on wood poles	
	from Flushing station to	
	Smyrna station	AEP (100%)
	Replace the South Canton	
b2727	138 kV breakers 'K', 'J',	
02,2,	'J1', and 'J2' with 80 kA	,
	breakers	AEP (100%)

	Convert the Sunnyside –	responsible Customer(b)
b2731	East Sparta – Malvern 23 kV	
	sub-transmission network to	
02/31	69 kV. The lines are already	
	built to 69 kV standards	AEP (100%)
		AEF (10076)
1,2722	Replace South Canton 138 kV breakers 'L' and 'L2'	
b2733		AED (1000/)
	with 80 kA rated breakers	AEP (100%)
	Retire Betsy Layne	
	138/69/43 kV station and	
b2750.1	replace it with the greenfield	
	Stanville station about a half	
	mile north of the existing	A ED (1000()
	Betsy Layne station	AEP (100%)
	Relocate the Betsy Layne	
1.2220.2	capacitor bank to the	
b2750.2	Stanville 69 kV bus and	
	increase the size to 14.4	1 TD (1000()
	MVAR	AEP (100%)
	Replace existing George	
	Washington station 138 kV	
	yard with GIS 138 kV	
b2753.1	breaker and a half yard in	
	existing station footprint.	
	Install 138 kV revenue	
	metering for new IPP	. == (1000)
	connection	AEP (100%)
	Replace Dilles Bottom 69/4	
	kV Distribution station as	
	breaker and a half 138 kV	
b2753.2	yard design including AEP	
02,00.2	Distribution facilities but	
	initial configuration will	
	constitute a 3 breaker ring	
	bus	AEP (100%)

		Responsible Customer(s)
	Connect two 138 kV 6-wired	
	circuits from "Point A"	
	(currently de-energized and	
	owned by FirstEnergy) in	
b2753.3	circuit positions previously	
02733.3	designated Burger #1 &	
	Burger #2 138 kV. Install	
	interconnection settlement	
	metering on both circuits	
	exiting Holloway	AEP (100%)
	Build double circuit 138 kV	
	line from Dilles Bottom to	
	"Point A". Tie each new	
	AEP circuit in with a 6-wired	
b2753.6	line at Point A. This will	
	create a Dilles Bottom –	
	Holloway 138 kV circuit and	
	a George Washington –	
	Holloway 138 kV circuit	AEP (100%)
	Retire line sections (Dilles	
	Bottom – Bellaire and	
	Moundsville – Dilles Bottom	
	69 kV lines) south of	
b2753.7	FirstEnergy 138 kV line	
02/33.7	corridor, near "Point A". Tie	
	George Washington –	
	Moundsville 69 kV circuit to	
	George Washington – West	
	Bellaire 69 kV circuit	AEP (100%)
	Rebuild existing 69 kV line	
	as double circuit from	
	George Washington – Dilles	
b2753.8	Bottom 138 kV. One circuit	
02/33.8	will cut into Dilles Bottom	
	138 kV initially and the other	
	will go past with future plans	
	to cut in	AEP (100%)

Required 11	ansmission Ennancements Annual R	evenue Requirement	Responsible Customer(s)
	Perform a Sag Study of the		
b2760	Saltville – Tazewell 138 kV		
	line to increase the thermal		
	rating of the line		AEP (100%)
b2761.1	Replace the Hazard 161/138		
02/01.1	kV transformer		AEP (100%)
	Perform a Sag Study of the		
<b>L</b> 2761.2	Hazard – Wooten 161 kV line		
02/01.2	to increase the thermal rating		
	of the line		AEP (100%)
	Rebuild the Hazard – Wooton		
<b>L</b> 2761.2	161 kV line utilizing 795 26/7		
02/01.3	ACSR conductor (300 MVA		
	rating)		AEP (100%)
	Perform a Sag Study of Nagel		
<b>L2762</b>	– West Kingsport 138 kV line		
02702	to increase the thermal rating		
	of the line		AEP (100%)
	Reconductor the entire		
b2776	Dequine – Meadow Lake 345		
02,70	kV circuit #2		AEP (100%)
	Reconductor the entire		
b2777	Dequine – Eugene 345 kV		
	circuit #1		EKPC (100%)
	Construct a new 138 kV		
<b>b</b> 2770 1	station, Campbell Road,		
02//9.1	tapping into the Grabill –		
	South Hicksville138 kV line		AEP (100%)
	Reconstruct sections of the		
	Butler-N.Hicksville and		
<b>52770.2</b>	Auburn-Butler 69 kV circuits		
02119.2	as 138 kV double circuit and		
	extend 138 kV from		
	Campbell Road station		AEP (100%)

Required 11	ansmission Ennancements Annual R	Levenue Requirement	Responsible Customer(s)
	Construct a new 345/138 kV		
	SDI Wilmington Station		
b2779.3	which will be sourced from		
02/19.3	Collingwood 345 kV and		
	serve the SDI load at 345 kV		
	and 138 kV, respectively		AEP (100%)
	Loop 138 kV circuits in-out		
	of the new SDI Wilmington		
	138 kV station resulting in a		
	direct circuit to Auburn 138		
	kV and an indirect circuit to		
b2779.4	Auburn and Rob Park via		
	Dunton Lake, and a circuit to		
	Campbell Road; Reconductor		
	138 kV line section between		
	Dunton Lake – SDI		
	Wilmington		AEP (100%)
b2779.5	Even and Aubrem 120 by has		
02/19.3	Expand Auburn 138 kV bus		AEP (100%)
	Construct a 345 kV ring bus		
b2779.6	at Dunton Lake to serve Steel		
02//9.0	Dynamics, Inc. (SDI) load at		
	345 kV via two (2) circuits		AEP (100%)
b2779.7	Retire Collingwood 345 kV		
02/19.7	station		AEP (100%)
	Reconductor 0.53 miles (14		
	spans) of the Kaiser Jct Air		
	Force Jct. Sw section of the		
b2787	Kaiser - Heath 69 kV		
02/8/	circuit/line with 336 ACSR to		
	match the rest of the circuit		
	(73 MVA rating, 78%		
	loading)		AEP (100%)

1100		10 / 0110/0 1 10 0 01110110	respension e disternor(s)
	Install a new 3-way 69 kV		
	line switch to provide service		
	to AEP's Barnesville		
b2788	distribution station. Remove a		
	portion of the #1 copper T-		
	Line from the 69 kV through-		
	path		AEP (100%)
	Rebuild the Brues - Glendale		
b2789	Heights 69 kV line section (5		
02/89	miles) with 795 ACSR (128		
	MVA rating, 43% loading)		AEP (100%)

	drishinssion Emiliancements	ment responsible customer(s)
	Install a 3 MVAR, 34.5 kV	
b2790	*	
	substation	AEP (100%)
b2701	Rebuild Tiffin – Howard, new	
02/91	transformer at Chatfield	AEP (100%)
	Rebuild portions of the East	
	Tiffin - Howard 69 kV line	
	from East Tiffin to West	
b2791.1	Rockaway Switch (0.8 miles)	
		AEP (100%)
	Rebuild Tiffin - Howard 69	
	kV line from St. Stephen's	
b2791.2	· · · · · · · · · · · · · · · · · · ·	
	, –	
	`	
	l = =	AEP (100%)
b2791.3		
	2790 cap bank at Caldwell substation  Rebuild Tiffin – Howard, new transformer at Chatfield  Rebuild portions of the East Tiffin - Howard 69 kV line from East Tiffin to West  Rockaway Switch (0.8 miles) using 795 ACSR Drake conductor (129 MVA rating, 50% loading)  Rebuild Tiffin - Howard 69 kV line from St. Stephen's Switch to Hinesville (14.7 miles) using 795 ACSR Drake conductor (90 MVA rating, non-conductor limited, 38% loading)  New 138/69 kV transformer with 138/69 kV protection at Chatfield  791.4 New 138/69 kV protection at existing Chatfield transformer  Replace the Elliott transformer with a 130 MVA unit, reconductor 0.42 miles of the Elliott — Ohio	AEP (100%)
1.0.00.4		( - 2 )
b2791.4		AEP (100%)
		(2001)
	1	
b2792	1	
	`	
		AEP (100%)
	CIMIN DILOCK DILOGGS IX	1111 (100/0)

required 11		arrevenue requirement responsible eustomer(s)
	Energize the spare Fremont Center	
b2793	138/69 kV 130 MVA transformer	
	#3. Reduces overloaded facilities to	
	46% loading	AEP (100%)
	Construct new 138/69/34 kV	
	station and 1-34 kV circuit	
b2794	(designed for 69 kV) from new	
02/94	station to Decliff station,	
	approximately 4 miles, with 556	
	ACSR conductor (51 MVA rating)	AEP (100%)
	Install a 34.5 kV 4.8 MVAR	
b2795	capacitor bank at Killbuck 34.5 kV	
	station	AEP (100%)
	Rebuild the Malvern - Oneida	
1.2707	Switch 69 kV line section with 795	
b2796	ACSR (1.8 miles, 125 MVA rating,	
	55% loading)	AEP (100%)
	Rebuild the Ohio Central -	
	Conesville 69 kV line section (11.8	
	miles) with 795 ACSR conductor	
b2797	(128 MVA rating, 57% loading).	
	Replace the 50 MVA Ohio Central	
	138/69 kV XFMR with a 90 MVA	
	unit	AEP (100%)
	Install a 14.4 MVAR capacitor	
	bank at West Hicksville station.	
b2798	Replace ground switch/MOAB at	
	West Hicksville with a circuit	
	switcher	AEP (100%)
	Rebuild Valley - Almena, Almena -	
	Hartford, Riverside - South Haven	
b2799	69 kV lines. New line exit at	
	Valley Station. New transformers	
	at Almena and Hartford	AEP (100%)

Rebuild 12 miles of Valley – Almena 69 kV line as a double circuit 138/69 kV line using 795 ACSR conductor (360 MVA rating) to introduce a new 138 kV source into the 69 kV load pocket around Almena station  Rebuild 3.2 miles of Almena to Hartford 69 kV line using 795 ACSR conductor (90 MVA rating)  Rebuild 3.8 miles of Riverside – South Haven 69 kV line using 795 ACSR conductor (90 MVA rating)  AEP (100%)  AFP (100%)	required 11	ansimission Emianecinents	Annual Revenue Require	ment Responsible Cusiomer(s)
double circuit 138/69 kV line   using 795 ACSR conductor (360 MVA rating) to introduce a new 138 kV   source into the 69 kV load   pocket around Almena station   AEP (100%)		Rebuild 12 miles of Valley –		
b2799.1 using 795 ACSR conductor (360 MVA rating) to introduce a new 138 kV source into the 69 kV load pocket around Almena station  Rebuild 3.2 miles of Almena to Hartford 69 kV line using 795 ACSR conductor (90 MVA rating)  Rebuild 3.8 miles of Riverside – South Haven 69 kV line using 795 ACSR conductor (90 MVA rating)  At Valley station, add new 138 kV line exit with a 3000 A 40 kA breaker for the new 138 kV line to Almena and replace CB D with a 3000 A 40 kA breaker MA AEP (100%)  At Almena station, install a 90 MVA 138/69 kV transformer with low side 3000 A 40 kA breaker and establish a new 138 kV line exit towards Valley At Hartford station, install a second 90 MVA 138/69 kV transformer with conducting the side of the side		Almena 69 kV line as a		
102799.1		double circuit 138/69 kV line		
(300 MVA rating) to introduce a new 138 kV source into the 69 kV load pocket around Almena station  Rebuild 3.2 miles of Almena to Hartford 69 kV line using 795 ACSR conductor (90 MVA rating)  Rebuild 3.8 miles of Riverside – South Haven 69 kV line using 795 ACSR conductor (90 MVA rating)  AEP (100%)  At Valley station, add new 138 kV line exit with a 3000 A 40 kA breaker for the new 138 kV line to Almena and replace CB D with a 3000 A 40 kA breaker  At Almena station, install a 90 MVA 138/69 kV transformer with low side 3000 A 40 kA breaker and establish a new 138 kV line exit towards Valley  At Hartford station, install a second 90 MVA 138/69 kV transformer with low side 3000 A 40 kA breaker and establish a new 138 kV line exit towards Valley  At Hartford station, install a second 90 MVA 138/69 kV transformer with a circuit switcher and 3000 A 40 kA	h2700 1	using 795 ACSR conductor		
source into the 69 kV load pocket around Almena station  Rebuild 3.2 miles of Almena to Hartford 69 kV line using 795 ACSR conductor (90 MVA rating)  Rebuild 3.8 miles of Riverside – South Haven 69 kV line using 795 ACSR conductor (90 MVA rating)  AEP (100%)  Rebuild 3.8 miles of Riverside – South Haven 69 kV line using 795 ACSR conductor (90 MVA rating)  At Valley station, add new 138 kV line exit with a 3000 A 40 kA breaker for the new 138 kV line to Almena and replace CB D with a 3000 A 40 kA breaker  At Almena station, install a 90 MVA 138/69 kV transformer with low side 3000 A 40 kA breaker and establish a new 138 kV line exit towards Valley  At Hartford station, install a second 90 MVA 138/69 kV transformer with a circuit switcher and 3000 A 40 kA	02/99.1	(360 MVA rating) to		
pocket around Almena station  Rebuild 3.2 miles of Almena to Hartford 69 kV line using 795 ACSR conductor (90 MVA rating)  Rebuild 3.8 miles of Riverside – South Haven 69 kV line using 795 ACSR conductor (90 MVA rating)  AEP (100%)  Rebuild 3.8 miles of Riverside – South Haven 69 kV line using 795 ACSR conductor (90 MVA rating)  At Valley station, add new 138 kV line exit with a 3000 A 40 kA breaker for the new 138 kV line to Almena and replace CB D with a 3000 A 40 kA breaker  At Almena station, install a 90 MVA 138/69 kV transformer with low side 3000 A 40 kA breaker and establish a new 138 kV line exit towards Valley  At Hartford station, install a second 90 MVA 138/69 kV transformer with a circuit switcher and 3000 A 40 kA		introduce a new 138 kV		
Rebuild 3.2 miles of Almena to Hartford 69 kV line using 795 ACSR conductor (90 MVA rating)  Rebuild 3.8 miles of Riverside – South Haven 69 kV line using 795 ACSR conductor (90 MVA rating)  AEP (100%)  Rebuild 3.8 miles of Riverside – South Haven 69 kV line using 795 ACSR conductor (90 MVA rating)  At Valley station, add new 138 kV line exit with a 3000 A 40 kA breaker for the new 138 kV line to Almena and replace CB D with a 3000 A 40 kA breaker  AEP (100%)  At Almena station, install a 90 MVA 138/69 kV transformer with low side 3000 A 40 kA breaker and establish a new 138 kV line exit towards Valley  At Hartford station, install a second 90 MVA 138/69 kV transformer with a circuit switcher and 3000 A 40 kA		source into the 69 kV load		
b2799.2 to Hartford 69 kV line using 795 ACSR conductor (90 MVA rating)  Rebuild 3.8 miles of Riverside – South Haven 69 kV line using 795 ACSR conductor (90 MVA rating)  AEP (100%)  At Valley station, add new 138 kV line exit with a 3000 A 40 kA breaker for the new 138 kV line to Almena and replace CB D with a 3000 A 40 kA breaker  At Almena station, install a 90 MVA 138/69 kV transformer with low side 3000 A 40 kA breaker and establish a new 138 kV line exit towards Valley  At Hartford station, install a second 90 MVA 138/69 kV transformer with a circuit switcher and 3000 A 40 kA		pocket around Almena station		AEP (100%)
795 ACSR conductor (90 MVA rating)  Rebuild 3.8 miles of Riverside – South Haven 69 kV line using 795 ACSR conductor (90 MVA rating)  At Valley station, add new 138 kV line exit with a 3000 A 40 kA breaker for the new 138 kV line to Almena and replace CB D with a 3000 A 40 kA breaker  At Almena station, install a 90 MVA 138/69 kV transformer with low side 3000 A 40 kA breaker and establish a new 138 kV line exit towards Valley  At Hartford station, install a second 90 MVA 138/69 kV transformer with a circuit switcher and 3000 A 40 kA		Rebuild 3.2 miles of Almena		
MVA rating)  Rebuild 3.8 miles of Riverside – South Haven 69 kV line using 795 ACSR conductor (90 MVA rating)  At Valley station, add new 138 kV line exit with a 3000 A 40 kA breaker for the new 138 kV line to Almena and replace CB D with a 3000 A 40 kA breaker  At Almena station, install a 90 MVA 138/69 kV transformer with low side 3000 A 40 kA breaker and establish a new 138 kV line exit towards Valley  At Hartford station, install a second 90 MVA 138/69 kV transformer with a circuit switcher and 3000 A 40 kA	h2700 2	to Hartford 69 kV line using		
Rebuild 3.8 miles of Riverside – South Haven 69 kV line using 795 ACSR conductor (90 MVA rating)  At Valley station, add new 138 kV line exit with a 3000 A 40 kA breaker for the new 138 kV line to Almena and replace CB D with a 3000 A 40 kA breaker  At Almena station, install a 90 MVA 138/69 kV transformer with low side 3000 A 40 kA breaker and establish a new 138 kV line exit towards Valley  At Hartford station, install a second 90 MVA 138/69 kV transformer with a circuit switcher and 3000 A 40 kA	02/99.2	795 ACSR conductor (90		
B2799.3   Riverside - South Haven 69 kV line using 795 ACSR conductor (90 MVA rating)   AEP (100%)				AEP (100%)
b2799.3 kV line using 795 ACSR conductor (90 MVA rating)  At Valley station, add new 138 kV line exit with a 3000 A 40 kA breaker for the new 138 kV line to Almena and replace CB D with a 3000 A 40 kA breaker  AEP (100%)  At Almena station, install a 90 MVA 138/69 kV transformer with low side 3000 A 40 kA breaker and establish a new 138 kV line exit towards Valley  AEP (100%)  At Hartford station, install a second 90 MVA 138/69 kV transformer with a circuit switcher and 3000 A 40 kA				
b2799.4 b2799.4 b2799.4 b2799.5 conductor (90 MVA rating) At Valley station, add new 138 kV line exit with a 3000 A 40 kA breaker for the new 138 kV line to Almena and replace CB D with a 3000 A 40 kA breaker  At Almena station, install a 90 MVA 138/69 kV transformer with low side 3000 A 40 kA breaker and establish a new 138 kV line exit towards Valley  At Hartford station, install a second 90 MVA 138/69 kV transformer with a circuit switcher and 3000 A 40 kA	h2700 2	Riverside – South Haven 69		
b2799.4  At Valley station, add new 138 kV line exit with a 3000 A 40 kA breaker for the new 138 kV line to Almena and replace CB D with a 3000 A 40 kA breaker  At Almena station, install a 90 MVA 138/69 kV transformer with low side 3000 A 40 kA breaker and establish a new 138 kV line exit towards Valley  At Hartford station, install a second 90 MVA 138/69 kV transformer with a circuit switcher and 3000 A 40 kA	02/99.3	kV line using 795 ACSR		
b2799.4  138 kV line exit with a 3000 A 40 kA breaker for the new 138 kV line to Almena and replace CB D with a 3000 A 40 kA breaker  At Almena station, install a 90 MVA 138/69 kV transformer with low side 3000 A 40 kA breaker and establish a new 138 kV line exit towards Valley  At Hartford station, install a second 90 MVA 138/69 kV transformer with a circuit switcher and 3000 A 40 kA	b2799.2 b2799.3 b2799.4	conductor (90 MVA rating)		AEP (100%)
b2799.4  A 40 kA breaker for the new 138 kV line to Almena and replace CB D with a 3000 A 40 kA breaker  At Almena station, install a 90 MVA 138/69 kV transformer with low side 3000 A 40 kA breaker and establish a new 138 kV line exit towards Valley  At Hartford station, install a second 90 MVA 138/69 kV transformer with a circuit switcher and 3000 A 40 kA		At Valley station, add new		
b2799.4  138 kV line to Almena and replace CB D with a 3000 A 40 kA breaker  At Almena station, install a 90 MVA 138/69 kV transformer with low side 3000 A 40 kA breaker and establish a new 138 kV line exit towards Valley  At Hartford station, install a second 90 MVA 138/69 kV transformer with a circuit switcher and 3000 A 40 kA		138 kV line exit with a 3000		
b2799.5 At Almena station, install a 90 MVA 138/69 kV transformer with low side 3000 A 40 kA breaker and establish a new 138 kV line exit towards Valley  At Hartford station, install a second 90 MVA 138/69 kV transformer with a circuit switcher and 3000 A 40 kA	h2700 4	A 40 kA breaker for the new		
40 kA breaker  AEP (100%)  At Almena station, install a 90 MVA 138/69 kV  transformer with low side 3000 A 40 kA breaker and establish a new 138 kV line exit towards Valley  AEP (100%)  At Hartford station, install a second 90 MVA 138/69 kV  transformer with a circuit switcher and 3000 A 40 kA	02/99.4	138 kV line to Almena and		
At Almena station, install a 90 MVA 138/69 kV transformer with low side 3000 A 40 kA breaker and establish a new 138 kV line exit towards Valley  At Hartford station, install a second 90 MVA 138/69 kV transformer with a circuit switcher and 3000 A 40 kA		replace CB D with a 3000 A		
b2799.5  90 MVA 138/69 kV transformer with low side 3000 A 40 kA breaker and establish a new 138 kV line exit towards Valley  At Hartford station, install a second 90 MVA 138/69 kV transformer with a circuit switcher and 3000 A 40 kA				AEP (100%)
b2799.5 transformer with low side 3000 A 40 kA breaker and establish a new 138 kV line exit towards Valley  At Hartford station, install a second 90 MVA 138/69 kV transformer with a circuit switcher and 3000 A 40 kA		At Almena station, install a		
3000 A 40 kA breaker and establish a new 138 kV line exit towards Valley  At Hartford station, install a second 90 MVA 138/69 kV transformer with a circuit switcher and 3000 A 40 kA		90 MVA 138/69 kV		
a 3000 A 40 kA breaker and establish a new 138 kV line exit towards Valley  At Hartford station, install a second 90 MVA 138/69 kV transformer with a circuit switcher and 3000 A 40 kA	1-2700 5	transformer with low side		
exit towards Valley  AEP (100%)  At Hartford station, install a second 90 MVA 138/69 kV transformer with a circuit switcher and 3000 A 40 kA	02/99.3	3000 A 40 kA breaker and		
At Hartford station, install a second 90 MVA 138/69 kV transformer with a circuit switcher and 3000 A 40 kA		establish a new 138 kV line		
b2799.6 second 90 MVA 138/69 kV transformer with a circuit switcher and 3000 A 40 kA		exit towards Valley		AEP (100%)
b2799.6 second 90 MVA 138/69 kV transformer with a circuit switcher and 3000 A 40 kA		At Hartford station, install a		
switcher and 3000 A 40 kA				
	b2799.6			
low side breaker AEP (100%)		switcher and 3000 A 40 kA		
		low side breaker		AEP (100%)

Required 11	ansinission Emiancements	Annual Revenue Requirement	Responsible Cusionner(s)
	Replace Delaware 138 kV		
b2817	breaker 'P' with a 40 kA		
	breaker		AEP (100%)
	Replace West Huntington 138		
b2818	kV breaker 'F' with a 40 kA		
	breaker		AEP (100%)
	Replace Madison 138 kV		
b2819	breaker 'V' with a 63 kA		
	breaker		AEP (100%)
	Replace Sterling 138 kV		
b2820	breaker 'G' with a 40 kA		
	breaker		AEP (100%)
	Replace Morse 138 kV		
b2821	breakers '103', '104', '105',		
02021	and '106' with 63 kA		
	breakers		AEP (100%)
	Replace Clinton 138 kV		
b2822	breakers '105' and '107' with		
	63 kA breakers		AEP (100%)
	Install 300 MVAR reactor at		
b2826.1	Ohio Central 345 kV		
	substation		AEP (100%)

1100/001100 11	distrission Emiliarections 7 timed Tevende Requiremen	it Responsible Customer(s)
b2826.2	Install 300 MVAR reactor at West Bellaire 345 kV	
02020.2	substation	AEP (100%)
	Upgrade the Tanner Creek –	7111 (10070)
b2831.1	Miami Fort 345 kV circuit	DFAX Allocation:
0203111	(AEP portion)	Dayton (99.99%) / EKPC (0.01%)
	Six wire the Kyger Creek –	
1.0000	Sporn 345 kV circuits #1 and	
b2832	#2 and convert them to one	
	circuit	AEP (100%)
	Reconductor the Maddox	
b2833	Creek – East Lima 345 kV	
02833	circuit with 2-954 ACSS	DFAX Allocation:
	Cardinal conductor	AEP (79.96%) / Dayton (20.04%)
	Reconductor and string open	
b2834	position and sixwire 6.2 miles	
02031	of the Chemical – Capitol Hill	
	138 kV circuit	AEP (100%)
	Replace the South Canton 138	
b2872	kV breaker 'K2' with a 80 kA	A FID (1000()
	breaker 120	AEP (100%)
1.0072	Replace the South Canton 138	
b2873	kV breaker "M" with a 80 kA	AFD (1000/)
	breaker 120	AEP (100%)
1,2074	Replace the South Canton 138 kV breaker "M2" with a 80	
b2874	kA breaker	AEP (100%)
	Upgrade the Clifty Creek	ALF (10070)
b2878	345 kV risers	AEP (100%)
	Rebuild approximately 4.77	ALI (10070)
	miles of the Cannonsburg –	
b2880	South Neal 69 kV line section	
02000	utilizing 795 ACSR	
	conductor (90 MVA rating)	AEP (100%)
L	· · · · · · · · · · · · · · · · · · ·	(/

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Rebuild ~1.7 miles of the Dunn Hollow – London 46 kV line section utilizing 795 b2881 26/7 ACSR conductor (58 MVA rating, non-conductor limited) AEP (100%) Rebuild Reusens - Peakland b2882 Switch 69 kV line. Replace Peakland Switch AEP (100%) Rebuild the Reusens -Peakland Switch 69 kV line (approximately 0.8 miles) b2882.1 utilizing 795 ACSR conductor (86 MVA rating, non-conductor limited) AEP (100%) Replace existing Peakland S.S b2882.2 with new 3 way switch phase over phase structure AEP (100%) Rebuild the Craneco – Pardee Three Forks – Skin Fork 46 kV line section b2883 (approximately 7.2 miles) utilizing 795 26/7 ACSR conductor (108 MVA rating) AEP (100%) Install a second transformer at Nagel station, comprised of 3 single phase 250 MVA 500/138 kV transformers. Presently, TVA operates their b2884 end of the Boone Dam -Holston 138 kV interconnection as normally open preemptively for the loss

of the existing Nagel

of Jackson

b2885

New delivery point for City

AEP (100%)

AEP (100%)

required 11	ansimission Emilancements	Annual Revenue Requireme	it responsible editioner(s)
	Install a new Ironman Switch		
	to serve a new delivery point		
b2885.1	requested by the City of		
	Jackson for a load increase		
	request		AEP (100%)
	Install a new 138/69 kV		
	station (Rhodes) to serve as a		
b2885.2	third source to the area to help		
	relieve overloads caused by		
	the customer load increase		AEP (100%)
	Replace Coalton Switch with		
b2885.3	a new three breaker ring bus		
	(Heppner)		AEP (100%)
	Install 90 MVA 138/69 kV		
	transformer, new transformer		
b2886	high and low side 3000 A 40		
02880	kA CBs, and a 138 kV 40 kA		
	bus tie breaker at West End		
	Fostoria		AEP (100%)
	Add 2-138 kV CB's and		
	relocate 2-138 kV circuit exits		
b2887	to different bays at Morse		
02887	Road. Eliminate 3 terminal		
	line by terminating Genoa -		
	Morse circuit at Morse Road		AEP (100%)
	Retire Poston substation.		
b2888	Install new Lemaster		
	substation		AEP (100%)
b2888.1	Remove and retire the Poston		
02000.1	138 kV station		AEP (100%)
	Install a new greenfield		
b2888.2	station, Lemaster 138 kV		
	Station, in the clear		AEP (100%)

Annual Revenue Requirement Responsible Customer(s) Required Transmission Enhancements Relocate the Trimble 69 kV AEP Ohio radial delivery point to 138 kV, to be served off of the Poston - Strouds Run b2888.3 Crooksville 138 kV circuit via a new three-way switch. Retire the Poston - Trimble 69 kV line AEP (100%) b2889 **Expand Cliffview station** AEP (100%) Cliffview Station: Establish 138 kV bus. Install two 138/69 kV b2889.1 XFRs (130 MVA), six 138 kV CBs (40 kA 3000 A) and four 69 kV CBs (40 kA 3000 A) AEP (100%) Byllesby – Wythe 69 kV: Retire all 13.77 miles (1/0 CU) of this b2889.2 circuit (~4 miles currently in national forest) AEP (100%) Galax – Wythe 69 kV: Retire 13.53 miles (1/0 CU section) of line from Lee Highway down to Byllesby. This section is b2889.3 currently double circuited with Byllesby – Wythe 69 kV. Terminate the southern 3/0 ACSR section into the newly opened position at Byllesby AEP (100%) Cliffview Line: Tap the existing Pipers Gap – Jubal Early 138 kV line section. Construct double b2889.4 circuit in/out (~2 miles) to newly established 138 kV bus, utilizing 795 26/7 ACSR conductor AEP (100%)

	Rebuild 23.55 miles of the East	responsible Customer(s)
1.2000.1	Cambridge – Smyrna 34.5 kV	
b2890.1	circuit with 795 ACSR	
	conductor (128 MVA rating)	1 TT (1000()
	and convert to 69 kV	AEP (100%)
	East Cambridge: Install a 2000	
b2890.2	A 69 kV 40 kA circuit breaker	
02070.2	for the East Cambridge –	
	Smyrna 69 kV circuit	AEP (100%)
	Old Washington: Install 69 kV	
b2890.3	2000 A two way phase over	
	phase switch	AEP (100%)
1,2000.4	Install 69 kV 2000 A two way	
b2890.4	phase over phase switch	AEP (100%)
	Rebuild the Midland Switch to	,
	East Findlay 34.5 kV line (3.31	
b2891	miles) with 795 ACSR (63	
	MVA rating) to match other	
	conductor in the area	AEP (100%)
	Install new 138/12 kV	
	transformer with high side	
	circuit switcher at Leon and a	
	new 138 kV line exit towards	
b2892	Ripley. Establish 138 kV at the	
	Ripley station with a new 138/69	
	kV 130 MVA transformer and	
	move the distribution load to	
	138 kV service	AEP (100%)
	Rebuild approximately 6.7 miles	1121 (10070)
	of 69 kV line between Mottville	
	and Pigeon River using 795	
b2936.1	ACSR conductor (129 MVA	
02730.1	rating). New construction will be	
	designed to 138 kV standards	
	but operated at 69 kV	AED (100%)
	out operated at 09 KV	AEP (100%)

		 1
	Pigeon River Station: Replace	
	existing MOAB Sw. 'W' with	
	a new 69 kV 3000 A 40 kA	
b2936.2	breaker, and upgrade existing	
	relays towards HMD station.	
	Replace CB H with a 3000 A	
	40 kA breaker	AEP (100%)
	Replace the existing 636	
b2937	ACSR 138 kV bus at	
02737	Fletchers Ridge with a larger	
	954 ACSR conductor	AEP (100%)
	Perform a sag mitigations on	
	the Broadford – Wolf Hills	
b2938	138 kV circuit to allow the	
	line to operate to a higher	
	maximum temperature	AEP (100%)
	Cut George Washington –	
b2958.1	Tidd 138 kV circuit into Sand	
02/30.1	Hill and reconfigure Brues &	
	Warton Hill line entrances	AEP (100%)
	Add 2 138 kV 3000 A 40 kA	
b2958.2	breakers, disconnect switches,	
02/30.2	and update relaying at Sand	
	Hill station	AEP (100%)
	Upgrade existing 345 kV	
b2968	terminal equipment at Tanner	
	Creek station	AEP (100%)
	Replace terminal equipment	
b2969	on Maddox Creek - East	
	Lima 345 kV circuit	AEP (100%)
	Upgrade terminal equipment	
	at Tanners Creek 345 kV	
b2976	station. Upgrade 345 kV bus	
	and risers at Tanners Creek	
	for the Dearborn circuit	AEP (100%)

ь2988	Replace the Twin Branch 345 kV breaker "JM" with 63 kA breaker and associated substation works including switches, bus leads, control	
	cable and new DICM	AEP (100%)
b2993	Rebuild the Torrey – South Gambrinus Switch – Gambrinus Road 69 kV line section (1.3 miles) with 1033 ACSR 'Curlew' conductor	AED (1009/)
	and steel poles  Replace South Canton 138 kV	AEP (100%)
b3000	breaker 'N' with an 80 kA	AEP (100%)
b3001	Replace South Canton 138 kV breaker 'N1' with an 80 kA breaker	AEP (100%)
b3002	Replace South Canton 138 kV breaker 'N2' with an 80 kA breaker	AEP (100%)
b3036	Rebuild 15.6 miles of Haviland - North Delphos 138 kV line	AEP (100%)
b3037	Upgrades at the Natrium substation	AEP (100%)
b3038	Reconductor the Capitol Hill  - Coco 138 kV line section	AEP (100%)
b3039	Line swaps at Muskingum 138 kV station	AEP (100%)
b3040.1	Rebuild Ravenswood – Racine tap 69 kV line section (~15 miles) to 69 kV standards, utilizing 795 26/7 ACSR conductor	AEP (100%)

rtequires 11		minimum recommendation	ment responsible editioner(s)
	Rebuild existing Ripley – Ravenswood 69 kV circuit		
b3040.2	(~9 miles) to 69 kV standards,		
03040.2	utilizing 795 26/7 ACSR		
	conductor		AEP (100%)
	Install new 3-way phase over		1121 (10070)
	phase switch at Sarah Lane		
b3040.3	station to replace the retired		
	switch at Cottageville		AEP (100%)
	Install new 138/12 kV 20		1121 (10070)
	MVA transformer at Polymer		
1.20.40.4	station to transfer load from		
b3040.4	Mill Run station to help		
	address overload on the 69		
	kV network		AEP (100%)
1.2040.5	Datina Mili Dana atati an		, ,
b3040.5	Retire Mill Run station		AEP (100%)
h2040 6	Install 28.8 MVAR cap bank		
03040.0	at South Buffalo station		AEP (100%)
h2051.2	Adjust CT tap ratio at		
b3040.6 b3051.2	Ronceverte 138 kV		AEP (100%)
	Reconductor Kammer –		
	George Washington 138 kV		
b3085	line (approx. 0.08 mile).		
	Replace the wave trap at		
	Kammer 138 kV		AEP (100%)
	Rebuild New Liberty –		
b3086.1	Findlay 34 kV line Str's 1–37		
03080.1	(1.5 miles), utilizing 795 26/7		
	ACSR conductor		AEP (100%)
	Rebuild New Liberty – North		
b3086.2	Baltimore 34 kV line Str's 1-		
03080.2	11 (0.5 mile), utilizing 795		
	26/7 ACSR conductor		AEP (100%)

Ttoquirou II	distrission Emancements	7 Hillian Revenue Requirement Responsible Customer(s)
	Rebuild West Melrose –	
b3086.3	Whirlpool 34 kV line Str's	
03000.3	55–80 (1 mile), utilizing 795	
	26/7 ACSR conductor	AEP (100%)
	North Findlay station: Install	
	a 138 kV 3000A 63 kA line	
b3086.4	breaker and low side 34.5 kV	
03080.4	2000A 40kA breaker, high	
	side 138 kV circuit switcher	
	on T1	AEP (100%)
	Ebersole station: Install	
	second 90 MVA 138/69/34	
b3086.5	kV transformer. Install two	
	low side (69 kV) 2000A 40	
	kA breakers for T1 and T2	AEP (100%)
	Construct a new greenfield	
	station to the west (approx.	
	1.5 miles) of the existing	
	Fords Branch Station in the	
	new Kentucky Enterprise	
	Industrial Park. This station	
	will consist of six 3000A 40	
b3087.1	kA 138 kV breakers laid out	
	in a ring arrangement, two 30	
	MVA 138/34.5 kV	
	transformers, and two 30	
	MVA 138/12 kV	
	transformers. The existing	
	Fords Branch Station will be	
	retired	AEP (100%)
	Construct approximately 5	(10070)
	miles of new double circuit	
1.000=5	138 kV line in order to loop	
b3087.2	the new Kewanee station into	
	the existing Beaver Creek –	
	Cedar Creek 138 kV circuit	AEP (100%)
		1222 (10070)

	Remote end work will be	•	ì
b3087.3	required at Cedar Creek		
3233712	Station		AEP (100%)
	Install 28.8 MVAR switching		(100,0)
b3087.4	shunt at the new Fords		
03007.1	Branch substation		AEP (100%)
	Rebuild Lakin – Racine Tap		1121 (10070)
	69 kV line section (9.2 miles)		
b3095	to 69 kV standards, utilizing		
	795 26/7 ACSR conductor		AEP (100%)
	Install a 138 kV 3000A 40 kA		1111 (10070)
	circuit switcher on the high		
b3099	side of the existing 138/34.5		
03077	kV transformer No.5 at		
	Holston station		AEP (100%)
	Replace the 138 kV MOAB		1121 (10070)
	switcher "YY" with a new		
b3100	138 kV circuit switcher on the		
03100	high side of Chemical		
	transformer No.6		AEP (100%)
	Rebuild the 1/0 Cu. conductor		1121 (10070)
	sections (approx. 1.5 miles) of		
	the Fort Robinson – Moccasin		
	Gap 69 kV line section		
	(approx. 5 miles) utilizing		
b3101	556 ACSR conductor and		
	upgrade existing relay trip		
	limit (WN/WE: 63 MVA, line		
	limited by remaining		
	conductor sections)		AEP (100%)
	Replace existing 50 MVA		(20070)
	138/69 kV transformers #1		
b3102	and #2 (both 1957 vintage) at		
03102	Fremont station with new 130		
	MVA 138/69 kV transformers		AEP (100%)

Required 1	ransmission Enhancements	Annuai Revenue Requ	irement Responsible Customer(s)
	Install a 138/69 kV		
	transformer at Royerton		
	station. Install a 69 kV bus		
	with one 69 kV breaker		
b3103.1	toward Bosman station.		
03103.1	Rebuild the 138 kV portion		
	into a ring bus configuration		
	built for future breaker and a		
	half with four 138 kV		
	breakers		AEP (100%)
	Rebuild the		
	Bosman/Strawboard station in		
b3103.2	the clear across the road to		
03103.2	move it out of the flood plain		
	and bring it up to 69 kV		
	standards		AEP (100%)
	Retire 138 kV breaker L at		
b3103.3	Delaware station and re-		
03103.3	purpose 138 kV breaker M		
	for the Jay line		AEP (100%)
	Retire all 34.5 kV equipment		
b3103.4	at Hartford City station. Re-		
03103.4	purpose breaker M for the		
	Bosman line 69 kV exit		AEP (100%)
	Rebuild the 138 kV portion of		
	Jay station as a 6 breaker,		
	breaker and a half station re-		
	using the existing breakers		
b3103.5	"A", "B", and "G." Rebuild		
03103.3	the 69 kV portion of this		
	station as a 6 breaker ring bus		
	re-using the 2 existing 69 kV		
	breakers. Install a new 138/69		
	kV transformer		AEP (100%)

	Rebuild the 69 kV Hartford	<u> </u>	
b3103.6	City – Armstrong Cork line		
	but instead of terminating it		
03103.0	into Armstrong Cork,		
	_		AED (1000/)
	terminate it into Jay station		AEP (100%)
b3103.7	Build a new 69 kV line from		1 TD (1000()
	Armstrong Cork – Jay station		AEP (100%)
	Rebuild the 34.5 kV		
	Delaware – Bosman line as		
b3103.8	the 69 kV Royerton –		
03103.0	Strawboard line. Retire the		
	line section from Royerton to		
	Delaware stations		AEP (100%)
	Perform a sag study on the		
	Polaris – Westerville 138 kV		
b3104	line (approx. 3.6 miles) to		
03104	increase the summer		
	emergency rating to 310		
	MVA		AEP (100%)
	Rebuild the Delaware – Hyatt		
	138 kV line (approx. 4.3		
b3105	miles) along with replacing		
	conductors at both Hyatt and		
	Delaware substations		AEP (100%)
	Perform a sag study (6.8		, , ,
	miles of line) to increase the		
	SE rating to 310 MVA. Note		
b3106	that results from the sag study		
	could cover a wide range of		
	outcomes, from no work		
	required to a complete rebuild		AEP (100%)
	Rebuild 5.2 miles Bethel –		(10070)
b3109	Sawmill 138 kV line		
03109	including ADSS		AEP (100%)
<u> </u>	merading ribbb	<u> </u>	1111 (10070)

required 11		THINGET TEC VOIGE TECOLOR	rement responsible customer(s)
b3112	Construct a single circuit 138 kV line (approx. 3.5 miles) from Amlin to Dublin using 1033 ACSR Curlew (296 MVA SN), convert Dublin station into a ring configuration, and reterminating the Britton UG		A F.D. (1009/)
b3116	cable to Dublin station  Replace existing Mullens 138/46 kV 30 MVA transformer No.4 and associated protective equipment with a new 138/46 kV 90 MVA transformer and associated protective equipment		AEP (100%) AEP (100%)
b3118.1	Expand existing Chadwick station and install a second 138/69 kV transformer at a new 138 kV bus tied into the Bellefonte – Grangston 138 kV circuit. The 69 kV bus will be reconfigured into a ring bus arrangement to tie the new transformer into the existing 69 kV via installation of four 3000A 63 kA 69 kV circuit breakers		AEP (100%)
b3118.2	Perform 138 kV remote end work at Grangston station		AEP (100%)
b3118.3	Perform 138 kV remote end work at Bellefonte station		AEP (100%)
b3118.4	Relocate the Chadwick – Leach 69 kV circuit within Chadwick station		AEP (100%)

		 1
	Terminate the Bellefonte –	
b3118.5	Grangston 138 kV circuit to the	
	Chadwick 138 kV bus	AEP (100%)
	Chadwick – Tri-State #2 138	
	kV circuit will be reconfigured	
b3118.6	within the station to terminate	
03118.0	into the newly established 138	
	kV bus #2 at Chadwick due to	
	construability aspects	AEP (100%)
	Reconductor Chadwick –	
	Leach and Chadwick	
	England Hill 69 kV lines with	
1,2110.7	795 ACSS conductor. Perform	
b3118.7	a LiDAR survey and a sag	
	study to confirm that the	
	reconductored circuits would	
	maintain acceptable clearances	AEP (100%)
	Replace the 20 kA 69 kV	
	circuit breaker 'F' at South	
b3118.8	Neal station with a new 3000A	
03118.8	40 kA 69 kV circuit breaker.	
	Replace line risers towards	
	Leach station	AEP (100%)
	Rebuild 336 ACSR portion of	
b3118.9	Leach – Miller S.S 69 kV line	
03118.9	section (approx. 0.3 mile) with	
	795 ACSS conductor	AEP (100%)
	Replace 69 kV line risers	
b3118.10	(towards Chadwick) at Leach	
	station	AEP (100%)
	Rebuild the Jay – Pennville 138	
	kV line as double circuit	
<b>L</b> 2110 1	138/69 kV. Build a new 9.8	
b3119.1	mile single circuit 69 kV line	
	from near Pennville station to	
	North Portland station	AEP (100%)

Required	ransmission Ennancements	Annuai Revenue Requirement	Responsible Cusiomer(s)
	Install three (3) 69 kV breakers		
b3119.2	to create the "U" string and add		
00113.2	a low side breaker on the Jay		
	transformer 2		AEP (100%)
	Install two (2) 69 kV breakers at		
b3119.3	North Portland station to		
03117.3	complete the ring and allow for		
	the new line		AEP (100%)
	At Conesville 138 kV station:		
	Remove line leads to generating		
	units, transfer plant AC service		
b3129	to existing station service feeds		
	in Conesville 345/138 kV yard,		
	and separate and reconfigure		
	protection schemes		AEP (100%)
	At East Lima and Haviland 138		
	kV stations, replace line relays		
b3131	and wavetrap on the East Lima -	_	
	Haviland 138 kV facility		AEP (100%)
	Rebuild approximately 12.3		1121 (10070)
	miles of remaining Lark		
	conductor on the double circuit		
b3131.1	line between Haviland and East		
	Lima with 1033 54/7 ACSR		
	conductor		AEP (100%)
	Rebuild 3.11 miles of the		AEI (10070)
b3132	LaPorte Junction – New Buffalo		
03132	69 kV line with 795 ACSR		AED (100%)
	Rebuild the Garden Creek –		AEP (100%)
b3139			
	Whetstone 69 kV line (approx. 4		AED (1000/)
	miles)		AEP (100%)
1 2 1 4 0	Rebuild the Whetstone – Knox		
b3140	Creek 69 kV line (approx. 3.1		A ED (1000()
	miles)		AEP (100%)

•	Rebuild the Knox Creek – Coal	•	•
b3141	Creek 69 kV line (approx. 2.9		
	miles)		AEP (100%)
	Rebuild the 46 kV Bradley –		
	Scarbro line to 96 kV standards		
	using 795 ACSR to achieve a		
12140 1	minimum rate of 120 MVA.		
b3148.1	Rebuild the new line adjacent to		
	the existing one leaving the old		
	line in service until the work is		
	completed		AEP (100%)
	Bradley remote end station		
b3148.2	work, replace 46 kV bus, install		
	new 12 MVAR capacitor bank		AEP (100%)
	Replace the existing switch at		
b3148.3	Sun substation with a 2-way		
03140.3	SCADA-controlled motor-		
	operated air-breaker switch		AEP (100%)
	Remote end work and		
b3148.4	associated equipment at Scarbro		
	station		AEP (100%)
	Retire Mt. Hope station and		
b3148.5	transfer load to existing Sun		
	station		AEP (100%)
	Rebuild the 2.3 mile Decatur –		
b3149	South Decatur 69 kV line using		
	556 ACSR		AEP (100%)
	Rebuild Ferguson 69/12 kV		
	station in the clear as the 138/12		
	kV Bear station and connect it		
b3150	to an approx. 1 mile double		
03130	circuit 138 kV extension from		
	the Aviation – Ellison Road 138		
	kV line to remove the load from		/
	the 69 kV line		AEP (100%)

required 11	distinssion Editation 11	illiaai ite veliae itequilellielli ites	polibiole edibtollier(b)
b3151.1	Rebuild the 30 mile Gateway – Wallen 34.5 kV circuit as the		
	27 mile Gateway – Wallen 69		
	kV line		AEP (100%)
	Retire approx. 3 miles of the		7121 (10070)
b3151.2	Columbia – Whitley 34.5 kV		
03131.2	line		AEP (100%)
	At Gateway station, remove all		ALI (10070)
	34.5 kV equipment and install		
b3151.3	one (1) 69 kV circuit breaker		
03131.3	for the new Whitley line		
	entrance		AEP (100%)
	Rebuild Whitley as a 69 kV		ALI (10070)
b3151.4	station with two (2) lines and		
03131.4	one (1) bus tie circuit breaker		AEP (100%)
	Replace the Union 34.5 kV		ALI (10070)
b3151.5	switch with a 69 kV switch		
03131.3	structure		AEP (100%)
	Replace the Eel River 34.5 kV		71L1 (10070)
b3151.6	switch with a 69 kV switch		
03131.0	structure		AEP (100%)
	Install a 69 kV Bobay switch at		71L1 (10070)
b3151.7	Woodland station		AEP (100%)
	Replace the Carroll and		ALI (10070)
	Churubusco 34.5 kV stations		
	with the 69 kV Snapper station.		
b3151.8	Snapper station will have two		
03131.0	(2) line circuit breakers, one (1)		
	bus tie circuit breaker and a		
	14.4 MVAR cap bank		AEP (100%)
	Remove 34.5 kV circuit		71121 (10070)
b3151.9	breaker "AD" at Wallen station		AEP (100%)
	Rebuild the 2.5 miles of the		ALI (10070)
b3151.10	Columbia – Gateway 69 kV		
	line		AEP (100%)
	IIIIC		7 TET (100/0)

Required In	ansmission Ennancements	Allitual Revenue Require	ment Responsible Customer(s)
	Rebuild Columbia station in		
	the clear as a 138/69 kV		
	station with two (2) 138/69		
b3151.11	kV transformers and 4-		
03131.11	breaker ring buses on the high		
	and low side. Station will		
	reuse 69 kV breakers "J" &		
	"K" and 138 kV breaker "D"		AEP (100%)
	Rebuild the 13 miles of the		
b3151.12	Columbia – Richland 69 kV		
	line		AEP (100%)
	Rebuild the 0.5 mile Whitley		
b3151.13	– Columbia City No.1 line as		
	69 kV		AEP (100%)
	Rebuild the 0.5 mile Whitley		
b3151.14	– Columbia City No.2 line as		
	69 kV		AEP (100%)
	Rebuild the 0.6 mile double		
	circuit section of the Rob		
b3151.15	Park – South Hicksville / Rob		
	Park – Diebold Road as 69		
	kV		AEP (100%)
	Construct an approx. 2.4		
	miles double circuit 138 kV		
b3160.1	extension using 1033 ACSR		
03100.1	(Aluminum Conductor Steel		
	Reinforced) to connect Lake		
	Head to the 138 kV network		AEP (100%)
b3160.2	Retire the approx.2.5 miles		
	34.5 kV Niles – Simplicity		
	Tap line		AEP (100%)
b3160.3	Retire the approx.4.6 miles		
	Lakehead 69 kV Tap		AEP (100%)

Required IT	ansmission Ennancements	Annual Revenue Requirem	ient Responsible Customer(s)
	Build new 138/69 kV drop		
	down station to feed		
	Lakehead with a 138 kV		
b3160.4	breaker, 138 kV switcher,		
	138/69 kV transformer and a		
	138 kV Motor-Operated Air		
	Break		AEP (100%)
	Rebuild the approx. 1.2 miles		
	Buchanan South 69 kV		
b3160.5	Radial Tap using 795 ACSR		
	(Aluminum Conductor Steel		
	Reinforced)		AEP (100%)
	Rebuild the approx.8.4 miles		
	69 kV Pletcher – Buchanan		
	Hydro line as the approx. 9		
b3160.6	miles Pletcher – Buchanan		
	South 69 kV line using 795		
	ACSR (Aluminum Conductor		
	Steel Reinforced)		AEP (100%)
	Install a PoP (Point-of-		
	Presence) switch at Buchanan		
b3160.7	South station with 2 line		
	MOABs (Motor-Operated Air		
	Break)		AEP (100%)

Required	Transmission Emancements	Allitual Nevertue Nequit	ement Responsible Customer(s)
	Retire approximately 38		
	miles of the 44 mile Clifford		
	<ul> <li>Scottsville 46 kV circuit.</li> </ul>		
	Build new 138 kV "in and		
	out" to two new distribution		
	stations to serve the load		
	formerly served by Phoenix,		
	Shipman, Schuyler (AEP),		
	and Rockfish stations.		
	Construct new 138 kV lines		
b3208	from Joshua Falls – Riverville		
	(approx. 10 miles) and		
	Riverville – Gladstone		
	(approx. 5 miles). Install		
	required station upgrades at		
	Joshua Falls, Riverville and		
	Gladstone stations to		
	accommodate the new 138		
	kV circuits. Rebuild Reusen –		
	Monroe 69 kV (approx. 4		
	miles)		AEP (100%)
	Rebuild the 10.5 mile Berne –		
b3209	South Decatur 69 kV line		
	using 556 ACSR		AEP (100%)
	Replace approx. 0.7 mile		
b3210	Beatty – Galloway 69 kV line		
	with 4000 kcmil XLPE cable		AEP (100%)
b3220	Install 14.4 MVAR capacitor		
03220	bank at Whitewood 138 kV		AEP (100%)

•	Replace risers at the Bass	•	•
b3243	1		
03243	34.5 kV station		AEP (100%)
	Rebuild approximately 9		
b3244	miles of the Robinson Park –		
	Harlan 69 kV line		AEP (100%)
	Install a low side 69 kV		
b3248	circuit breaker at the Albion		
	138/69 kV transformer #1		AEP (100%)
b3249	Rebuild the Chatfield –		
	Melmore 138 kV line		
	(approximately 10 miles) to		
	1033 ACSR conductor		AEP (100%)

Ttoquirou i		minima reconsider recogni	ement responsible editioner(s)
	Install a 3000A 40 kA 138 kV		
	breaker on the high side of		
	138/69 kV transformer #5 at		
b3253	the Millbrook Park station. The		
	transformer and associated bus		
	protection will be upgraded		
	accordingly		AEP (100%)
	Upgrade 795 AAC risers at the		
b3255	Sand Hill 138 kV station		
03233	towards Cricket Switch with		
	1272 AAC		AEP (100%)
	Upgrade 500 MCM Cu risers at		
b3256	Tidd 138 kV station towards		
03230	Wheeling Steel; replace with		
	1272 AAC conductor		AEP (100%)
	Replace two spans of 336.4		
b3257	26/7 ACSR on the Twin		
03237	Branch – AM General #2 34.5		
	kV circuit		AEP (100%)
	Install a 3000A 63 kA 138 kV		
	breaker on the high side of		
	138/69 kV transformer #2 at		
b3258	Wagenhals station. The		
	transformer and associated bus		
	protection will be upgraded		
	accordingly		AEP (100%)
	At West Millersburg station,		
	replace the 138 kV MOAB on		
b3259	the West Millersburg –		
	Wooster 138 kV line with a		
	3000A 40 kA breaker		AEP (100%)
	Upgrade circuit breaker "R1"		
	at Tanners Creek 345 kV.		
b3261	Install Transient Recovery		
	Voltage capacitor to increase		
	the rating from 50 kA to 63 kA		AEP (100%)

		<b>1</b>
b3269	At West New Philadelphia station, add a high side 138 kV breaker on the 138/69 kV	
	Transformer #2 along with a	
	138 kV breaker on the line	A ED (1000/)
	towards Newcomerstown	AEP (100%)
	Install 1.7 miles of 795 ACSR	
	138 kV conductor along the	
	other side of Dragoon Tap	
	138 kV line, which is	
	currently double circuit tower	
	with one position open.	
	Additionally, install a second	
b3270	138/34.5 kV transformer at	
03270	Dragoon, install a high side	
	circuit switcher on the current	
	transformer at the Dragoon	
	Station, and install two (2)	
	138 kV line breakers on the	
	Dragoon – Jackson 138 kV	
	and Dragoon – Twin Branch	
	138 kV lines	AEP (100%)
	Replace Dragoon 34.5 kV	
b3270.1	breakers "B", "C", and "D"	
	with 40 kA breakers	AEP (100%)
	Install a 138 kV circuit	
	breaker at Fremont station on	
b3271	the line towards Fremont	
632/1	Center and install a 9.6	
	MVAR 69 kV capacitor bank	
	at Bloom Road station	AEP (100%)
	Install two 138 kV circuit	
1,2272	switchers on the high side of	
b3272	138/34.5 kV Transformers #1	
	and #2 at Rockhill station	AEP (100%)

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Rebuild and convert the existing 17.6 miles East b3273.1 Leipsic – New Liberty 34.5	
b3273.1   Leipsic – New Liberty 34.5	
kV circuit to 138 kV using	
795 ACSR AEP (100%)	
Convert the existing 34.5	
kV equipment to 138 kV	
and expand the existing	
McComb station to the	
north and east to allow for	
b3273.2   new equipment to be	
installed. Install two (2)	
new 138 kV box bays to	
allow for line positions and	
two (2) new 138/12 kV	
transformers AEP (100%)	
Expand the existing East	
Leipsic 138 kV station to	
the north to allow for	
another 138 kV line exit to	
be installed. The new line	
exit will involve installing	
b3273.3   a new 138 kV circuit	
breaker, disconnect	
switches and the addition	
of a new dead end structure	
along with the extension of	
the existing 138 kV bus	
work AEP (100%)	
Add one (1) 138 kV circuit	
breaker and disconnect	
switches in order to add an	
additional line position at	
b3273.4 New Liberty 138 kV	
station. Install line relaying	
potential devices and retire	
the 34.5 kV breaker 'F'  AEP (100%)	

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		1 11110001 1 10 ( 011000 1 100	ement responsible customer(s)
	Rebuild approximately 8.9		
	miles of 69 kV line between		
b3274	Newcomerstown and Salt		
	Fork Switch with 556 ACSR		
	conductor		AEP (100%)
	Rebuild the Kammer Station		
b3275.1	– Cresaps Switch 69 kV line,		
	approximately 0.5 mile		AEP (100%)
	Rebuild the Cresaps Switch –		
b3275.2	McElroy Station 69 kV,		
	approximately 0.67 mile		AEP (100%)
	Replace a single span of 4/0		
	ACSR from Moundsville -		
	Natrium structure 93L to		
b3275.3	Carbon Tap switch 69 kV		
032/3.3	located between the		
	Colombia Carbon and Conner		
	Run stations. Remainder of		
	the line is 336 ACSR		AEP (100%)
	Rebuild from Colombia		
	Carbon to Columbia Carbon		
	Tap structure 93N 69 kV,		
	approximately 0.72 mile. The		
b3275.4	remainder of the line between		
	Colombia Carbon Tap		
	structure 93N and Natrium		
	station is 336 ACSR and will		
	remain		AEP (100%)
	Replace the Cresaps 69 kV 3-		
	Way Phase-Over-Phase		
b3275.5	switch and structure with a		
	new 1200A 3-Way switch		
	and steel pole		AEP (100%)
	Replace 477 MCM Alum bus		
b3275.6	and risers at McElroy 69 kV		
	station		AEP (100%)

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Required Tr	ansmission Enhancements	Annual Revenue Require	ement Responsible Customer(s)
	Replace Natrium 138 kV bus		
	existing between CB-BT1		
	and along the 138 kV Main		
	Bus #1 dropping to CBH1		
b3275.7	from the 500 MCM		
	conductors to a 1272 KCM		
	AAC conductor. Replace the		
	dead end clamp and strain		
	insulators		AEP (100%)
	Rebuild the 2/0 Copper		
	section of the Lancaster –		
	South Lancaster 69 kV line,		
b3276.1	approximately 2.9 miles of		
032/0.1	the 3.2 miles total length with		
	556 ACSR conductor. The		
	remaining section has a 336		
	ACSR conductor		AEP (100%)
	Rebuild the 1/0 Copper		
	section of the line between		
b3276.2	Lancaster Junction and		
03270.2	Ralston station 69 kV,		
	approximately 2.3 miles of		
	the 3.1 miles total length		AEP (100%)
	Rebuild the 2/0 Copper		
	portion of the line between		
b3276.3	East Lancaster Tap and		
	Lancaster 69 kV,		
	approximately 0.81 mile		AEP (100%)

Required 1r	ansmission Ennancements	Annual Revenue Requirement Responsible Customer(s)
	Replace H.S. MOAB	
	switches on the high side of	
b3278.1	the 138/69/34.5 kV	
00270.1	transformer T1 with a H.S.	
	circuit switcher at Saltville	
	station	AEP (100%)
	Replace existing 138/69/34.5	
	kV transformer T2 with a	
b3278.2	new 130 MVA 138/69/13 kV	
	transformer at Meadowview	
	station	AEP (100%)
	Install a new 138 kV, 21.6	
1-2270	MVAR cap bank and circuit	
b3279	switcher at Apple Grove	
	station	AEP (100%)
	Rebuild the existing Cabin	
	Creek – Kelly Creek 46 kV	
	line (to Structure 366-44),	
	approximately 4.4 miles. This	
b3280	section is double circuit with	
	the existing Cabin Creek –	
	London 46 kV line so a	
	double circuit rebuild would	
	be required	AEP (100%)

b3281	Install 138 kV circuit switcher on the 138/69 kV Transformer #1 and 138/34.5 kV Transformer #2 at Dewey 138 kV substation. Install 138 kV 2000 A 40 kA breaker on Stanville line at Dewey 138 kV substation	AEP (100%)
b3282.1	Install a second 138 kV circuit utilizing 795 ACSR conductor on the open position of the existing double circuit towers from East Huntington – North Proctorville. Remove the existing 34.5 kV line from East Huntington – North Chesapeake and rebuild this section to 138 kV served from a new PoP switch off the new East Huntington – North Proctorville 138 kV #2 line	AEP (100%)
b3282.2	Install a 138 kV 40 kA circuit breaker at North Proctorville station	AEP (100%)
b3282.3	Install a 138 kV 40 kA circuit breaker at East Huntington station	AEP (100%)
b3282.4	Convert the existing 34/12 kV North Chesapeake to a 138/12 kV station	AEP (100%)
b3283	Replace the existing Inez 138/69 kV 50 MVA autotransformer with a 138/69 kV 90 MVA autotransformer	AEP (100%)

required 11	ansmission Ennancements	Allitual Revenue Require	ment Responsible Customer(s)
	Rebuild approximately 5.44		
b3284	miles of 69 kV line from		
	Lock Lane to Point Pleasant		AEP (100%)
	Replace the Meigs 69 kV 4/0		
	Cu station riser towards		
	Gavin and rebuild the section		
	of the Meigs – Hemlock 69		
1,2205	kV circuit from Meigs to		
b3285	approximately Structure #40		
	(about 4 miles) replacing the		
	line conductor 4/0 ACSR		
	with the line conductor size		
	556.5 ACSR		AEP (100%)
	Reconductor the first 3 spans		, ,
	from Merrimac station to		
	Structure 464-3 of 3/0 ACSR		
b3286	conductor utilizing 336		
	ACSR on the existing		
	Merrimac – Midway 69 kV		
	circuit		AEP (100%)
	Upgrade 69 kV risers at		
b3287	Moundsville station towards		
	George Washington		AEP (100%)
	Construct approximately 2.75		, ,
	miles Orinoco – Stone 69 kV		
b3288.1	transmission line in the clear		
	between Orinoco station and		
	Stone station		AEP (100%)
	Construct approximately 3.25		,
	miles Orinoco – New Camp		
b3288.2	69 kV transmission line in the		
	clear between Orinoco station		
	and New Camp station		AEP (100%)

Required 11	ansmission enhancements	Allitual Revenue Require	ment Responsible Customer(s)
	At Stone substation, circuit		
	breaker A to remain in place		
	and be utilized as T1 low side		
	breaker, circuit breaker B to		
b3288.3	remain in place and be		
03200.3	utilized as new Hatfield (via		
	Orinoco and New Camp) 69		
	kV line breaker. Add new 69		
	kV circuit breaker E for		
	Coleman line exit		AEP (100%)
	Reconfigure the New Camp		
	69 kV tap which includes		
	access road		
b3288.4	improvements/installation,		
322331.	temporary wire and		
	permanent wire work along		
	with dead end structures		1 TD (1000)
	installation		AEP (100%)
	At New Camp substation,		
	rebuild the 69 kV bus, add 69		
b3288.5	kV MOAB W and replace the		
	69 kV ground switch Z1 with		
	a 69 kV circuit switcher on		A ED (1000/)
	the New Camp transformer		AEP (100%)
1 2200 1	Install high-side circuit		
b3289.1	switcher on 138/69/12 kV T5		A FIR (1000()
	at Roanoke station		AEP (100%)
	Install high-side circuit		
b3289.2	switcher on 138/69/34.5 kV		
.20205.2	T1 at Huntington Court		A FIR (1000)
	station		AEP (100%)

Troquirou III		I Hilliam Free Collabo Free qui	Terrient Responsible Customer(s)
	Build 9.4 miles of single		
b3290.1	circuit 69 kV line from		
00290.1	Roselms to near East		
	Ottoville 69 kV switch		AEP (100%)
	Rebuild 7.5 miles of double		
	circuit 69 kV line between		
b3290.2	East Ottoville switch and		
03270.2	Kalida station (combining		
	with the new Roselms to		
	Kalida 69 kV circuit)		AEP (100%)
	At Roselms switch, install a		
b3290.3	new three way 69 kV, 1200 A		
03290.3	phase-over-phase switch,		
	with sectionalizing capability		AEP (100%)
	At Kalida 69 kV station,		
	terminate the new line from		
b3290.4	Roselms switch. Move the CS		
03290.4	XT2 from high side of T2 to		
	the high side of T1. Remove		
	existing T2 transformer		AEP (100%)
1,2201	Replace the Russ St. 34.5 kV		
b3291	switch		AEP (100%)
	Replace existing 69 kV		, , ,
1 2202	capacitor bank at Stuart		
b3292	station with a 17.2 MVAR		
	capacitor bank		AEP (100%)
	Replace 2/0 Cu entrance span		, , ,
	conductor on the South Upper		
1 2202	Sandusky 69 kV line and 4/0		
b3293	Cu Risers/Bus conductors on		
	the Forest line at Upper		
	Sandusky 69 kV station		AEP (100%)
	Replace existing 69 kV		` ′
1.222.4	disconnect switches for		
b3294	circuit breaker "C" at Walnut		
	Avenue station		AEP (100%)
	1	ı	\ /

rtequirea 11		i minaar revenae regar	rement Responsible Customer(s)
b3295	Grundy 34.5 kV: Install a		AED (1000/)
	34.5 kV 9.6 MVAR cap bank		AEP (100%)
	Rebuild the overloaded		
	portion of the Concord –		
b3296	Whitaker 34.5 kV line (1.13		
05270	miles). Rebuild is double		
	circuit and will utilize 795		
	ACSR conductor		AEP (100%)
	Rebuild 4.23 miles of 69 kV		
b3297.1	line between Sawmill and		
03277.1	Lazelle station, using 795		
	ACSR 26/7 conductor		AEP (100%)
	Rebuild 1.94 miles of 69 kV		
b3297.2	line between Westerville and		
03291.2	Genoa stations, using 795		
	ACSR 26/7 conductor		AEP (100%)
	Replace risers and switchers		
	at Lazelle, Westerville, and		
b3297.3	Genoa 69 kV stations.		
	Upgrade associated relaying		
	accordingly		AEP (100%)
	Rebuild 0.8 mile of double		
	circuit 69 kV line between		
b3298	South Toronto and West		
	Toronto. Replace 219 ACSR		
	with 556 ACSR		AEP (100%)
	Replace the 69 kV breaker D		, , ,
b3298.1	at South Toronto station with		
	40 kA breaker		AEP (100%)
	Rebuild 0.2 mile of the West		`
	End Fostoria - Lumberjack		
	Switch 69 kV line with 556		
b3299	ACSR (Dove) conductors.		
03277	Replace jumpers on West End		
	Fostoria line at Lumberjack		
	Switch		AEP (100%)
	<del>-</del>		\ /

required 11	ansimission Emancements	Ailliaal Revellae Require	chiche Responsible Customer(s)
	Rebuild Fleming station in		
	the clear; Replace 138/69kV		
	Fleming Transformer #1 with		
	138/69 kV 130 MVA		
	transformer with high side		
	138 kV CB; Install a 5		
	breaker 69 kV ring bus on the		
b3307	low side of the transformer,		
	replace 69 kV circuit switcher		
	AA, replace 69/12 kV		
	Transformer #3 with 69/12		
	kV 30 MVA transformer,		
	replace 12 kV CB A and D;		
	Retire existing Fleming		
	substation		AEP (100%)
	Reconductor and rebuild 1		
b3308	span of T-line on the Fort		
03308	Steuben – Sunset Blvd 69 kV		
	branch with 556 ACSR		AEP (100%)
	Rebuild 1.75 miles of the		
	Greenlawn – East Tiffin line		
	section of the Carothers –		
b3309	Greenlawn 69 kV circuit		
03307	containing 133 ACSR		
	conductor with 556 ACSR		
	conductor. Upgrade relaying		
	as required		AEP (100%)
	Rebuild 10.5 miles of the		
b3310.1	Howard – Willard 69 kV line		
	utilizing 556 ACSR		
	conductor		AEP (100%)
b3310.2	Upgrade relaying at Howard		
05510.2	69 kV station		AEP (100%)
b3310.3	Upgrade relaying at Willard		
	69 kV station		AEP (100%)

Required In	ransmission Enhancements	Annual Revenue Require	ement Responsible Customer(s)
	Rebuild approximately 4		
	miles of existing 69 kV line		
	between West Mount Vernon		
	and Mount Vernon stations.		
b3312	Replace the existing 138/69		
	kV transformer at West		
	Mount Vernon with a larger		
	90 MVA unit along with		
	existing 69 kV breaker 'C'		AEP (100%)
	Add 40 kA circuit breakers		
b3313	on the low and high side of		
03313	the East Lima 138/69 kV		
	transformer		AEP (100%)
	Install a new 138/69 kV 130		
b3314.1	MVA transformer and		
03314.1	associated protection at Elliot		
	station		AEP (100%)
	Perform work at Strouds Run		
	station to retire 138/69/13 kV		
b3314.2	33.6 MVA Transformer #1		
	and install a dedicated 138/13		
	KV distribution transformer		AEP (100%)
	Upgrade relaying on Mark		
	Center – South Hicksville 69		
b3315	kV line and replace Mark		
	Center cap bank with a 7.7		
	MVAR unit		AEP (100%)

#### **SCHEDULE 12 – APPENDIX A**

# (20) Virginia Electric and Power Company

Required 1	ransmission Ennancements Annual Re	evenue Requirement	Responsible Customer(s)
b1698.7	Replace Loudoun 230 kV breaker '203052' with 63 kA rating		Dominion (100%)
b1696.1	Replace the Idylwood 230 kV '25112' breaker with 50 kA breaker		Dominion (100%)
b1696.2	Replace the Idylwood 230 kV '209712' breaker with 50 kA breaker		Dominion (100%)
b1793.1	Remove the Carolina 22 SPS to include relay logic changes, minor control wiring, relay resets and SCADA programming upon completion of project		Dominion (100%)
b2281	Additional Temporary SPS at Bath County		Dominion (100%)
b2350	Reconductor 211 feet of 545.5 ACAR conductor on 59 Line Elmont - Greenwood DP 115 kV to achieve a summer emergency rating of 906 amps or greater		Dominion (100%)
b2358	Install a 230 kV 54 MVAR capacitor bank on the 2016 line at Harmony Village Substation		Dominion (100%)
b2359	Wreck and rebuild approximately 1.3 miles of existing 230 kV line between Cochran Mill - X4-039 Switching Station		Dominion (100%)
b2360	Build a new 39 mile 230 kV transmission line from Dooms - Lexington on existing right-of-way		Dominion (100%)
b2361	Construct 230 kV OH line along existing Line #2035 corridor, approx. 2.4 miles from Idylwood - Dulles Toll Road (DTR) and 2.1 miles on new right-of-way along DTR to new Scott's Run Substation		Dominion (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s)

Required i	ransmission emiancements. Annual R	evenue Requirement Responsible Customer(s)
b2368	Replace the Brambleton 230 kV breaker '209502' with 63 kA breaker	Dominion (100%)
b2369	Replace the Brambleton 230 kV breaker '213702' with 63 kA breaker	Dominion (100%)
b2370	Replace the Brambleton 230 kV breaker 'H302' with 63 kA breaker	Dominion (100%)
b2373	Build a 2nd Loudoun - Brambleton 500 kV line within the existing ROW. The Loudoun - Brambleton 230 kV line will be relocated as an underbuild on the new 500 kV line	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b2397	Replace the Beaumeade 230 kV breaker '2079T2116' with 63 kA	Dominion (100%)
b2398	Replace the Beaumeade 230 kV breaker '2079T2130' with 63 kA	Dominion (100%)
b2399	Replace the Beaumeade 230 kV breaker '208192' with 63 kA	Dominion (100%)
b2400	Replace the Beaumeade 230 kV breaker '209592' with 63 kA	Dominion (100%)
b2401	Replace the Beaumeade 230 kV breaker '211692' with 63 kA	Dominion (100%)
b2402	Replace the Beaumeade 230 kV breaker '227T2130' with 63 kA	Dominion (100%)
	· · · · · · · · · · · · · · · · · · ·	

The Annual Revenue Requirement for all Virginia Electric and Power Company projects in this Section 20 shall be as specified in Attachment 7 to Appendix A of Attachment H-16A and under the procedures detailed in Attachment H-16B.

<sup>\*</sup>Neptune Regional Transmission System, LLC

required i	ransmission Enhancements Ani	lual Revenue Requirement	Responsible Customer(s)
b2403	Replace the Beaumeade 230 kV breaker '274T2130' with 63 kA		Dominion (100%)
b2404	Replace the Beaumeade 230 kV breaker '227T2095' with 63 kA		Dominion (100%)
b2405	Replace the Pleasant view 230 kV breaker '203T274' with 63 kA		Dominion (100%)
b2443	Construct new underground 230 kV line from Glebe to Station C, rebuild Glebe Substation, construct 230 kV high side bus at Station C with option to install 800 MVA PAR		Dominion (97.11%) / ME (0.18%) / PEPCO (2.71%)
b2443.1	Replace the Idylwood 230 kV breaker '203512' with 50 kA		Dominion (100%)
b2443.2	Replace the Ox 230 kV breaker '206342' with 63 kA breaker		Dominion (100%)
b2443.3	Glebe – Station C PAR		DFAX Allocation: Dominion (22.57%) / PEPCO (77.43%)
b2443.6	Install a second 500/230 kV transformer at Possum Point substation and replace bus work and associated equipment as needed		Dominion (100%)
b2443.7	Replace 19 63 kA 230 kV breakers with 19 80 kA 230 kV breakers		Dominion (100%)
b2457	Replace 24 115 kV wood h-frames with 230 kV Dominion pole H-frame structures on the Clubhouse – Purdy 115 kV line		Dominion (100%)
b2458.1	Replace 12 wood H-frame structures with steel H- frame structures and install shunts on all conductor splices on Carolina – Woodland 115 kV		Dominion (100%)

Required I	Fransmission Enhancements Ann	nual Revenue Requirement	Responsible Customer(s)
	Upgrade all line switches and substation components at Carolina		
b2458.2	115 kV to meet or exceed new conductor rating of		7
	174 MVA		Dominion (100%)
b2458.3	Replace 14 wood H-frame structures on Carolina –		
02.00.0	Woodland 115 kV		Dominion (100%)
b2458.4	Replace 2.5 miles of static wire on Carolina –		
02.00.1	Woodland 115 kV		Dominion (100%)
	Replace 4.5 miles of conductor between		
	Carolina 115 kV and		
	Jackson DP 115 kV with		
b2458.5	min. 300 MVA summer		
02430.3	STE rating; Replace 8 wood H-frame structures		
	located between Carolina		
	and Jackson DP with steel		
	H-frames		Dominion (100%)
	Replace Hanover 230 kV		
b2460.1	substation line switches		Daminian (1009/)
	with 3000A switches Replace wave traps at		Dominion (100%)
	Four River 230 kV and		
b2460.2	Elmont 230 kV		
	substations with 3000A		
	wave traps		Dominion (100%)
	Wreck and rebuild existing Remington CT –		
b2461	Warrenton 230 kV		
02101	(approx. 12 miles) as a		
	double-circuit 230 kV line		Dominion (100%)
	Construct a new 230 kV		
	line approximately 6 miles from NOVEC's Wheeler		
b2461.1	Substation a new 230 kV		
	switching station in Vint		
	Hill area		Dominion (100%)
	Convert NOVEC's		
b2461.2	Gainesville – Wheeler line (approximately 6 miles) to		
	230 kV		Dominion (100%)
	Complete a Vint Hill –		
b2461.3	Wheeler – Loudoun 230		Daminia, (1000/)
	kV networked line		Dominion (100%)

required 1	Tansinission Emiancements Amiuai	Revenue Requirement	Responsible Customer(s)
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%)
		/ APS (5.64%) / ATSI (8.02%)	
		/ BGE (4.12%) / ComEd	
			(13.46%) / Dayton (2.12%) /
	Replace Midlothian 500 kV		DEOK (3.37%) / DL (1.76%) /
	breaker 563T576 and motor operated switches with 3		DPL (2.55%) / Dominion
104-4	breaker 500 kV ring bus.		(12.97%) / EKPC (1.81%) /
b2471	Terminate Lines # 563 Carson		JCPL (3.92%) / ME (1.95%) /
	– Midlothian, #576		NEPTUNE* (0.24%) / OVEC
	Midlothian –North Anna,		(0.07%) / PECO (5.39%) /
	Transformer #2 in new ring		PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			DFAX Allocation:
			Dominion (100%)
	Rebuild 115 kV Line #32		2 0111111011 (10070)
	from Halifax-South Boston (6		
	miles) for min. of 240 MVA		
b2504	and transfer Welco tap to Line		
	#32. Moving Welco to Line #32 requires disabling auto-		
	sectionalizing scheme		Dominion (100%)
	Install structures in river to		
	remove the 115 kV #65 line		
b2505	(Whitestone-Harmony Village		
	115 kV) from bridge and		Dominion (100%)
	improve reliability of the line Replace the Loudoun 500 kV		Dominion (10070)
b2542	'H2T502' breaker with a 50		
02012	kA breaker		Dominion (100%)
	Replace the Loudoun 500 kV		, , ,
b2543	'H2T584' breaker with a 50		D :: (1000/)
	kA breaker Reconductor wave trap at		Dominion (100%)
b2565	Carver Substation with a		
02303	2000A wave trap		Dominion (100%)
	Reconductor 1.14 miles of		( /
b2566	existing line between ACCA		
02300	and Hermitage and upgrade		Daminian (1000/)
	associated terminal equipment		Dominion (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required 1	ransmission enhancements Ani	iuai Kevenue Kequiremeni	Responsible Customer(s)
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%)
			/ APS (5.64%) / ATSI (8.02%)
			/ BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
			DEOK (3.37%) / DL (1.76%) /
			DPL (2.55%) / Dominion
			(12.97%) / EKPC (1.81%) /
b2582	Rebuild the Elmont –		JCPL (3.92%) / ME (1.95%) /
02362	Cunningham 500 kV line		NEPTUNE* (0.24%) / OVEC
			(0.07%) / PECO (5.39%) /
			PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			DFAX Allocation:
			BGE (6.10%) / Dominion
			( <del>84.49</del> <u>89.98</u> %) / PEPCO
	X		( <del>9.41</del> 10.02%)
	Install 500 kV breaker at Ox Substation to remove		
b2583	Ox Tx#1 from H1T561		
	breaker failure outage		Dominion (100%)
	Relocate the Bremo load		
	(transformer #5) to #2028		
b2584	(Bremo-Charlottesville 230 kV) line and		
02304	Cartersville distribution		
	station to #2027 (Bremo-		
	Midlothian 230 kV) line		Dominion (100%)
	Reconductor 7.63 miles of existing line between		
b2585	Cranes and Stafford,		
02303	upgrade associated line		
	switches at Stafford		PEPCO (100%)
	Wreck and rebuild the		
	Chesapeake – Deep Creek – Bowers Hill – Hodges		
1.0600	Ferry 115 kV line;		
b2620	minimum rating 239		
	MVA normal/emergency,		
	275 MVA load dump		Dominion (100%)
	rating		

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required T	ransmission Enhancements Annual Revenue Re	quirement Responsible Customer(s)
b2622	Rebuild Line #47 between Kings Dominion 115 kV and Fredericksburg 115 kV to current standards with summer emergency rating of 353 MVA at 115 kV	Dominion (100%)
b2623	Rebuild Line #4 between Bremo and Structure 8474 (4.5 miles) to current standards with a summer emergency rating of 261 MVA at 115 kV	Dominion (100%)
b2624	Rebuild 115 kV Lines #18 and #145 between Possum Point Generating Station and NOVEC's Smoketown DP (approx. 8.35 miles) to current 230 kV standards with a normal continuous summer rating of 524 MVA at 115 kV	Dominion (100%)
b2625	Rebuild 115 kV Line #48 between Thole Street and Structure 48/71 to current standard. The remaining line to Sewells Point is 2007 vintage. Rebuild 115 kV Line #107 line, Sewells Point to Oakwood, between structure 107/17 and 107/56 to current standard	Dominion (100%)
b2626	Rebuild 115 kV Line #34 between Skiffes Creek and Yorktown and the double circuit portion of 115 kV Line #61 to current standards with a summer emergency rating of 353 MVA at 115 kV	Dominion (100%)
b2627	Rebuild 115 kV Line #1 between Crewe 115 kV and Fort Pickett DP 115 kV (12.2 miles) to current standards with summer emergency rating of 261 MVA at 115 kV	Dominion (100%)

Required 1	ransmission Enhancements Annual Revenue Requirement	Responsible Customer(s)
	Rebuild 115 kV Line #82	
	Everetts – Voice of America	
b2628	(20.8 miles) to current	
02020	standards with a summer	
	emergency rating of 261	
	MVA at 115 kV	Dominion (100%)
	Rebuild the 115 kV Lines	
	#27 and #67 lines from	
	Greenwich 115 kV to Burton	
b2629	115 kV Structure 27/280 to	
	current standard with a	
	summer emergency rating of	
	262 MVA at 115 kV	Dominion (100%)
	Install circuit switchers on	, , ,
	Gravel Neck Power Station	
1.2620	GSU units #4 and #5. Install	
b2630	two 230 kV CCVT's on	
	Lines #2407 and #2408 for	
	loss of source sensing	Dominion (100%)
	Install three 230 kV bus	
	breakers and 230 kV, 100	
	MVAR Variable Shunt	
	Reactor at Dahlgren to	
b2636	provide line protection	
	during maintenance, remove	
	the operational hazard and	
	provide voltage reduction	
	during light load conditions	Dominion (100%)
	Rebuild Boydton Plank Rd –	
	Kerr Dam 115 kV Line #38	
1.0647	(8.3 miles) to current	
b2647	standards with summer	
	emergency rating of 353	
	MVA at 115 kV	Dominion (100%)
	Rebuild Carolina – Kerr	
	Dam 115 kV Line #90 (38.7	
b2648	miles) to current standards	
	with summer emergency	
	rating of 353 MVA 115 kV	Dominion (100%)
	Rebuild Clubhouse –	` /
	Carolina 115 kV Line #130	
1.2640	(17.8 miles) to current	
b2649	standards with summer	
	emergency rating of 353	
	MVA at 115 kV	Dominion (100%)

Required 1	ransmission emiancements. Annua	i Revenue Requirement	Responsible Customer(s)
	Rebuild of 1.7 mile tap to		
	Metcalf and Belfield DP		
	(MEC) due to poor		
	condition. The existing		
	summer rating of the tap is		
b2649.1	48 MVA and existing		
	conductor is 4/0 ACSR on		
	wood H-frames. The		
	proposed new rating is 176		
	MVA using 636 ACSR		
	conductor		Dominion (100%)
	Rebuild of 4.1 mile tap to		
	Brinks DP (MEC) due to		
	wood poles built in 1962.		
	The existing summer rating		
	of the tap is 48 MVA and		
b2649.2	existing conductor is 4/0		
	ACSR and 393.6 ACSR on		
	wood H-frames. The		
	proposed new rating is 176		
	MVA using 636 ACSR		
	conductor		Dominion (100%)
	Rebuild Twittys Creek –		`
	Pamplin 115 kV Line #154		
1.0650	(17.8 miles) to current		
b2650	standards with summer		
	emergency rating of 353		
	MVA at 115 kV		Dominion (100%)

Required Ir	ansmission Enhancements Annua	I Revenue Requirement	Responsible Customer(s)
b2651	Rebuild Buggs Island – Plywood 115 kV Line #127 (25.8 miles) to current standards with summer emergency rating of 353 MVA at 115 kV. The line should be rebuilt for 230 kV and operated at 115 kV		Dominion (100%)
b2652	Rebuild Greatbridge – Hickory 115 kV Line #16 and Greatbridge – Chesapeake E.C. to current standard with summer emergency rating of 353 MVA at 115 kV		Dominion (100%)
b2653.1	Build 20 mile 115 kV line from Pantego to Trowbridge with summer emergency rating of 353 MVA		Dominion (100%)
b2653.2	Install 115 kV four-breaker ring bus at Pantego		Dominion (100%)
b2653.3	Install 115 kV breaker at Trowbridge		Dominion (100%)
b2654.1	Build 15 mile 115 kV line from Scotland Neck to S Justice Branch with summer emergency rating of 353 MVA. New line will be routed to allow HEMC to convert Dawson's Crossroads RP from 34.5 kV to 115 kV		Dominion (100%)
b2654.2	Install 115 kV three-breaker ring bus at S Justice Branch		Dominion (100%)
b2654.3	Install 115 kV breaker at Scotland Neck		Dominion (100%)
b2654.3	Install a 2nd 224 MVA 230/115 kV transformer at Hathaway		Dominion (100%)

Required 1r	ansmission Enhancements Annual	Revenue Requirement	Responsible Customer(s)
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%)
			/ APS (5.64%) / ATSI (8.02%)
			/ BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
			DEOK (3.37%) / DL (1.76%) /
			DPL (2.55%) / Dominion
			(12.97%) / EKPC (1.81%) /
b2665	Rebuild the Cunningham – Dooms 500 kV line		JCPL (3.92%) / ME (1.95%) /
	Dooms 300 k v line		NEPTUNE* (0.24%) / OVEC
			(0.07%) / PECO (5.39%) /
			PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			DFAX Allocation:
			Dominion (72.18%) / PEPCO
			(27.82%)
b2686	Pratts Area Improvement		Dominion (100%)
	Build a 230 kV line from		Dominion (10070)
1.0000.1	Remington Substation to		
b2686.1	Gordonsville Substation		
	utilizing existing ROW Install a 3rd 230/115 kV		Dominion (100%)
b2686.2	Install a 3rd 230/115 kV transformer at Gordonsville		
02080.2	Substation		Dominion (100%)
	Upgrade Line 2088		Dominion (10070)
b2686.3	between Gordonsville		
02080.3	Substation and Louisa CT		D :: (1000()
	Station CT		Dominion (100%)
	Replace the Remington CT 230 kV breaker		
b2686.4	"2114T2155" with a 63 kA		
	breaker		Dominion (100%)
	Upgrading sections of the		
b2686.11	Gordonsville – Somerset		Danisian (1000/)
	115 kV circuit Upgrading sections of the		Dominion (100%)
b2686.12	Somerset – Doubleday 115		
02000.12	kV circuit		Dominion (100%)
	Upgrading sections of the		( )
b2686.13	Orange – Somerset 115 kV		<b>D</b>
	circuit		Dominion (100%)
1,2696 14	Upgrading sections of the Mitchell – Mt. Run 115 kV		
b2686.14	circuit - Mt. Run 113 KV		Dominion (100%)
	Circuit		Dominion (10070)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required 11	ansimission Emiancements	Allitual Revenue Requires	ment Responsible Customer(s)
b2717.1	De-energize Davis – Rosslyn #179 and #180 69 kV lines		Dominion (100%)
b2717.2	Remove splicing and stop joints in manholes		Dominion (100%)
b2717.3	Evacuate and dispose of insulating fluid from various reservoirs and cables		Dominion (100%)
b2717.4	Remove all cable along the approx. 2.5 mile route, swab and cap-off conduits for future use, leave existing communication fiber in place		Dominion (100%)
b2719.1	Expand Perth substation and add a 115 kV four breaker ring		Dominion (100%)
b2719.2	Extend the Hickory Grove DP tap 0.28 miles to Perth and terminate it at Perth		Dominion (100%)
b2719.3	Split Line #31 at Perth and terminate it into the new ring bus with 2 breakers separating each of the line terminals to prevent a breaker failure from taking out both 115 kV lines		Dominion (100%)
b2720	Replace the Loudoun 500 kV 'H1T569' breakers with 50 kA breaker		Dominion (100%)
b2729	Optimal Capacitors Configuration: New 175 MVAR capacitor at Brambleton, new 175 MVAR capacitor at Ashburn, new 300 MVAR capacitor at Shelhorm, new 150 MVAR capacitor at Liberty		AEC (1.96%) / BGE (14.37%) / Dominion (35.11%) / DPL (3.76%) / ECP** (0.29%) / HTP*** (0.34%) / JCPL (3.31%) / ME (2.51%) / NEPTUNE* (0.63%) / PECO (6.26%) / PEPCO (20.23%) / PPL (3.94%) / PSEG (7.29%)

<sup>\*</sup> Neptune Regional Transmission System, LLC
\*\* East Coast Power, L.L.C.

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

Kequiled 11	ansmission Emancements. Annual Revenue Requireme	1
		<b>Load-Ratio Share Allocation:</b>
		AEC (1.67%) / AEP (13.94%)
		/ APS (5.64%) / ATSI (8.02%)
		/ BGE (4.12%) / ComEd
		(13.46%) / Dayton (2.12%) /
		DEOK (3.37%) / DL (1.76%) /
		DPL (2.55%) / Dominion
	D 1 114 C D	(12.97%) / EKPC (1.81%) /
b2744	Rebuild the Carson – Rogers Rd 500 kV circuit	JCPL (3.92%) / ME (1.95%) /
	Rd 500 k v chedit	NEPTUNE* (0.24%) / OVEC
		(0.07%) / PECO (5.39%) /
		PENELEC (1.84%) / PEPCO
		(3.71%) / PPL (4.78%) / PSEG
		(6.40%) / RE (0.27%)
		DFAX Allocation:
		Dominion (94.47%) / EKPC
		(0.22%) / PEPCO (5.31%)
	Rebuild 21.32 miles of	
b2745	existing line between Chesterfield – Lakeside	
	230 kV	Dominion (100%)
	Rebuild Line #137 Ridge Rd	
b2746.1	– Kerr Dam 115 kV, 8.0	
02710.1	miles, for 346 MVA summer	Dominion (100%)
	emergency rating Rebuild Line #1009 Ridge Rd	Dominion (10076)
1.0746.0	- Chase City 115 kV, 9.5	
b2746.2	miles, for 346 MVA summer	
	emergency rating	Dominion (100%)
	Install a second 4.8 MVAR	
b2746.3	capacitor bank on the 13.8 kV bus of each transformer at	
	Ridge Rd	Dominion (100%)
	Install a Motor Operated	, , ,
1 25 45	Switch and SCADA control	
b2747	between Dominion's Gordonsville 115 kV bus and	
	FirstEnergy's 115 kV line	Dominion (100%)
L	I mountagy of the R v mile	D 0111111011 (10070)

<sup>\*</sup>Neptune Regional Transmission System, LLC

required 110	ansmission Emiancements Amida r	cevenue requirement	Responsible Customer(s)
b2757	Install a +/-125 MVAr Statcom at Colington 230 kV		Dominion (100%)
b2758	Rebuild Line #549 Dooms – Valley 500 kV		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)
			DFAX Allocation: Dominion (100%)  Load-Ratio Share Allocation:
b2759	Rebuild Line #550 Mt. Storm – Valley 500 kV		AEC (1.67%) / AEP (13.94%)  / APS (5.64%) / ATSI (8.02%)  / BGE (4.12%) / ComEd  (13.46%) / Dayton (2.12%) /  DEOK (3.37%) / DL (1.76%) /  DPL (2.55%) / Dominion  (12.97%) / EKPC (1.81%) /  JCPL (3.92%) / ME (1.95%) /  NEPTUNE* (0.24%) / OVEC  (0.07%) / PECO (5.39%) /  PENELEC (1.84%) / PEPCO  (3.71%) / PPL (4.78%) / PSEG  (6.40%) / RE (0.27%)  DFAX Allocation:  APS (87.50%) / ATSI (0.37%)  / DL (0.19%) / Dominion  (1.04%) / EKPC (10.90%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Tr	ansmission Enhancements Annual R	Revenue Requirement	Responsible Customer(s)
b2800	The 7 mile section from Dozier to Thompsons Corner of line #120 will be rebuilt to current standards using 768.2 ACSS conductor with a summer emergency rating of 346 MVA at 115 kV. Line is proposed to be rebuilt on single circuit steel monopole structure Lines #76 and #79 will be	Revenue Requirement	Dominion (100%)
b2801	rebuilt to current standard using 768.2 ACSS conductor with a summer emergency rating of 346 MVA at 115 kV. Proposed structure for rebuild is double circuit steel monopole structure		Dominion (100%)
b2802	Rebuild Line #171 from Chase City – Boydton Plank Road tap by removing end- of-life facilities and installing 9.4 miles of new conductor. The conductor used will be at current standards with a summer emergency rating of 393 MVA at 115 kV		Dominion (100%)
b2815	Build a new Pinewood 115 kV switching station at the tap serving North Doswell DP with a 115 kV four breaker ring bus		Dominion (100%)
b2842	Update the nameplate for Mount Storm 500 kV "57272" to be 50 kA breaker		Dominion (100%)
b2843	Replace the Mount Storm 500 kV "G2TY" with 50 kA breaker		Dominion (100%)
b2844	Replace the Mount Storm 500 kV "G2TZ" with 50 kA breaker		Dominion (100%)

Required In	ansmission Enhancements Annual Revenue Re	equirement Responsible Customer(s)
b2845	Update the nameplate for Mount Storm 500 kV	
02015	"G3TSX1" to be 50 kA breaker	Dominion (100%)
b2846	Update the nameplate for Mount Storm 500 kV "SX172" to be 50 kA breaker	Dominion (100%)
b2847	Update the nameplate for Mount Storm 500 kV "Y72" to be 50 kA breaker	Dominion (100%)
b2848	Replace the Mount Storm 500 kV "Z72" with 50 kA breaker	Dominion (100%)
b2871	Rebuild 230 kV line #247 from Swamp to Suffolk (31 miles) to current standards with a summer emergency rating of 1047 MVA at 230 kV	Dominion (100%)
b2876	Rebuild line #101 from Mackeys – Creswell 115 kV, 14 miles, with double circuit structures. Install one circuit with provisions for a second circuit. The conductor used will be at current standards with a summer emergency rating of 262 MVA at 115 kV	Dominion (100%)
b2877	Rebuild line #112 from Fudge Hollow – Lowmoor 138 kV (5.16 miles) to current standards with a summer emergency rating of 314 MVA at 138 kV	Dominion (100%)
b2899	Rebuild 230 kV line #231 to current standard with a summer emergency rating of 1046 MVA. Proposed conductor is 2-636 ACSR	Dominion (100%)
b2900	Build a new 230/115 kV switching station connecting to 230 kV network line #2014 (Earleys – Everetts). Provide a 115 kV source from the new station to serve Windsor DP	Dominion (100%)

required 11	ansimission Emianecinents Amidai i	evenue requirement	responsible cusionici(s)
b2922	Rebuild 8 of 11 miles of 230 kV lines #211 and #228 to current standard with a summer emergency rating of 1046 MVA for rebuilt section. Proposed conductor is 2-636 ACSR		Dominion (100%)
b2928	Rebuild four structures of 500 kV line #567 from Chickahominy to Surry using galvanized steel and replace the river crossing conductor with 3-1534 ACSR. This will increase the line #567 line rating from 1954 MVA to 2600 MVA		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%)
			DFAX Allocation: Dominion (100%)
b2929	Rebuild 230 kV line #2144 from Winfall to Swamp (4.3 miles) to current standards with a standard conductor (bundled 636 ACSR) having a summer emergency rating of 1047 MVA at 230 kV		Dominion (100%)
b2960	Replace fixed series capacitors on 500 kV Line #547 at Lexington and on 500 kV Line #548 at Valley		See sub-IDs for cost allocations

<sup>\*</sup>Neptune Regional Transmission System, LLC

		1	Land Datie Chara Allegations
			<b>Load-Ratio Share Allocation:</b>
			AEC (1.67%) / AEP (13.94%)
			/ APS (5.64%) / ATSI (8.02%)
			/ BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
			DEOK (3.37%) / DL (1.76%) /
			DPL (2.55%) / Dominion
	D 1 C 1		(12.97%) / EKPC (1.81%) /
1-2060 1	Replace fixed series capacitors on 500 kV Line		JCPL (3.92%) / ME (1.95%) /
b2960.1	#547 at Lexington		NEPTUNE* (0.24%) / OVEC
	#347 at Leanigton		(0.07%) / PECO (5.39%) /
			PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			(12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: DEOK (1.39%) / Dominion
			DEOK (1.39%) / Dominion
			(21.26%) / EKPC (0.82%) /
			PEPCO (76.53%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required 113	ansmission Enhancements Annual R	evenue Requirement	Responsible Customer(s)
			<b>Load-Ratio Share Allocation:</b>
			AEC (1.67%) / AEP (13.94%)
			/ APS (5.64%) / ATSI (8.02%)
			/ BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
			DEOK (3.37%) / DL (1.76%) /
			DPL (2.55%) / Dominion
			(12.97%) / EKPC (1.81%) /
1,2060.2	Replace fixed series capacitors on 500 kV Line		JCPL (3.92%) / ME (1.95%) /
b2960.2	#548 at Valley		NEPTUNE* (0.24%) / OVEC
	11340 at variey		(0.07%) / PECO (5.39%) /
			PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			DFAX Allocation:
			DEOK (20.11%) / Dominion
		(67.22%) / EKPC (9.17%) /	
			PEPCO (3.50%)
	Rebuild approximately 3		
b2961	miles of Line #205 & Line #2003 from Chesterfield to		
	Locks & Poe respectively		Dominion (100%)
	Split Line #227 (Brambleton		2 eminion (10070)
b2962	Beaumeade 230 kV) and		
02902	terminate into existing		T (1000()
	Belmont substation		Dominion (100%)
b2962.1	Replace the Beaumeade 230 kV breaker "274T2081" with		
02902.1	63 kA breaker		Dominion (100%)
	Replace the NIVO 230 kV		( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (
b2962.2	breaker "2116T2130" with 63		D :: (1000()
	kA breaker		Dominion (100%)
	Reconductor the Woodbridge to Occoquan 230 kV line		
	segment of Line #2001 with		
b2963	1047 MVA conductor and		
	replace line terminal		
	equipment at Possum Point,		D (1000()
<b>431</b> / <b>F</b>	Woodbridge, and Occoquan		Dominion (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

required 1	ansimission Emiancements Amitu	ii revenue requirement	Responsible Cusiomer(s)
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
	Install 2-125 MVAR		DEOK (3.37%) / DL (1.76%) /
	STATCOMs at Rawlings		DPL (2.55%) / Dominion
b2978	and 1-125 MVAR		(12.97%) / EKPC (1.81%) /
02978	STATCOM at Clover 500		JCPL (3.92%) / ME (1.95%) /
	kV substations		NEPTUNE* (0.24%) / OVEC
	k v substations		(0.07%) / PECO (5.39%) /
			PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			DFAX Allocation:
			Dominion (100%)
	Rebuild 115 kV Line #43		
	between Staunton and		
b2980	Harrisonburg (22.8 miles)		
62980	to current standards with a		
	summer emergency rating		
	of 261 MVA at 115 kV		Dominion (100%)
	Rebuild 115 kV Line #29		
	segment between		
	Fredericksburg and Aquia		
	Harbor to current 230 kV		
	standards (operating at 115		
b2981	kV) utilizing steel H-frame		
	structures with 2-636		
	ACSR to provide a normal		
	continuous summer rating		
	of 524 MVA at 115 kV		
	(1047 MVA at 230 kV)		Dominion (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Ir	ansmission Enhancements Annual I	Revenue Requirement	Responsible Customer(s)
	Install a second 230/115 kV		
	Transformer (224 MVA)		
	approximately 1 mile north of		
	Bremo and tie 230 kV Line		
	#2028 (Bremo –		
	Charlottesville) and 115 kV		
	Line #91 (Bremo -		
	Sherwood) together. A three		
b2989	breaker 230 kV ring bus will		
02989	split Line #2028 into two		
	lines and Line #91 will also		
	be split into two lines with a		
	new three breaker 115 kV		
	ring bus. Install a temporary		
	230/115 kV transformer at		
	Bremo substation for the		
	interim until the new		
	substation is complete		Dominion (100%)
	Chesterfield to Basin 230 kV		
	line – Replace 0.14 miles of		
b2990	1109 ACAR with a conductor		
02770	which will increase the line		
	rating to approximately 706		D :: (1000/)
	MVÅ		Dominion (100%)
b2991	Chaparral to Locks 230 kV		
02991	line – Replace breaker lead		Dominion (100%)
	Acquire land and build a new		2 (10070)
	switching station (Skippers)		
1.200.4	at the tap serving Brink DP		
b2994	with a 115 kV four breaker		
	ring to split Line #130 and		
	terminate the end points		Dominion (100%)
	Rebuild Line #49 between		` ′
	New Road and Middleburg		
	substations with single circuit		
b3018	steel structures to current 115		
	kV standards with a		
	minimum summer emergency		<b>-</b>
	rating of 261 MVA		Dominion (100%)

Required 11	ansinission Emiancements Amuan	Acvenue Requirement	Responsible Cusionier(s)
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%)
			/ APS (5.64%) / ATSI (8.02%)
			/ BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
			DEOK (3.37%) / DL (1.76%) /
			DPL (2.55%) / Dominion
	Rebuild 500 kV Line #552		(12.97%) / EKPC (1.81%) /
b3019	Bristers to Chancellor – 21.6		JCPL (3.92%) / ME (1.95%) /
	miles long		NEPTUNE* (0.24%) / OVEC
			(0.07%) / PECO (5.39%) /
			PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			DFAX Allocation:
			Dominion (93.48%) / PEPCO
			(6.52%)
	Update the nameplate for		
b3019.1	Morrisville 500 kV breaker		Danisias (1000/)
	"H1T594" to be 50 kA		Dominion (100%)
1,2010.2	Update the nameplate for		
03019.2			Dominion (100%)
b3019.2	Morrisville 500 kV breaker "H1T545" to be 50 kA		Dominion (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

required 11	ansmission Ennancements Annual F	Cevenue Requirement	Responsible Customer(s)
			<b>Load-Ratio Share Allocation:</b>
			AEC (1.67%) / AEP (13.94%)
			/ APS (5.64%) / ATSI (8.02%)
			/ BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
			DEOK (3.37%) / DL (1.76%) /
			DPL (2.55%) / Dominion
			(12.97%) / EKPC (1.81%) /
	Rebuild 500 kV Line #574		JCPL (3.92%) / ME (1.95%) /
b3020	Ladysmith to Elmont – 26.2		NEPTUNE* (0.24%) / OVEC
	miles long		(0.07%) / PECO (5.39%) /
			PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			DFAX Allocation:
			APS (16.36%) / DEOK
		(0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) <b>DFAX Allocation:</b> APS (16.36%) / DEOK (11.61%) / Dominion (51.27%)	
			/ EKPC (5.30%) / PEPCO
			(15.46%)
			<b>Load-Ratio Share Allocation:</b>
		AEC (1.67%) / AEP (13.94%)	AEC (1.67%) / AEP (13.94%)
			· · · · · · · · · · · · · · · · · · ·
			DEOK (3.37%) / DL (1.76%) /
			DPL (2.55%) / Dominion
	Rebuild 500 kV Line #581		(12.97%) / EKPC (1.81%) /
b3021	Ladysmith to Chancellor –		JCPL (3.92%) / ME (1.95%) /
	15.2 miles long		NEPTUNE* (0.24%) / OVEC
			(0.07%) / PECO (5.39%) /
			PENELÉC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			DFAX Allocation:
	Reconductor Line #274		Dominion (100%)
	(Pleasant View – Ashburn –		
1,2026	Beaumeade 230 kV) with a		
b3026	minimum rating of 1200		
	MVA. Also upgrade terminal		Danisia (1000/)
	equipment		Dominion (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required 11	ansmission Ennancements Annual Revenue Requirement	Responsible Customer(s)
b3027.1	Add a 2nd 500/230 kV 840 MVA transformer at Dominion's Ladysmith	
	substation	Dominion (100%)
b3027.2	Reconductor 230 kV Line #2089 between Ladysmith and Ladysmith CT substations to increase the line rating from 1047 MVA to 1225 MVA	Dominion (100%)
b3027.3	Replace the Ladysmith 500 kV breaker "H1T581" with 50 kA breaker	Dominion (100%)
b3027.4	Update the nameplate for Ladysmith 500 kV breaker "H1T575" to be 50 kA breaker	Dominion (100%)
b3027.5	Update the nameplate for Ladysmith 500 kV breaker "568T574" (will be renumbered as "H2T568") to be 50 kA breaker	Dominion (100%)
b3055	Install spare 230/69 kV transformer at Davis substation	Dominion (100%)
b3056	Partial rebuild 230 kV Line #2113 Waller to Lightfoot	Dominion (100%)
b3057	Rebuild 230 kV Lines #2154 and #19 Waller to Skiffes Creek	Dominion (100%)
b3058	Partial rebuild of 230 kV Lines #265, #200 and #2051	Dominion (100%)
b3059	Rebuild 230 kV Line #2173 Loudoun to Elklick	Dominion (100%)

Required IT	ansmission Enhancements Annual R	Revenue Requirement	Responsible Customer(s)
	Rebuild 4.6 mile Elklick – Bull Run 230 kV Line #295		
b3060	and the portion (3.85 miles)		
03000	of the Clifton – Walney 230		
	kV Line #265 which shares structures with Line #295		Dominion (100%)
	Rebuild 4.75 mile section of		Dominion (10076)
	Line #26 between Lexington		
b3088	and Rockbridge with a		
	minimum summer emergency		
	rating of 261 MVA		Dominion (100%)
	Rebuild 230 kV Line #224		
	between Lanexa and		
	Northern Neck utilizing		
	double circuit structures to current 230 kV standards.		
b3089	Only one circuit is to be		
	installed on the structures		
	with this project with a		
	minimum summer emergency		
	rating of 1047 MVA		Dominion (100%)
	Convert the overhead portion		
	(approx. 1500 feet) of 230 kV		
b3090	Lines #248 & #2023 to		
	underground and convert		
	Glebe substation to gas insulated substation		Dominion (100%)
	Rebuild 230 kV line No.2063		Deliminon (10070)
	(Clifton – Ox) and part of 230		
	kV line No.2164 (Clifton –		
	Keene Mill) with double		
b3096	circuit steel structures using		
03070	double circuit conductor at		
	current 230 kV northern		
	Virginia standards with a minimum rating of 1200		
	MVA		Dominion (100%)
	Rebuild 4 miles of 115 kV		Deliminon (10070)
	Line #86 between		
b3097	Chesterfield and Centralia to		
03097	current standards with a		
	minimum summer emergency		D :: (1000/)
	rating of 393 MVA		Dominion (100%)
	Rebuild 9.8 miles of 115 kV Line #141 between Balcony		
	Falls and Skimmer and 3.8		
	miles of 115 kV Line #28		
b3098	between Balcony Falls and		
	Cushaw to current standards		
	with a minimum rating of 261		
	MVA		Dominion (100%)

Required Tr	ansmission Enhancements Annual Reve	enue Requirement Responsible Customer(s)
1 2000 1	Rebuild Balcony Falls 115 kV	
b3098.1	substation	Dominion (100%)
b3110.1	Rebuild Line #2008 between Loudoun to Dulles Junction using single circuit conductor at current 230 kV northern Virginia standards with minimum summer ratings of 1200 MVA. Cut and loop Line #265 (Clifton – Sully) into Bull Run substation. Add three (3)	
	230 kV breakers at Bull Run to accommodate the new line and upgrade the substation	Dominion (100%)
b3110.2	Replace the Bull Run 230 kV breakers "200T244" and "200T295" with 50 kA	Dominion (100%)
	breakers	Dominion (100%)
b3110.3	Replace the Clifton 230 kV breakers "201182" and "XT2011" with 63 kA breakers	Dominion (100%)
b3113	Rebuild approximately 1 mile of 115 kV Lines #72 and #53 to current standards with a minimum summer emergency rating of 393 MVA. The resulting summer emergency rating of Line #72 segment from Brown Boveri to Bellwood is 180 MVA. There is no change to Line #53 ratings	Dominion (100%)
b3114	Rebuild the 18.6 mile section of 115 kV Line #81 which includes 1.7 miles of double circuit Line #81 and 230 kV Line #2056. This segment of Line #81 will be rebuilt to current standards with a minimum rating of 261 MVA. Line #2056 rating will not change	Dominion (100%)
b3121	Rebuild Clubhouse – Lakeview 230 kV Line #254 with single-circuit wood pole equivalent structures at the current 230 kV standard with a minimum rating of 1047 MVA	Dominion (100%)

Required Tr	ansmission Enhancements Annual F	Revenue Requirement	Responsible Customer(s)
b3122	Rebuild Hathaway – Rocky Mount (Duke Energy Progress) 230 kV Line #2181 and Line #2058 with double circuit steel structures using double circuit conductor at current 230 kV standards with a minimum rating of 1047 MVA		Dominion (100%)
b3161.1	Split Chesterfield-Plaza 115 kV Line No. 72 by rebuilding the Brown Boveri tap line as double circuit loop in-and-out of the Brown Boveri Breaker station		Dominion (100%)
b3161.2	Install a 115 kV breaker at the Brown Boveri Breaker station. Site expansion is required to accommodate the new layout		Dominion (100%)
b3162	Acquire land and build a new 230 kV switching station (Stevensburg) with a 224 MVA, 230/115 kV transformer. Gordonsville-Remington 230 kV Line No. 2199 will be cut and connected to the new station. Remington-Mt. Run 115 kV Line No.70 and Mt. Run-Oak Green 115 kV Line No. 2 will also be cut and connected to the new station		Dominion (100%)
b3211	Rebuild the 1.3 mile section of 500 kV Line No. 569 (Loudoun – Morrisville) with single-circuit 500 kV structures at the current 500 kV standard. This will increase the rating of the line to 3424 MVA		Dominion (100%)
b3213	Install 2nd Chickahominy 500/230 kV transformer		Dominion (100%)
b3213.1	Replace the eight (8) Chickahominy 230 kV breakers with 63 kA breakers: "SC122", "205022", "209122", 210222-2", "28722", "H222", "21922" and "287T2129"		Dominion (100%)

Required Ira	ansmission Ennancements Annual I	Revenue Requirement	Responsible Customer(s)
b3223.1	Install a second 230 kV circuit with a minimum summer emergency rating of 1047 MVA between Lanexa and Northern Next substations. The second circuit will utilize the vacant arms on the double-circuit structures that are being installed on Line #224 (Lanexa – Northern Next) as part of the End-of-Life rebuild project (b3089)		Dominion (100%)
b3223.2	Expand the Northern Neck terminal from a 230 kV, 4- breaker ring bus to a 6- breaker ring bus		Dominion (100%)
b3223.3	Expand the Lanexa terminal from a 6-breaker ring bus to a breaker-and-a-half arrangement		Dominion (100%)
b3246.1	Convert 115 kV Line #172 Liberty – Lomar and 115 kV Line #197 Cannon Branch – Lomar to 230 kV to provide a new 230 kV source between Cannon Branch and Liberty. The majority of 115 kV Line #172 Liberty – Lomar and Line #197 Cannon Branch – Lomar is adequate for 230 kV operation. Rebuild 0.36 mile segment between the Lomar and Cannon Branch junction. Lines will have a summer rating of 1047MVA/1047MVA (SN/SE)		Dominion (100%)
	Perform substation work for		
b3246.2	the 115 kV to 230 kV line conversion at Liberty, Wellington, Godwin, Pioneer, Sandlot and Cannon Branch		Dominion (100%)

Required 11	ansmission Enhancements Annual I	Xevenue Requirement	Responsible Customer(s)
b3246.3	Extend 230 kV Line #2011 Cannon Branch – Clifton to Winters Branch by removing the existing Line #2011 termination at Cannon Branch and extending the line to Brickyard creating 230 kV Line #2011 Brickyard - Clifton. Extend a new 230 kV line between Brickyard and Winters Branch with a summer rating of 1572MVA/1572MVA (SN/SE)		Dominion (100%)
b3246.4	Perform substation work at Cannon Branch, Brickyard and Winters Branch for the 230 kV Line #2011 Cannon Branch – Clifton extension		Dominion (100%)
b3246.5	Replace the Gainesville 230 kV 40 kA breaker "216192" with a 50 kA breaker		Dominion (100%)
b3247	Replace 13 towers with galvanized steel towers on Doubs – Goose Creek 500 kV. Reconductor 3 mile section with three (3) 1351.5 ACSR 45/7. Upgrade line terminal equipment at Goose Creek substation to support the 500 kV line rebuild		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)
			<b>DFAX Allocation:</b> Dominion (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required 11	ansinission chilancements. Annual f	Revenue Requirement	Responsible Customer(s)
b3262	Install a second 115 kV 33.67 MVAR cap bank at Harrisonburg substation		
	along with a 115 kV breaker		Dominion (100%)
b3263	Cut existing 115 kV Line #5 between Bremo and Cunningham substations and loop in and out of Fork Union substation		Dominion (100%)
b3264	Install 40 kA breaker at Stuarts Draft 115 kV station and sectionalize the Doom to Dupont-Waynesboro 115 kV Line #117 into two 115 kV lines		Dominion (100%)
b3268	Build a switching station at the junction of 115 kV line #39 and 115 kV line #91 with a 115 kV capacitor bank. The switching station will be built with 230 kV structures but will operate at 115 kV		Dominion (100%)
b3300	Reconductor 230 kV Line #2172 from Brambleton to Evergreen Mills along with upgrading the line leads at Brambleton to achieve a summer emergency rating of 1574 MVA		Dominion (100%)

Required Transmission Enhancements Annual Revenue Requirement			Responsible Customer(s)
b3301	Reconductor 230 kV Line #2210 from Brambleton to Evergreen Mills along with upgrading the line leads at Brambleton to achieve a summer emergency rating of 1574 MVA		Dominion (100%)
b3302	Reconductor 230 kV Line #2213 from Cabin Run to Yardley Ridge along with upgrading the line leads at Yardley to achieve a summer emergency rating of 1574 MVA		Dominion (100%)
b3303.1	Extend a new single circuit 230 kV Line #9250 from Farmwell substation to Nimbus substation		Dominion (100%)
b3303.2	Remove Beaumeade 230 kV Line #2152 line switch		Dominion (100%)
b3304	Midlothian area improvements for 300 MW load drop relief		Dominion (100%)
b3304.1	Cut 230 kV Line #2066 at Trabue junction		Dominion (100%)
b3304.2	Reconductor idle 230 kV Line #242 (radial from Midlothian to Trabue junction) to allow a minimum summer rating of 1047 MVA and connect to the section of 230 kV Line #2066 between Trabue junction and Winterpock, re-number 230 kV Line #242 structures to Line #2066		Dominion (100%)
b3304.3	Use the section of idle 115 kV Line #153, between Midlothian and Trabue junction to connect to the section of (former) 230 kV Line #2066 between Trabue junction and Trabue to create new Midlothian – Trabue lines with new line numbers #2218 and #2219		Dominion (100%)
b3304.4	Create new line terminations at Midlothian for the new Midlothian – Trabue 230 kV lines		Dominion (100%)

## **Attachment B**

Schedule 12 – Appendices of the PJM Open Access Transmission Tariff

(Clean Format)

#### **SCHEDULE 12 – APPENDIX**

## (5) Mid-Atlantic Interstate Transmission, LLC for the Metropolitan Edison Company Zone

Troquirea	Transmission Emianeements 1	minual ite venue itequiren	nent Responsible Customer(s)
b0215	Install 230 kV series reactor and 2- 100 MVAR PLC switched capacitors at Hunterstown		AEC (6.71%) / APS (3.97%) / DPL (9.10%) / JCPL (16.85%) / ME (10.53%) / NEPTUNE* (1.69%) / PECO (19.00%) / PPL (7.55%) / PSEG (22.67%) / RE (0.34%) / UGI (0.95%) / ECP** (0.64%)
b0404.1	Replace South Reading 230 kV breaker 107252		ME (100%)
b0404.2	Replace South Reading 230 kV breaker 100652		ME (100%)
b0575.1	Rebuild Hunterstown – Texas Eastern Tap 115 kV		ME (100%)
b0575.2	Rebuild Texas Eastern Tap  – Gardners 115 kV and associated upgrades at Gardners including disconnect switches		ME (100%)
b0650	Reconductor Jackson – JE Baker – Taxville 115 kV line		ME (100%)
b0652	Install bus tie circuit breaker on Yorkana 115 kV bus and expand the Yorkana 230 kV ring bus by one breaker so that the Yorkana 230/115 kV banks 1, 3, and 4 cannot be lost for either B-14 breaker fault or a 230 kV line or bank fault with a stuck breaker		ME (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

# (5) Mid-Atlantic Interstate Transmission, LLC for the Metropolitan Edison Company Zone

Required	Transmission Enhancements	Annual Revenue Requirem	ent Responsible Customer(s)
	Construct a 230 kV		
	Bernville station by		
	tapping the North Temple –		
b0653	North Lebanon 230 kV		
	line. Install a 230/69 kV		
	transformer at existing		
	Bernville 69 kV station		ME (100%)
	Replace Portland 115 kV		,
b1000	breaker '95312'		
	breaker 93312		ME (100%)
1.1001	Replace Portland 115 kV		
b1001	breaker '92712'		NE (1000/)
		-	ME (100%)
b1002	Replace Hunterstown 115		NE (1000/)
	kV breaker '96392'	-	ME (100%)
b1003	Replace Hunterstown 115		NET (1000/)
	kV breaker '96292'		ME (100%)
b1004	Replace Hunterstown 115		N. 577 (4.0.00 ()
	kV breaker '99192'		ME (100%)
	Replace existing Yorkana		
	230/115 kV transformer		
b1061	banks 1 and 4 with a		
	single, larger transformer		
	similar to transformer bank		(1000)
	#3		ME (100%)
b1061.1	Replace the Yorkana 115		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	kV breaker '97282'		ME (100%)
b1061.2	Replace the Yorkana 115		
01001.2	kV breaker 'B282'		ME (100%)
	Replace the limiting bus		
	conductor and wave trap at		
b1302	the Jackson 115 kV		
	terminal of the Jackson –		
	JE Baker Tap 115 kV line		ME (100%)
	Reconductor the		
h1265	Middletown – Collins 115		
b1365	kV (975) line 0.32 miles of		
	336 ACSR		ME (100%)

#### (5) Mid-Atlantic Interstate Transmission, LLC for the Metropolitan Edison Company Zone

Required	Transmission Emiancements	Annual Revenue Requirem	ient Responsible Customer(s)
	Reconductor the Collins –		
b1366	Cly – Newberry 115 kV		
01000	(975) line 5 miles with 795		
	ACSR		ME (100%)
	Reconductor 2.4 miles of		
	existing 556 and 795		
b1727	ACSR from Harley		
01/2/	Davidson to Pleasureville		
	115 kV with 795 ACSS to		
	raise the ratings		ME (100%)
			<b>Load-Ratio Share</b>
			Allocation:
			AEC (1.67%) / AEP (13.94%)
			/ APS (5.64%) / ATSI
			(8.02%) / BGE (4.12%) /
			ComEd (13.46%) / Dayton
			(2.12%) / DEOK (3.37%) /
			DL (1.76%) / DPL (2.55%) /
	Install a 500 MVAR SVC		Dominion (12.97%) / EKPC
b1800	at the existing Hunterstown		(1.81%) / JCPL (3.92%) / ME
	500 kV substation		(1.95%) / NEPTUNE*
			(0.24%) / OVEC (0.07%) /
			PECO (5.39%) / PENELEC
			(1.84%) / PEPCO (3.71%) /
			PPL (4.78%) / PSEG (6.40%)
			/ RE (0.27%)
			<b>DFAX Allocation:</b>
			DPL (45.03%) / ME (54.80%)
			/ PSEG (0.16%) / RE (0.01%)
			AEC (6.47%) / AEP (2.58%) /
			APS (6.88%) / BGE (6.57%) /
			DPL (12.39%) / Dominion
1.1001	Build a 250 MVAR SVC at		(14.89%) / JCPL (8.14%) /
b1801	Altoona 230 kV		ME (6.21%) / NEPTUNE*
			(0.82%) / PECO (21.56%) /
			PPL (4.89%) / PSEG (8.18%)
			/ RE (0.33%) / ECP** (0.09%

<sup>\*</sup>Neptune Regional Transmission System, LLC
\*\*East Coast Power, L.L.C.

# (5) Mid-Atlantic Interstate Transmission, LLC for the Metropolitan Edison Company Zone

Required	Transmission Enhancements	Annual Revenue Requiremen	i Responsible Customer(s)
	Replace SCCIR (Sub-		
b1816.5	conductor) at Hunterstown		
01010.5	Substation on the No. 1,		
	230/115 kV transformer		ME (100%)
	Replace limiting wave trap,		
	circuit breaker, substation		
b1999	conductor, relay and		
	current transformer		
	components at Northwood		ME (100%)
	Replace limiting wave trap		
b2000	on the Glendon -		
	Hosensack line		ME (100%)
	Replace limiting circuit		
	breaker and substation		
b2001	conductor transformer		
	components at Portland		
	230kV		ME (100%)
b2002	Northwood 230/115 kV		
02002	Transformer upgrade		ME (100%)
	Construct a new North		
b2023	Temple - Riverview -		
02025	Cartech 69 kV line (4.7		
	miles) with 795 ACSR		ME (100%)
1.000.4	Upgrade 4/0 substation		
b2024	conductors at Middletown		N (T (4000 ()
	69 kV		ME (100%)
	Upgrade 4/0 and 350 Cu		
	substation conductors at		
b2025	the Middletown Junction		
	terminal of the Middletown		
	Junction - Wood Street Tap		N (T (4000 ()
	69 kV line		ME (100%)
1.005	Upgrade an OC protection		
b2026	relay at the Baldy 69 kV		
	substation		ME (100%)
	Install a 115 kV 28.8		
b2148	MVAR capacitor at		
	Pleasureville substation		ME (100%)

# (5) Mid-Atlantic Interstate Transmission, LLC for the Metropolitan Edison Company Zone

			1
b2149	Upgrade substation riser on the Smith St York Inc. 115 kV line		ME (100%)
b2150	Upgrade York Haven structure 115 kV bus conductor on Middletown Jct Zions View 115 kV		ME (100%)

#### **SCHEDULE 12 – APPENDIX**

## (7) Mid-Atlantic Interstate Transmission, LLC for the Pennsylvania Electric Company Zone

Required Transmission Enhancements		Annual Revenue Requirement	nt Responsible Customer(s)
			AEC (1.67%) / AEP (13.94%)
			/ APS (5.64%) / ATSI (8.02%)
	Build 500 kV substation		/ BGE (4.12%) / ComEd
	in PENELEC – Tap the		(13.46%) / Dayton (2.12%) /
	Keystone – Juniata and		DEOK (3.37%) / DL (1.76%) /
	Conemaugh – Juniata 500		DPL (2.55%) / Dominion
b0284.1	kV, connect the circuits		(12.97%) / EKPC (1.81%) /
	with a breaker and half		JCPL (3.92%) / ME (1.95%) /
	scheme, and install new		NEPTUNE* (0.24%) / OVEC
	400 MVAR capacitor		(0.07%) / PECO (5.39%) /
			PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
	Replace wave trap and upgrade a bus section at Keystone 500 kV – on the		AEC (1.67%) / AEP (13.94%)
			/ APS (5.64%) / ATSI (8.02%)
			/ BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
			DEOK (3.37%) / DL (1.76%) /
			DPL (2.55%) / Dominion
b0284.3			(12.97%) / EKPC (1.81%) /
	Keystone – Airydale 500		JCPL (3.92%) / ME (1.95%) /
	kV		NEPTUNE* (0.24%) / OVEC
			(0.07%) / PECO (5.39%) /
			PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required T	ransmission Enhancements	Annual Revenue Requirement	nt Responsible Customer(s)
			AEC (1.67%) / AEP (13.94%)
			/ APS (5.64%) / ATSI (8.02%)
			/ BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
	Replace wave trap at		DEOK (3.37%) / DL (1.76%) /
	Keystone 500 kV – on the		DPL (2.55%) / Dominion
b0285.1	Keystone – Conemaugh		(12.97%) / EKPC (1.81%) /
	500 kV		JCPL (3.92%) / ME (1.95%) /
	300 K V		NEPTUNE* (0.24%) / OVEC
			(0.07%) / PECO (5.39%) /
			PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			AEC (1.67%) / AEP (13.94%)
	Replace wave trap and relay at Conemaugh 500		/ APS (5.64%) / ATSI (8.02%)
			/ BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
			DEOK (3.37%) / DL (1.76%) /
			DPL (2.55%) / Dominion
b0285.2	kV – on the Conemaugh –		(12.97%) / EKPC (1.81%) /
	Keystone 500 kV		JCPL (3.92%) / ME (1.95%) /
	Reystolle 300 kV		NEPTUNE* (0.24%) / OVEC
			(0.07%) / PECO (5.39%) /
			PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Upgrade Rolling b0349 Meadows-Gore Jct 115 kV PENELEC (100%) Construction of a ring bus b0360 on the 345 kV side of Wayne substation **PENELEC** (100%) Add a 50 MVAR, 230 kV b0365 cap bank at Altoona 230 kV **PENELEC** (100%) AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / Install 100 MVAR DPL (2.55%) / Dominion Dynamic Reactive Device b0369 (12.97%) / EKPC (1.81%) / at Airydale 500 kV JCPL (3.92%) / ME (1.95%) / substation NEPTUNE\* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / Install 500 MVAR DPL (2.55%) / Dominion Dynamic Reactive Device b0370 (12.97%) / EKPC (1.81%) / at Airydale 500 kV JCPL (3.92%) / ME (1.95%) / substation NEPTUNE\* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required	Transmission Enhancements An	inual Revenue Requirement	Responsible Customer(s)
			Load-Ratio Share
			Allocation:
			AEC (1.67%) / AEP (13.94%)
			/ APS (5.64%) / ATSI (8.02%)
			/ BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
			DEOK (3.37%) / DL (1.76%) /
			DPL (2.55%) / Dominion
			(12.97%) / EKPC (1.81%) /
	Install 300 MVAR		JCPL (3.92%) / ME (1.95%) /
b0376	capacitor at Conemaugh		NEPTUNE* (0.24%) / OVEC
	500 kV substation		(0.07%) / PECO (5.39%) /
			PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			DFAX Allocation:
			AEC (5.20%) / BGE (19.46%)
			/ JCPL (18.23%) / ME
			(11.67%) / NEPTUNE*
			(2.00%) / PECO (18.42%) /
			PSEG (24.09%) / RE (0.93%)
b0442	Spare Keystone 500/230		
00442	kV transformer		PENELEC (100%)
	Replace Lewistown		
b0515	circuit breaker 1LY		
	Yeagertown		PENELEC (100%)
	Replace Lewistown		TEINEEDE (10070)
b0516	circuit breaker 2LY		
00310	Yeagertown		DENEL E.G. (1000/)
			PENELEC (100%)
b0517	Replace Shawville bus		
00317	section circuit breaker		PENELEC (100%)
	Replace Homer City		, , ,
b0518	circuit breaker 201		
	Johnstown		PENELEC (100%)
			1 ENELEC (10070)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required	Transmission Enhancements A	illuai Revenue Requirement	Responsible Customer(s)
b0519	Replace Keystone circuit		
	breaker 4 Transformer - 20		PENELEC (100%)
			Load-Ratio Share
			Allocation:
			AEC (1.67%) / AEP (13.94%)
			/ APS (5.64%) / ATSI
			(8.02%) / BGE (4.12%) /
			ComEd (13.46%) / Dayton
			(2.12%) / DEOK (3.37%) /
			DL (1.76%) / DPL (2.55%) /
			Dominion (12.97%) / EKPC
			(1.81%) / JCPL (3.92%) / ME
	Install 250 MVAR		(1.95%) / NEPTUNE*
b0549	capacitor at Keystone 500		(0.24%) / OVEC (0.07%) /
	kV		PECO (5.39%) / PENELEC
			(1.84%) / PEPCO (3.71%) /
			PPL (4.78%) / PSEG (6.40%)
			/ RE (0.27%)
			DFAX Allocation:
			AEC (5.11%) / BGE (23.95%)
			/ DL (0.04%) / JCPL
			(16.27%) / ME (12.99%) /
			NEPTUNE* (1.79%) / PECO
		(18.16%) / PSEG (20.88%) /	
			RE (0.81%)
			AEC (8.58%) / APS (1.69%) /
			DPL (12.24%) / JCPL
	Install 25 MVAR capacitor		(18.16%) / ME (1.55%) /
b0550	at Lewis Run 115 kV		NEPTUNE* (1.77%) / PECO
	substation		(21.78%) / PPL (6.40%) /
			ECP** (0.73%) / PSEG
			(26.13%) / RE (0.97%)
			AEC (8.58%) / APS (1.69%) /
			DPL (12.24%) / JCPL
	Install 25 MVAR capacitor		(18.16%) / ME (1.55%) /
b0551	at Saxton 115 kV		NEPTUNE* (1.77%) / PECO
	substation		(21.78%) / PPL (6.40%) /
			ECP** (0.73%) / PSEG
			(26.13%) / RE (0.97%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup> East Coast Power, L.L.C.

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) AEC (8.58%) / APS (1.69%) / DPL (12.24%) / JCPL (18.16%) Install 50 MVAR / ME (1.55%) / NEPTUNE\* b0552 capacitor at Altoona 230 (1.77%) / PECO (21.78%) / kV substation PPL (6.40%) / ECP\*\* (0.73%) / PSEG (26.13%) / RE (0.97%) AEC (8.58%) / APS (1.69%) / DPL (12.24%) / JCPL (18.16%) Install 50 MVAR / ME (1.55%) / NEPTUNE\* b0553 capacitor at Raystown 230 (1.77%) / PECO (21.78%) / kV substation PPL (6.40%) / ECP\*\* (0.73%) / PSEG (26.13%) / RE (0.97%) AEC (8.58%) / APS (1.69%) / DPL (12.24%) / JCPL (18.16%) Install 100 MVAR / ME (1.55%) / NEPTUNE\* b0555 capacitor at Johnstown (1.77%) / PECO (21.78%) / 230 kV substation PPL (6.40%) / ECP\*\* (0.73%) / PSEG (26.13%) / RE (0.97%) AEC (8.58%) / APS (1.69%) / DPL (12.24%) / JCPL (18.16%) Install 50 MVAR / ME (1.55%) / NEPTUNE\* b0556 capacitor at Grover 230 (1.77%) / PECO (21.78%) / kV substation PPL (6.40%) / ECP\*\* (0.73%) / PSEG (26.13%) / RE (0.97%) AEC (8.58%) / APS (1.69%) / DPL (12.24%) / JCPL (18.16%) Install 75 MVAR / ME (1.55%) / NEPTUNE\* b0557 capacitor at East Towanda (1.77%) / PECO (21.78%) / 230 kV substation PPL (6.40%) / ECP\*\* (0.73%) / PSEG (26.13%) / RE (0.97%) Install 25 MVAR b0563 capacitor at Farmers Valley 115 kV substation PENELEC (100%) Install 10 MVAR b0564 capacitor at Ridgeway 115 kV substation PENELEC (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Reconfigure the Cambria Slope 115 kV and Wilmore Junction 115 kV b0654 stations to eliminate Wilmore Junction 115 kV 3-terminal line **PENELEC** (100%) Reconfigure and expand the Glade 230 kV ring bus to eliminate the Glade b0655 Tap 230 kV 3-terminal line PENELEC (100%) Add three breakers to b0656 form a ring bus at Altoona 230 kV PENELEC (100%) Upgrade the Homer City 230 kV breaker 'Pierce b0794 Road' PENELEC (100%) Replace Glory 115 kV b1005 breaker '#7 XFMR' PENELEC (100%) Replace Shawville 115 b1006 kV breaker 'NO.14 XFMR' PENELEC (100%) Replace Shawville 115 kV breaker 'NO.15 b1007 XFMR' PENELEC (100%) Replace Shawville 115 b1008 kV breaker '#1B XFMR' PENELEC (100%) Replace Shawville 115 b1009 kV breaker '#2B XFMR' PENELEC (100%) Replace Shawville 115 b1010 kV breaker 'Dubois' PENELEC (100%)

rtequirea i	Tarisi ilission Linancements T	initiaat teevenae reequiternent	Responsible Customer(s)
b1011	Replace Shawville 115 kV breaker 'Philipsburg'		PENELEC (100%)
b1012	Replace Shawville 115 kV breaker 'Garman'		PENELEC (100%)
b1059	Replace a CRS relay at Hooversville 115 kV station		PENELEC (100%)
b1060	Replace a CRS relay at Rachel Hill 115 kV station		PENELEC (100%)
b1153	Upgrade Conemaugh 500/230 kV transformer and add a new line from Conemaugh-Seward 230 kV		AEC (3.74%) / APS (6.26%) / BGE (16.82%) / DL (0.32%) / JCPL (12.57%) / ME (6.89%) / PECO (11.53%) / PEPCO (0.55%) / PPL (15.42%) / PSEG (20.52%) / RE (0.72%) / NEPTUNE* (1.70%) / ECP** (2.96%)
b1153.1	Revise the reclosing on the Shelocta 115 kV breaker 'Lucerne'		PENELEC (100%)
b1169	Replace Shawville 115 kV breaker '#1A XFMR'		PENELEC (100%)
b1170	Replace Shawville 115 kV breaker '#2A XFMR'		PENELEC (100%)
b1277	Build a new Osterburg East – Bedford North 115 kV Line, 5.7 miles of 795 ACSR		PENELEC (100%)
b1278	Install 25 MVAR Capacitor Bank at Somerset 115 kV		PENELEC (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC
\*\* East Coast Power, L.L.C.

Required 1	Fransmission Enhancements Annual Revenue Requirement	t Responsible Customer(s)
	Replace the Cambria	
b1367	Slope 115/46 kV 50	
	MVA transformer with	DEN 1977 E. G. (4.000 ()
	75 MVA	PENELEC (100%)
	Replace the Claysburg	
b1368	115/46 kV 30 MVA	
01300	transformer with 75	
	MVA	PENELEC (100%)
	Replace the 4/0 CU	
	substation conductor with	
b1369	795 ACSR on the	
	Westfall S21 Tap 46 kV	
	line	PENELEC (100%)
	Legate 11 a 2 nd 115/46 1-37	
b1370	Install a 3rd 115/46 kV transformer at Westfall	
	transformer at westian	PENELEC (100%)
	Reconductor 2.6 miels of	
b1371	the Claysburg – HCR 46	
	kV line with 636 ACSR	PENELEC (100%)
	Replace 4/0 CU	
	substation conductor with	
b1372	795 ACSR on the	
	Hollidaysburg – HCR 46	
	kV	PENELEC (100%)
	Re-configure the Erie	121:222 (10070)
	West 345 kV substation,	
b1373	add a new circuit breaker	
01575	and relocate the	
	Ashtabula line exit	PENELEC (100%)
	Replace wave traps at	TELLEGO (10070)
	Raritan River and Deep	
	Run 115 kV substations	
b1374	with higher rated	
	equipment for both B2	
	and C3 circuits	PENELEC (100%)
	Reconductor 0.8 miles of	1 LINDLEC (10070)
	the Gore Junction – ESG	
b1535	Tap 115 kV line with 795	
	-	DENIEL EC (100%)
	ACSS	PENELEC (100%)

Required I	ransmission Enhancements An	muai Revenue Requirement	Responsible Customer(s)
	Reconductor the New		
b1607	Baltimore - Bedford		
	North 115 kV		PENELEC (100%)
	Construct a new 345/115		, ,
1.1.600	kV substation and loop		
b1608	the Mansfield - Everts		APS (8.61%) / PECO (1.72%) /
	115 kV		PENELEC (89.67%)
	Construct Four Mile		
	Junction 230/115 kV		
	substation. Loop the Erie		
	South - Erie East 230 kV		
b1609	line, Buffalo		
	Road - Corry East and		
	Buffalo Road - Erie		APS (4.86%) / PENELEC
	South 115 kV lines		(95.14%)
			(33.1170)
b1610	Install a new 230 kV		
01010	breaker at Yeagertown		PENELEC (100%)
	Install a 345 kV breaker		TENEELEC (10070)
b1713	at Erie West and relocate		
01/13	Ashtabula 345 kV line		DENIEL EC (1000/)
			PENELEC (100%)
1.1760	Install a 75 MVAR cap		
b1769	bank on the Four Mile		DELYEY E G (4000()
	230 kV bus		PENELEC (100%)
	Install a 50 MVAR cap		
b1770	bank on the Buffalo Road		
	115 kV bus		PENELEC (100%)
			AEC (6.47%) / AEP (2.58%) /
			APS (6.88%) / BGE (6.57%) /
	Build a 100 MVAR Fast		DPL (12.39%) / Dominion
b1802	Switched Shunt and 200		(14.89%) / JCPL (8.14%) / ME
01002	MVAR Switched Shunt		(6.21%) / NEPTUNE* (0.82%)
	at Mansfield 345 kV		/ PECO (21.56%) / PPL
			(4.89%) / PSEG (8.18%) / RE
			(0.33%) / ECP** (0.09%)

<sup>\*</sup> Neptune Regional Transmission System, LLC
\*\* East Coast Power, L.L.C.

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace the Erie South b1821 115 kV breaker 'Union **PENELEC** (100%) City' Construct a 115 kV ring bus at Claysburg Substation. Bedford b1943 North and Saxton lines will no longer share a common breaker PENELEC (100%) Reconductor Eclipse substation 115 kV bus b1944 with 1033 kcmil conductor PENELEC (100%) Install second 230/115 b1945 kV autotransformer at Johnstown PENELEC (100%) Replace the 1200 Amp Line trap at Lewistown on the Raystownb1966 Lewistown 230 kV line and replace substation conductor at Lewistown PENELEC (100%) Replace the Blairsville b1967 138/115 kV transformer PENELEC (100%) Install a 25 MVAR 115 b1990 kV Capacitor at Grandview PENELEC (100%) Construct Farmers Valley 345/230 kV and 230/115 kV substation. Loop the b1991 Homer City-Stolle Road 345 kV line into Farmers Valley PENELEC (100%) Reconductor Cambria Slope-Summit 115kV b1992 with 795 ACSS Conductor **PENELEC** (100%)

rtequired i		idai revende reganement	Responsible Customer(s)
b1993	Relocate the Erie South 345 kV line terminal		APS (10.09%) / ECP** (0.45%) / HTP*** (0.49%) / JCPL (5.14%) / NEPTUNE* (0.54%) / PENELEC (70.71%) / PSEG (12.10%) / RE (0.48%)
b1994	Convert Lewis Run- Farmers Valley to 230 kV using 1033.5 ACSR conductor. Project to be completed in conjunction with new Farmers Valley 345/230 kV transformation		APS (33.20%) / ECP** (0.44%) / HTP*** (0.44%) / JCPL (8.64%) / ME (5.52%) / NEPTUNE* (0.86%) / PENELEC (36.81%) / PSEG (13.55%) / RE (0.54%)
b1995	Change CT Ratio at Claysburg		PENELEC (100%)
b1996.1	Replace 600 Amp Disconnect Switches on Ridgeway-Whetstone 115 kV line with 1200 Amp Disconnects		PENELEC (100%)
b1996.2	Reconductor Ridgway and Whetstone 115 kV Bus		PENELEC (100%)
b1996.3	Replace Wave Trap at Ridgway		PENELEC (100%)
b1996.4	Change CT Ratio at Ridgway		PENELEC (100%)
b1997	Replace 600 Amp Disconnect Switches on Dubois-Harvey Run- Whetstone 115 kV line with 1200 Amp Disconnects		PENELEC (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup> East Coast Power, L.L.C.

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

b1998	Install a 75 MVAR 115 kV Capacitor at Shawville		PENELEC (100%)
b2016	Reconductor bus at Wayne 115 kV station		PENELEC (100%)

#### **SCHEDULE 12 – APPENDIX**

## (8) PECO Energy Company

Required T	Transmission Enhancements	Annual Revenue Requirement	nt Responsible Customer(s)
			Load-Ratio Share
			Allocation:
			AEC (1.67%) / AEP (13.94%)
			/ APS (5.64%) / ATSI (8.02%)
			/ BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
			DEOK (3.37%) / DL (1.76%) /
	Replace two 500 kV		DPL (2.55%) / Dominion
	circuit breakers and two		(12.97%) / EKPC (1.81%) /
b0171.1	wave traps at Elroy		JCPL (3.92%) / ME (1.95%) /
00171.1	substation to increase		NEPTUNE* (0.24%) / OVEC
	rating of Elroy -		(0.07%) / PECO (5.39%) /
	Hosensack 500 kV		PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			DFAX Allocation:
			AEC (8.03%) / DPL (8.44%) /
			JCPL (19.98%) / PECO
			(63.55%)
b0180	Replace Whitpain 230 kV		
00100	circuit breaker #165		PECO (100%)
b0181	Replace Whitpain 230 kV		
00101	circuit breaker #J105		PECO (100%)
	Upgrade Plymouth		
b0182	Meeting 230 kV circuit		
	breaker #125		PECO (100%)
	Install three 28.8 Mvar		
b0205	capacitors at Planebrook		
	35 kV substation		PECO (100%)
4.000	Install 161 Mvar capacitor		AEC (14.20%) / DPL
b0206	at Planebrook 230 kV		(24.39%) / PECO (57.94%) /
	substation		PSEG (3.47%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required 1	ransmission Ennancements Annual Revenue Requirement	Responsible Customer(s)
1.000=	Install 161 Mvar capacitor	AEC (14.20%) / DPL
b0207	at Newlinville 230 kV	(24.39%) / PECO (57.94%) /
	substation	PSEG (3.47%)
	Install 161 Myar capacitor	AEC (14.20%) / DPL
b0208	Heaton 230 kV substation	(24.39%) / PECO (57.94%) /
		PSEG (3.47%)
	Install 2% series reactor at	
ь0209	Chichester substation on	AEC (65.23%) / JCPL
00207	the Chichester -	(25.87%)/ NEPTUNE*
	Mickleton 230 kV circuit	(2.55%) / PSEG (6.35%)
	Upgrade Chichester –	
	Delco Tap 230 kV and the	
b0264	PECO portion of the	
	Delco Tap – Mickleton	AEC (89.87%) / JCPL (9.48%)
	230 kV circuit	/ NEPTUNE* (0.65%)
	Replace two wave traps	
	and ammeter at Peach	
1-0266	Bottom, and two wave	
b0266	traps and ammeter at	
	Newlinville 230 kV	
	1 (0 () 1111 ( 1110 25 0 11 (	
	substations	PECO (100%)
		PECO (100%)  Load-Ratio Share
		` /
		Load-Ratio Share
		Load-Ratio Share Allocation:
		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%)
		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%)
		Load-Ratio Share
		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) /
	substations	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) /
b0269	Install a new 500 kV	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion
b0269	Install a new 500 kV Center Point substation in	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) /
b0269	Install a new 500 kV Center Point substation in PECO by tapping the	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%)
b0269	Install a new 500 kV Center Point substation in PECO by tapping the Elroy – Whitpain 500 kV	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) /
b0269	Install a new 500 kV Center Point substation in PECO by tapping the Elroy – Whitpain 500 kV	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO
b0269	Install a new 500 kV Center Point substation in PECO by tapping the Elroy – Whitpain 500 kV	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) /
b0269	Install a new 500 kV Center Point substation in PECO by tapping the Elroy – Whitpain 500 kV	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%)
b0269	Install a new 500 kV Center Point substation in PECO by tapping the Elroy – Whitpain 500 kV	Load-Ratio Share
b0269	Install a new 500 kV Center Point substation in PECO by tapping the Elroy – Whitpain 500 kV	Load-Ratio Share

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>†</sup>Cost allocations associated with Regional Facilities and Necessary Lower Voltage Facilities associated with the project

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b0269.1	Add a new 230 kV circuit between Whitpain and Heaton substations		AEC (8.25%) / DPL (9.56%) / PECO (82.19%)††
b0269.2	Reconductor the Whitpain 1 – Plymtg 1 230 kV circuit		AEC (8.25%) / DPL (9.56%) / PECO (82.19%)††
b0269.3	Convert the Heaton bus to a ring bus		AEC (8.25%) / DPL (9.56%) / PECO (82.19%)††
b0269.4	Reconductor the Heaton – Warminster 230 kV circuit		AEC (8.25%) / DPL (9.56%) / PECO (82.19%)††
b0269.5	Reconductor Warminster  – Buckingham 230 kV circuit		AEC (8.25%) / DPL (9.56%) / PECO (82.19%)††

<sup>††</sup>Cost allocations associated with below 500 kV elements of the project

Load-Ratio Share Allocation:   AEC (1.67%) / AEP (13.94%)     ABC (1.67%) / AEP (13.94%)     ABC (1.67%) / AEP (13.94%)     ABC (1.28%) / ComEd (13.46%) / Dayton (2.12%) /   DEOK (3.37%) / DL (1.76%) /   DPL (2.55%) / Dominion (12.97%) / ERPC (1.81%) /   DPL (2.55%) / Dominion (12.97%) / ERPC (1.81%) /   DPL (3.92%) / ME (1.95%) /   NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) /   PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)     DFAX Allocation:   AEC (6.70%) / PECO (93.30%)     DFAX Allocation:   AEC (6.25%) / DPL (9.56%) /   PECO (100%)     DFAX Allocation:   AEC (8.25%) / DPL (9.56%) /   PECO (82.19%)††     Install a new 230 kV center Point transformer     Install 161 MVAR     capacitor at Warrington     230 kV substation     DECO 100%     Install 181 MVAR     capacitor at Warrington     230 kV substation     DECO 100%     Install 182.8 MVAR     capacitor at Warrington     24 kV substation     PECO 100%     DECO 100%     DECO 100%     DECO 100%	required 11	ansmission enhancements. Annual Revenue Requirement	Responsible Customer(s)
Add a new 500 kV   DEOK (3.37%) / DEOK (3.37%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / DPL (3.92%) / ME (1.95%) / DPL (3.92%) /			Load-Ratio Share
Add a new 500 kV   DEOK (3.37%) / DL (1.76%) / DEOK (3.37%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PEGO (6.40%) / RE (0.27%) / DEOK (3.30%) / PENELEC (1.84%) / PECO (3.71%) / PPL (4.78%) / PECO (3.71%) / PECO (3.30%) / PECO (3.30%) / PECO (1.00%) / PECO (3.30%) / PECO (3.3			
Add a new 500 kV   DEOK (3.37%) / DL (1.76%) / DEOK (3.37%) / DEOK (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PECO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)      DFAX Allocation:   AEC (6.70%) / PECO (93.30%)     DFAX Allocation:   AEC (8.25%) / DPL (9.56%) / PECO (100%)     AEC (8.25%) / DPL (9.56%) / PECO (82.19%) † †   DFAX Allocation:   AEC (8.25%) / DPL (9.56%) / PECO (82.19%) † †   DFAX Allocation:   AEC (8.25%) / DPL (9.56%) / PECO (82.19%) † †   DFAX Allocation:   AEC (8.25%) / DPL (9.56%) / PECO (82.19%) † †   DFAX Allocation:   AEC (8.25%) / DPL (9.56%) / PECO (82.19%) † †   DFAX Allocation:   AEC (8.25%) / DPL (9.56%) / PECO (82.19%) † †   DFAX Allocation:   AEC (8.25%) / DPL (9.56%) / PECO (82.19%) † †   DFAX Allocation:   AEC (8.25%) / DPL (9.56%) / PECO (82.19%) † †   DFAX Allocation:   AEC (8.25%) / DPL (9.56%) / PECO (93.30%)     DFAX Allocation:   AEC (8.25%) / DPL (9.56%) / PECO (93.30%)     DFAX Allocation:   AEC (8.25%) / DPL (9.56%) / PECO (93.30%)     DFAX Allocation:   AEC (8.25%) / DPL (9.56%) / PECO (93.30%)     DFAX Allocation:   AEC (8.25%) / DPL (9.56%) / PECO (93.30%)     DFAX Allocation:   AEC (8.25%) / DPL (9.56%) / PECO (93.30%)     DFAX Allocation:   AEC (8.25%) / DPL (9.56%) / PECO (93.30%)     DFAX Allocation:   AEC (8.25%) / DPL (9.56%) / PECO (93.30%)     DFAX Allocation:   AEC (8.25%) / DPL (9.56%) / PECO (93.30%)     DFAX Allocation:   AEC (8.25%) / DPL (9.56%) / PECO (93.30%)     DFAX Allocation:   AEC (8.25%) / DPL (9.56%) / PECO (93.30%)     DFAX Allocation:   DFAX Allocation:   AEC (8.25%) / DPL (9.5			` ' '
Add a new 500 kV   DEOK (3.37%) / DL (1.76%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PEPCO (3.71%) / PPL (4.78%) / PEPCO (3.71%) / PPL (4.78%) / PECO (93.30%)			, , , , , , , , , , , , , , , , , , , ,
Add a new 500 kV breaker at Whitpain between #3 transformer and 5029 line    DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)    DFAX Allocation: AEC (6.70%) / PECO (93.30%) / PECO (93.30%)    DFAX Allocation: AEC (6.70%) / PECO (93.30%) / PECO (93.30%)    DFAX Allocation: AEC (6.70%) / PECO (93.30%) / PECO (93.30%)    Install a new 230 kV			· · · · · ·
DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / DCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PECO (5.39%) / PENELEC (1.84%) / PECO (3.71%) / PECO (3.71%) / PECO (93.30%)    DFAX Allocation: AEC (6.70%) / PECO (93.30%)   DFAX Allocation: AEC (6.70%) / PECO (93.30%)   DFAX Allocation: AEC (6.70%) / PECO (93.30%)   Install a new 230 kV Center Point substation in PECO by tapping the North Wales – Perkiomen 230 kV circuit. Install a new 500/230 kV Center Point transformer			• • • • • • • • • • • • • • • • • • • •
Add a new 500 kV breaker at Whitpain between #3 transformer and 5029 line     (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)     DFAX Allocation: AEC (6.70%) / PECO (93.30%)			` , , , ,
b0269.6 breaker at Whitpain between #3 transformer and 5029 line (12.97%) / ERPC (1.81%) / SCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)    DFAX Allocation: AEC (6.70%) / PECO (93.30%)   AEC (6.70%) / PECO (93.30%)   Install a new 230 kV Center Point substation in PECO by tapping the North Wales – Perkiomen 230 kV circuit. Install a new 500/230 kV Center Point transformer   AEC (8.25%) / DPL (9.56%) / PECO (82.19%)††		Add a new 500 kV	
between #3 transformer and 5029 line    DEPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)    DEFAX Allocation: AEC (6.70%) / PECO (93.30%)    DEFAX Allocation: AEC (6.70%) / PECO (93.30%)    Install a new 230 kV Center Point substation in PECO by tapping the North Wales – Perkiomen 230 kV circuit. Install a new 500/230 kV Center Point transformer    Install 161 MVAR capacitor at Warrington 230 kV substation   PECO 100%    Install 161 MVAR capacitor at Bradford 230 kV substation   PECO 100%    Install 28.8 MVAR capacitor at Warrington   PECO 100%    Install 28.8 MVAR capacitor at Warrington   PECO 100%	4.05.50.5		` ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '
(0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)	b0269.6		
PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)		and 5029 line	NEPTUNE* (0.24%) / OVEC
(3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)			(0.07%) / PECO (5.39%) /
(6.40%) / RE (0.27%)   DFAX Allocation:   AEC (6.70%) / PECO (93.30%)   B0269.7   Replace North Wales 230   kV breaker #105   PECO (100%)   Install a new 230 kV   Center Point substation in   PECO by tapping the   North Wales – Perkiomen   230 kV circuit. Install a   new 500/230 kV Center   Point transformer   PECO (82.19%)††   Install 161 MVAR     capacitor at Warrington     230 kV substation   PECO 100%     Install 161 MVAR     capacitor at Bradford 230   kV substation   PECO 100%     Install 28.8 MVAR     capacitor at Warrington     Install 28.8 MVAR     capacitor at Warrington     Capacitor at Warrington			PENELEC (1.84%) / PEPCO
DFAX Allocation: AEC (6.70%) / PECO (93.30%)  b0269.7 Replace North Wales 230 kV breaker #105  Install a new 230 kV Center Point substation in PECO by tapping the North Wales – Perkiomen 230 kV circuit. Install a new 500/230 kV Center Point transformer  Install 161 MVAR capacitor at Warrington 230 kV substation  Install 161 MVAR capacitor at Bradford 230 kV substation  Install 161 MVAR capacitor at Bradford 230 kV substation  Install 28.8 MVAR capacitor at Warrington  Install 28.8 MVAR capacitor at Warrington  Install 28.8 MVAR capacitor at Warrington			(3.71%) / PPL (4.78%) / PSEG
AEC (6.70%) / PECO (93.30%)  b0269.7 Replace North Wales 230 kV breaker #105  Install a new 230 kV Center Point substation in PECO by tapping the North Wales – Perkiomen 230 kV circuit. Install a new 500/230 kV Center Point transformer    Decomplete			(6.40%) / RE (0.27%)
Bo269.7   Replace North Wales 230   Replace North Wales   Perkiomen 230   Replace North Wales   Replace North			DFAX Allocation:
Bo269.7   Replace North Wales 230   Replace North Wales   Perkiomen 230   Replace North Wales   Re			AEC (6.70%) / PECO
Doc   North Wales - Perkiomen   230 kV   Center Point substation in PECO by tapping the			` ′
Install a new 230 kV   Center Point substation in PECO by tapping the North Wales – Perkiomen 230 kV circuit. Install a new 500/230 kV Center Point transformer   AEC (8.25%) / DPL (9.56%) / PECO (82.19%)††	b0260.7	Replace North Wales 230	
Center Point substation in PECO by tapping the North Wales – Perkiomen 230 kV circuit. Install a new 500/230 kV Center Point transformer Install 161 MVAR capacitor at Warrington 230 kV substation Install 161 MVAR capacitor at Bradford 230 kV substation Install 28.8 MVAR b0280.3 capacitor at Warrington Capacitor at Warrington Capacitor at Bradford 230 kV substation PECO 100%  PECO 100%  PECO 100%	00209.7		PECO (100%)
PECO by tapping the North Wales – Perkiomen 230 kV circuit. Install a new 500/230 kV Center Point transformer  Install 161 MVAR capacitor at Warrington 230 kV substation  Install 161 MVAR b0280.2  Expected to the perkiomen of t			
b0269.10 North Wales – Perkiomen 230 kV circuit. Install a new 500/230 kV Center Point transformer  Install 161 MVAR capacitor at Warrington 230 kV substation  Install 161 MVAR capacitor at Bradford 230 kV substation  PECO 100%  Install 28.8 MVAR capacitor at Warrington  Install 28.8 MVAR capacitor at Warrington			
230 kV circuit. Install a new 500/230 kV Center Point transformer  Install 161 MVAR capacitor at Warrington 230 kV substation  Install 161 MVAR capacitor at Bradford 230 kV substation  Install 28.8 MVAR b0280.3 capacitor at Warrington  Install 28.8 MVAR capacitor at Warrington  Install 28.8 MVAR capacitor at Warrington	1.02(0.10	• 11 0	
new 500/230 kV Center Point transformer  Install 161 MVAR capacitor at Warrington 230 kV substation  Install 161 MVAR capacitor at Bradford 230 kV substation  PECO 100%  Install 28.8 MVAR b0280.3 capacitor at Warrington	60269.10		
Point transformer  Install 161 MVAR capacitor at Warrington 230 kV substation  Install 161 MVAR capacitor at Bradford 230 kV substation  PECO 100%  Install 28.8 MVAR capacitor at Warrington  Install 28.8 MVAR capacitor at Warrington			AEC (8.25%) / DDI (0.56%) /
Install 161 MVAR capacitor at Warrington 230 kV substation PECO 100%  Install 161 MVAR capacitor at Bradford 230 kV substation PECO 100%  Install 28.8 MVAR b0280.3 capacitor at Warrington			
b0280.1 capacitor at Warrington 230 kV substation  Install 161 MVAR capacitor at Bradford 230 kV substation  PECO 100%  Install 28.8 MVAR b0280.3 capacitor at Warrington			FECO (82.1970)
230 kV substation PECO 100%  Install 161 MVAR capacitor at Bradford 230 kV substation PECO 100%  Install 28.8 MVAR capacitor at Warrington	50280 1		
Install 161 MVAR capacitor at Bradford 230 kV substation PECO 100% Install 28.8 MVAR capacitor at Warrington	00200.1	1	PFCO 100%
b0280.2 capacitor at Bradford 230 kV substation PECO 100%  Install 28.8 MVAR capacitor at Warrington			120010070
kV substation PECO 100%  Install 28.8 MVAR capacitor at Warrington	b0280.2		
Install 28.8 MVAR capacitor at Warrington	00200.2		PECO 100%
b0280.3 capacitor at Warrington			
	b0280.3		
		•	PECO 100%

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>††</sup>Cost allocations associated with below 500 kV elements of the project

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Install 18 MVAR b0280.4 capacitor at Waverly 13.8 kV substation PECO 100% **Load-Ratio Share** Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion Install 600 MVAR (12.97%) / EKPC (1.81%) / Dynamic Reactive Device JCPL (3.92%) / ME (1.95%) / b0287 NEPTUNE\* (0.24%) / OVEC in Whitpain 500 kV vicinity (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** AEC (8.03%) / DPL (8.44%) / JCPL (19.98%) / PECO (63.55%) Reconductor Tunnel b0351 Grays Ferry 230 kV PECO (100%) Reconductor Tunnel b0352 Parrish 230 kV PECO (100%) Install 2% reactors on b0353.1 both lines from Eddystone - Llanerch 138 kV PECO (100%) Install identical second 230/138 kV transformer b0353.2 in parallel with existing 230/138 kV transformer at Plymouth Meeting PECO 100% Replace Whitpain 230 kV b0353.3 breaker 135 PECO (100%) Replace Whitpain 230 kV b0353.4 breaker 145

PECO (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Ttoquirou I	Tarismission Emianechens Ann	Tesponsione Customer(s)
b0354	Eddystone – Island Road Upgrade line terminal	
	equipment	PECO 100%
	Reconductor Master –	
b0355	North Philadelphia 230	
	kV line	PECO 100%
		JCPL (37.17%) /
b0357	Reconductor Buckingham	NEPTUNE* (4.46%) /
00007	– Pleasant Valley 230 kV	PSEG (54.14%) / RE
	D 1 . N .1	(2.32%) / ECP** (1.91%)
1.0250	Reconductor North	
b0359	Philadelphia – Waneeta 230 kV circuit	DECO 1009/
	Replace Whitpain 230 kV	PECO 100%
b0402.1	breaker #245	DECO (1000/)
		PECO (100%)
b0402.2	Replace Whitpain 230 kV breaker #255	PEGO (1000/)
		PECO (100%)
b0438	Spare Whitpain 500/230	
	kV transformer	PECO (100%)
b0443	Spare Peach Bottom	
	500/230 kV transformer	PECO (100%)
b0505	Reconductor the North	
	Wales – Whitpain 230 kV	AEC (8.58%) / DPL
	circuit	(7.76%) / PECO (83.66%)
b0506	Reconductor the North	AEC (0.500/) / DDI
	Wales – Hartman 230 kV	AEC (8.58%) / DPL
	circuit	(7.76%) / PECO (83.66%)
b0507	Reconductor the Jarrett –	AEC (8.58%) / DPL
	Whitpain 230 kV circuit	(7.76%) PECO (83.66%)
b0508.1	Replace station cable at	
	Hartman on the	
	Warrington - Hartman 230 kV circuit	PECO (100%)
	Reconductor the Jarrett –	FECO (100%)
b0509	Heaton 230 kV circuit	PECO (100%)
	Ticaton 250 KV circuit	1 ECO (10070)

<sup>\*</sup>Neptune Regional Transmission Partners, LLC \*\*East Coast Power, L.L.C.

required i	Taristinssion Emianeements Afficari	te venue requirement	Responsible Customer(s)
b0727	Rebuild Bryn Mawr –		
	Plymouth Meeting 138		AEC (1.25%) / DPL
	kV line		(3.11%) / PECO (95.64%)
	Reconductor the line to		AEC (0.72%) / JCPL
	provide a normal rating of		(17.36%) / NEPTUNE*
b0789	677 MVA and an		(1.70%) / PECO (44.47%) /
	emergency rating of 827		ECP** (0.92%) / PSEG
	MVA		(33.52%) / RE (1.31%)
	Reconductor the Bradford		
	– Planebrook 230 kV Ckt.		JCPL (17.30%)/
1.0700	220-31 to provide a		NEPTUNE* (1.69%) /
b0790	normal rating of 677		PECO (45.09%) / ECP**
	MVA and emergency		(0.93%) / PSEG (33.68%) /
	rating of 827 MVA		RE (1.31%)
1.0020.1	Replace Whitpain 230 kV		
b0829.1	breaker '155'		PECO (100%)
	Install 2 new 230 kV		, ,
	breakers at Planebrook		
1 1072	(on the 220-02 line		
b1073	terminal and on the 230		
	kV side of the #9		
	transformer)		PECO (100%)
1.0020.2	Replace Whitpain 230 kV		
b0829.2	breaker '525'		PECO (100%)
1 0000	Replace Whitpain 230 kV		
b0829.3	breaker '175'		PECO (100%)
	Replace Plymouth		
b0829.4	Meeting 230 kV breaker		
30027.1	'225'		PECO (100%)
b0829.5	Replace Plymouth		
	Meeting 230 kV breaker		
	'335'		PECO (100%)
	Move the connection		
b0841	points for the 2nd		
	Plymouth Meeting		
	230/138 kV XFMR		PECO (100%)
	1		\ /

<sup>\*</sup> Neptune Regional Transmission System, LLC
\*\*East Coast Power, L.L.C.

Required Ti	ransmission Enhancements Ann	ual Revenue Requirement	Responsible Customer(s)
	Install a 2nd 230/138 kV		
b0842	XFMR and 35 MVAR		
	CAP at Heaton 138 kV		
	bus		PECO (100%)
b0842.1	Replace Heaton 138 kV		
00042.1	breaker '150'		PECO (100%)
b0843	Install a 75 MVAR CAP		
00043	at Llanerch 138 kV bus		PECO (100%)
	Move the connection		
b0844	point for the Llanerch		
	138/69 kV XFMR		PECO (100%)
b0887	Replace Richmond-		
0000/	Tacony 69 kV line		PECO (100%)
	Replace station cable at		
b0920	Whitpain and Jarrett		
00920	substations on the Jarrett		
	- Whitpain 230 kV circuit		PECO (100%)
	Replace Circuit breaker,		
b1014.1	Station Cable, CTs and		
01011.1	Wave Trap at Eddistone		
	230 kV		PECO (100%)
	Replace Circuit breaker,		
1 1 0 1 1 0	Station Cable, CTs		
b1014.2	Disconnect Switch and		
	Wave Trap at Island Rd.		DECO (1000/)
	230 kV		PECO (100%)
1.1015	Replace Breakers #115 and #125 at Printz 230		
b1015	kV substation		PECO (100%)
			PECO (100%)
b1156.1	Upgrade at Richmond		DECO (1000/)
	230 kV breaker '525'		PECO (100%)
b1156.2	Upgrade at Richmond		DEGC (1000()
	230 kV breaker '415'		PECO (100%)
b1156.3	Upgrade at Richmond		
	230 kV breaker '475'		PECO (100%)
b1156.4	Upgrade at Richmond		
	230 kV breaker '575'		PECO (100%)

1114	ansimission Emilancements Ami	COUNT TEO + OTTORO TEO O CONTOTTO	responsible Customer(s)
b1156.5	Upgrade at Richmond 230 kV breaker '185'		PECO (100%)
b1156.6	Upgrade at Richmond 230 kV breaker '285'		PECO (100%)
b1156.7	Upgrade at Richmond 230 kV breaker '85'		PECO (100%)
b1156.8	Upgrade at Waneeta 230 kV breaker '425'		PECO (100%)
b1156.9	Upgrade at Emilie 230 kV breaker '815'		PECO (100%)
b1156.10	Upgrade at Plymouth Meeting 230 kV breaker '265'		PECO (100%)
b1156.11	Upgrade at Croydon 230 kV breaker '115'		PECO (100%)
b1156.12	Replace Emilie 138 kV breaker '190'		PECO (100%)
b1178	Add a second 230/138 kV transformer at Chichester. Add an inductor in series with the parallel transformers		JCPL (4.14%) / Neptune* (0.44%) / PECO (82.19%) / ECP** (0.33%) / HTP*** (0.32%) / PSEG (12.10%) / RE (0.48%)
b1179	Replace terminal equipment at Eddystone and Saville and replace underground section of the line		PECO (100%)
b1180.1	Replace terminal equipment at Chichester		PECO (100%)
b1180.2	Replace terminal equipment at Chichester		PECO (100%)
b1181	Install 230/138 kV transformer at Eddystone		PECO (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

required i	ransmission Ennancements Ani	iuai Revenue Requirement	Responsible Customer(s)
b1182	Reconductor Chichester  – Saville 138 kV line and upgrade terminal equipment		JCPL (5.08%) / Neptune* (0.54%) / PECO (78.85%) / ECP** (0.39%) / HTP*** (0.38%) / PSEG (14.20%) / RE (0.56%)
b1183	Replace 230/69 kV transformer #6 at Cromby. Add two 50 MVAR 230 kV banks at Cromby		PECO (100%)
b1184	Add 138 kV breakers at Cromby, Perkiomen, and North Wales; add a 35 MVAR capacitor at Perkiomen 138 kV		PECO (100%)
b1185	Upgrade Eddystone 230 kV breaker #365		PECO (100%)
b1186	Upgrade Eddystone 230 kV breaker #785		PECO (100%)
b1197	Reconductor the PECO portion of the Burlington – Croydon circuit		PECO (100%)
b1198	Replace terminal equipments including station cable, disconnects and relay at Conowingo 230 kV station		PECO (100%)
b1338	Replace Printz 230 kV breaker '225'		PECO (100%)
b1339	Replace Printz 230 kV breaker '315'		PECO (100%)
b1340	Replace Printz 230 kV breaker '215'		PECO (100%)
b1398.6	Reconductor the Camden  – Richmond 230 kV circuit (PECO portion) and upgrade terminal equipments at Camden substations		JCPL (12.82%) / NEPTUNE* (1.18%) / HTP*** (0.79%) / PECO (51.08%) / PEPCO (0.57%) / ECP** (0.85%) / PSEG (31.46%) / RE (1.25%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

required 11	ansmission Emancements. Annual Revenue Requirement	Responsible Customer(s)
	Reconductor Richmond –	JCPL (12.82%) / NEPTUNE*
	Waneeta 230 kV and	(1.18%) / HTP*** (0.79%) /
b1398.8	replace terminal	PECO (51.08%) / PEPCO
	equipments at Richmond	(0.57%) / ECP** (0.85%) /
	and Waneeta substations	PSEG (31.46%) / RE (1.25%)
1 1200 12	Replace Graysferry 230	
b1398.12	kV breaker '115'	PECO (100%)
		AEC (1.67%) / AEP (13.94%)
		/ APS (5.64%) / ATSI
		(8.02%) / BGE (4.12%) /
		ComEd (13.46%) / Dayton
		(2.12%) / DEOK (3.37%) /
		DL (1.76%) / DPL (2.55%) /
	Unavada Dagah Pattam	Dominion (12.97%) / EKPC
b1398.13	Upgrade Peach Bottom 500 kV breaker '225'	(1.81%) / JCPL (3.92%) / ME
	300 KV breaker 223	(1.95%) / NEPTUNE*
		(0.24%) / OVEC (0.07%) /
		PECO (5.39%) / PENELEC
		(1.84%) / PEPCO (3.71%) /
		PPL (4.78%) / PSEG (6.40%)
		/ RE (0.27%)†
b1398.14	Replace Whitpain 230	<b></b> (4.000 ()
	kV breaker '105'	PECO (100%)
	Upgrade the PECO	/
	portion of the Camden –	BGE (3.05%) / ME (0.83%) /
b1590.1	Richmond 230 kV to a	HTP*** (0.21%) / PECO
01230.1	six wire conductor and	(91.36%) / PEPCO (1.93%) /
	replace terminal	PPL (2.46%) / ECP**
	equipment at Richmond.	(0.16%)
b1591	Reconductor the	BGE (4.54%) / DL (0.27%) /
	underground portion of	ME (1.04%) / HTP***
	the Richmond – Waneeta	(0.03%) / PECO (88.08%) /
	230 kV and replace	PEPCO (2.79%) / PPL
	terminal equipment	(3.25%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

<sup>†</sup>Cost allocations associated with Regional Facilities and Necessary Lower Voltage Facilities associated with the project

### PECO Energy Company (cont.)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s)

Required 1	ransmission Ennancements Ann	uai Kevenue Kequiremeni	Responsible Customer(s)
	Install a second Waneeta		
b1717	230/138 kV transformer		HTP*** (0.04%) / PECO
	on a separate bus section		(99.96%)
	Reconductor the		
b1718	Crescentville - Foxchase		
	138 kV circuit		PECO (100%)
	Reconductor the		
b1719	Foxchase - Bluegrass 138		
	kV circuit		PECO (100%)
	Increase the effective		
	rating of the Eddystone		
b1720	230/138 kV transformer		
	by replacing a circuit		
	breaker at Eddystone		PECO (100%)
	Increase the rating of the		
b1721	Waneeta - Tuna 138 kV		
01/21	circuit by replacing two		
	138 kV CTs at Waneeta		PECO (100%)
	Increase the normal		
	rating of the Cedarbrook		
	- Whitemarsh 69 kV		
b1722	circuit by changing the		
	CT ratio and replacing		
	station cable at		
	Whitemarsh 69 kV		PECO (100%)
	Install 39 MVAR		
b1768	capacitor at Cromby 138		
	kV bus		PECO (100%)
	Add a 3rd 230 kV		PECO (69.62%) / JCPL
	transmission line between		(6.02%) / ATSI (1.23%) /
b1900	Chichester and Linwood		PSEG (20.83%) / RE
01900			(0.83%) / NEPTUNE*
	substations and remove		(0.59%) / ECP** (0.45%) /
	the Linwood SPS		HTP*** (0.43%)
1.01.40	Install a 3rd Emilie		PECO (97.04%) / ECP**
b2140	230/138 kV transformer		(1.62%) / HTP*** (1.34%)
	Replace two sections of		
b2145	conductor inside		
	Richmond substation		PECO (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC \*\*East Coast Power, L.L.C.

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

#### **SCHEDULE 12 – APPENDIX**

### (9) PPL Electric Utilities Corporation

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Rebuild 12 miles of S. Akron – Berks 230 kV to double circuit, looping b0074 Met Ed's S. Lebanon – S. Reading line into Berks; replacement of S. Reading 230 kV breaker 107252 PPL (100%) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL Replace wavetrap at (2.55%) / Dominion (12.97%) / Hosensack 500 kV EKPC (1.81%) / JCPL (3.92%) / b0171.2 substation to increase ME (1.95%) / NEPTUNE\* rating of Elroy -(0.24%) / OVEC (0.07%) / PECO Hosensack 500 kV (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** AEC (8.03%) / DPL (8.44%) / JCPL (19.98%) / PECO (63.55%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements		Annual Revenue Requirement Responsible Customer(s)
b0172.1	Replace wave trap at Alburtis 500 kV substation	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0284.2	Replace two wave traps at Juniata 500 kV – on the two Juniata – Airydale 500 kV	(55.15%) / RE (2.14%)   Load-Ratio Share Allocation:   AEC (1.67%) / AEP (13.94%) /   APS (5.64%) / ATSI (8.02%) /   BGE (4.12%) / ComEd (13.46%)   / Dayton (2.12%) / DEOK   (3.37%) / DL (1.76%) / DPL   (2.55%) / Dominion (12.97%) /   EKPC (1.81%) / JCPL (3.92%) /   ME (1.95%) / NEPTUNE*   (0.24%) / OVEC (0.07%) / PECO   (5.39%) / PENELEC (1.84%) /   PEPCO (3.71%) / PPL (4.78%) /   PSEG (6.40%) / RE (0.27%)   DFAX Allocation:   AEC (5.20%) / BGE (19.46%) /   JCPL (18.23%) / ME (11.67%) /   NEPTUNE* (2.00%) / PECO   (18.42%) / PSEG (24.09%) / RE   (0.93%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Changes at Juniata 500 b0284.4 kV substation PPL (100%) Replace wavetrap at the Martins Creek 230 kV b0293.1 bus PPL (100%) Raise the operating temperature of the 2b0293.2 1590 ACSR to 140C for the Martins Creek -Portland 230 kV circuit PPL (100%) Spare Juniata 500/230 b0440 kV transformer PPL (100%) Build a new substation with two 150 MVA transformers between Dauphin and Hummelstown 230/69 b0468 kV substations by JCPL (4.55%) / NEPTUNE\* sectionalizing the (0.37%) / PECO (1.79%) / Middletown Junction – PENELEC (0.33%) / PPL (86.63%) / ECP\*\* (0.18%) / New Lebanon 230 kV PSEG (5.93%) / RE (0.22%) line

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup> East Coast Power, L.L.C.

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Install 130 MVAR b0469 capacitor at West Shore 230 kV line PPL (100%) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / Build new 500 kV transmission facilities EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE\* from Susquehanna to b0487 Pennsylvania – New (0.24%) / OVEC (0.07%) / Jersey border at PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL Bushkill (4.78%) / PSEG (6.40%) / RE (0.27%)**DFAX Allocation:** JCPL (30.99%) / NEPTUNE\* (3.92%) / PSEG (62.66%) / RE (2.43%)Install Lackawanna 500/230 kV transformer and b0487.1 upgrade 230 kV PENELEC (16.90%) / PPL (77.59%) / ECP\*\* (0.19%) / substation and switchyard PSEG (5.13%) / RE (0.19%) Conastone – Otter Creek 230 kV -Reconductor AEC (6.27%) / DPL (8.65%) / JCPL (14.54%) / ME (10.59%) / approximately 17.2 b0500.1 miles of 795 kcmil Neptune\* (1.37%) / PECO (15.66%) / PPL (21.02%) / ACSR with new 795 ECP\*\* (0.57%) / PSEG kemil ACSS operated at 160 deg C (20.56%) / RE (0.77%)

The Annual Revenue Requirements associated with the Transmission Enhancement Charges are set forth and determined in Appendix A to Attachment H-8G.

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup> East Coast Power, L.L.C.

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s)

Required	i ransmission Ennancements Ar	inuai Revenue Requiremen	t Responsible Customer(s)
b0558	Install 250 MVAR capacitor at Juniata 500 kV substation		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0593	Eldred – Pine Grove 69 kV line Rebuild Part 2: 8 miles		PPL (100%)
b0595	Rebuild Lackawanna – Edella 69 kV line to double circuit		PPL (100%)
b0596	Reconductor and rebuild Stanton – Providence 69 kV #1 and #2 lines with 69 kV design; approximately 8 miles total		PPL (100%)
b0597	Reconductor Suburban – Providence 69 kV #1 and resectionalize the Suburban 69 kV lines		PPL (100%)
b0598	Reconductor Suburban Taps #1 and #2 for 69 kV line portions		PPL (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b0600	Tripp Park Substation: 69 kV tap off Stanton – Providence 69 kV line #3 to new substation		PPL (100%)
b0601	Jessup Substation: New 138/69 kV tap off of Peckville – Jackson 138/69 kV line		PPL (100%)
b0604	Add 150 MVA, 230/138/69 transformer #6 to Harwood substation		PPL (100%)
b0605	Reconductor Stanton – Old Forge 69 kV line and resectionalize the Jenkins – Scranton 69 kV #1 and #2 lines		PPL (100%)
b0606	New 138 kV tap off Monroe – Jackson 138 kV #1 line to Bartonsville substation		PPL (100%)
b0607	New 138 kV taps off Monroe – Jackson 138 kV lines to Stroudsburg substation		PPL (100%)
b0608	New 138 kV tap off Siegfried – Jackson 138 kV #2 to transformer #2 at Gilbert substation		PPL (100%)
b0610	At South Farmersville substation, a new 69 kV tap off Nazareth – Quarry #2 to transformer #2		PPL (100%)
b0612	Rebuild Siegfried – North Bethlehem portion (6.7 miles) of Siegfried – Quarry 69 kV line		PPL (100%)
b0613	East Tannersville Substation: New 138 kV tap to new substation		PPL (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Elroy substation expansion and new Elroy b0614 - Hatfield 138/69 kV double circuit lines (1.9 miles) PPL (100%) Reconductor and rebuild 12 miles of Seidersville – b0615 Quakerstown 138/69 kV and a new 75 MVA, 230/69 kV transformer #4 PPL (100%) New Springfield 230/69 kV substation and b0616 transmission line connections PPL (100%) New 138 kV line and b0620 terminal at Monroe 230/138 substation PPL (100%) New 138 kV line and terminal at Siegfried 230/138 kV substation b0621 and add a second circuit to Siegfried – Jackson for 8.0 miles PPL (100%) 138 kV yard upgrades and transmission line b0622 rearrangements at Jackson 138/69 kV substation PPL (100%) New West Shore -Whitehill Taps 138/69 kV b0623 double circuit line (1.3 miles) PPL (100%) Reconductor Cumberland Wertzville 69 kV b0624 portion (3.7 miles) of Cumberland – West Shore 69 kV line PPL (100%) Reconductor Mt. Allen – Rossmoyne 69 kV b0625 portions (1.6 miles) of West Shore – Cumberland #3 and #4 lines PPL (100%)

Required '	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b0627	Replace UG cable from Walnut substation to Center City Harrisburg substation for higher ampacity (0.25 miles)		PPL (100%)
b0629	Lincoln substation: 69 kV tap to convert to modified Twin A		PPL (100%)
b0630	W. Hempfield – Donegal 69 kV line: Reconductor / rebuild from Landisville Tap – Mt. Joy (2 miles)		PPL (100%)
b0631	W. Hempfield – Donegal 69 kV line: Reconductor / rebuild to double circuit from Mt. Joy – Donegal (2 miles)		PPL (100%)
b0632	Terminate new S.  Manheim – Donegal 69 kV circuit into S.  Manheim 69 kV #3		PPL (100%)
b0634	Rebuild S. Manheim – Fuller 69 kV portion (1.0 mile) of S. Manheim – West Hempfield 69 kV #3 line into a 69 kV double circuit		PPL (100%)
b0635	Reconductor Fuller Tap – Landisville 69 kV (4.1 miles) into a 69 kV double circuit		PPL (100%)
b0703	Berks substation modification on Berks – South Akron 230 kV line. Modification will isolate the line fault on the South Akron line and will allow Berks transformer #2 to be energized by the South Lebanon 230 kV circuit		PPL (100%)

Required	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b0705	New Derry – Millville 69 kV line		PPL (100%)
ь0707	Construct Bohemia – Twin Lakes 69 kV line, install a 10.9 MVAR capacitor bank near Bohemia 69 kV substation		PPL (100%)
ь0708	New 69 kV double circuit from Jackson – Lake Naomi Tap		PPL (100%)
ь0709	Install new 69 kV double circuit from Carlisle – West Carlisle		PPL (100%)
b0710	Install a third 69 kV line from Reese's Tap to Hershey substation		PPL (100%)
b0711	New 69 kV that taps West Shore – Cumberland 69 kV #1 to Whitehill 69 kV substation		PPL (100%)
b0712	Construct a new 69 kV line between Strassburg Tap and the Millwood – Engleside 69 kV #1 line		PPL (100%)
b0713	Construct a new 138 kV double circuit line between Dillersville Tap and the West Hempfield – Prince 138 kV line		PPL (100%)
b0714	Prepare Roseville Tap for 138 kV conversion		PPL (100%)
b0715	Transfer S. Akron – S. Manheim #1 and #2 lines from the S. Akron 69 kV Yard to the S. Akron 138 kV Yard; Install switches on S. Akron – S. Manheim 138 kV #1 and #2 lines		PPL (100%)

Required	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b0716	Add a second 69 kV line from Morgantown – Twin Valley		PPL (100%)
b0717	Rebuild existing Brunner Island – West Shore 230 kV line and add a second Brunner Island – West Shore 230 kV line		PPL (100%)
b0718	SPS scheme to drop 190 MVA of 69 kV radial load at West Shore and 56 MVA of 69 kV radial load at Cumberland		PPL (100%)
b0719	SPS scheme at Jenkins substation to open the Stanton #1 and Stanton #2 230 kV circuit breakers after the second contingency		PPL (100%)
b0791	Add a fourth 230/69 kV transformer at Stanton		PENELEC (9.55%) / PPL (90.45%)
b1074	Install motor operators on the Jenkins 230 kV '2W' disconnect switch and build out Jenkins Bay 3 and have MOD '3W' operated as normally open		PPL (100%)
b0881	Install motor operators on Susquehanna T21 - Susquehanna 230 kV line East CB at Susquehanna 230 kV switching station		PPL (100%)
b0908	Install motor operators at South Akron 230 kV		PPL (100%)

Required	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b0909	Convert Jenkins 230 kV yard into a 3-breaker ring bus		PPL (100%)
b0910	Install a second 230 kV line between Jenkins and Stanton		PPL (100%)
b0911	Install motor operators at Frackville 230 kV		PPL (100%)
b0912	Install 2, 10.8 MVAR capacitor banks at Scranton 69 kV		PPL (100%)
b0913	Extend Cando Tap to the Harwood-Jenkins #2 69 kV line		PPL (100%)
b0914	Build a 3rd 69 kV line from Harwood to Valmont Taps		PPL (100%)
b0915	Replace Walnut-Center City 69 kV cable		PPL (100%)
b0916	Reconductor Sunbury- Dalmatia 69 kV line		PPL (100%)
b1021	Install a new (#4) 138/69 kV transformer at Wescosville		PPL (100%)
b1196	Remove the Siegfried bus tie breaker and install a new breaker on the Martins Creek 230 kV line west bay to maintain two ties between the 230 kV buses		PPL (100%)
b1201	Rebuild the Hercules Tap to Double Circuit 69 kV		PPL (100%)

Required '	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b1202	Mack-Macungie Double Tap, Single Feed Arrangement		PPL (100%)
b1203	Add the 2nd Circuit to the East Palmerton-Wagners- Lake Naomi 138/69 kV Tap		PPL (100%)
b1204	New Breinigsville 230-69 kV Substation		PPL (100%)
b1205	Siegfried-East Palmerton #1 69 kV Line- Install new 69 kV LSAB, Sectionalize, and Transfer Treichlers Substation		PPL (100%)
b1206	Siegfried-Quarry #1 & #2 69 kV Lines- Rebuild 3.3 mi from Quarry Substation to Macada Taps		PPL (100%)
b1209	Convert Neffsville Taps from 69 kV to 138 kV Operation		PPL (100%)
b1210	Convert Roseville Taps from 69 kV to 138 kV Operation (Part 1 – operate on the 69 kV system)		PPL (100%)
b1211	Convert Roseville Taps from 69 kV to 138 kV Operation (Part 2 – operate on the 138 kV system)		PPL (100%)
b1212	New 138 kV Taps to Flory Mill 138/69 kV Substation		PPL (100%)

Required T	Fransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b1213	Convert East Petersburg Taps from 69 kV to 138 kV operation, install two 10.8 MVAR capacitor banks		PPL (100%)
b1214	Terminate South Manheim-Donegal #2 at South Manheim, Reduce South Manheim 69 kV Capacitor Bank, Resectionalize 69 kV		PPL (100%)
b1215	Reconductor and rebuild 16 miles of Peckville- Varden 69 kV line and 4 miles of Blooming Grove-Honesdale 69 kV line		PPL (100%)
b1216	Build approximately 2.5 miles of new 69 kV transmission line to provide a "double tap – single feed" connection to Kimbles 69/12 kV substation		PPL (100%)
b1217	Provide a "double tap – single feed" connection to Tafton 69/12 kV substation		PPL (100%)
b1524	Build a new Pocono 230/69 kV substation		PPL (100%)
b1524.1	Build approximately 14 miles new 230 kV South Pocono – North Pocono line		PPL (100%)
b1524.2	Install MOLSABs at Mt. Pocono substation		PPL (100%)

Required T	ransmission Enhancements	Annual Revenue Requirem	nent Responsible Customer(s)
b1525	Build new West Pocono 230/69 kV Substation		PPL (100%)
b1525.1	Build approximately 14 miles new 230 kV Jenkins-West Pocono 230 kV Line		PPL (100%)
b1525.2	Install Jenkins 3E 230 kV circuit breaker		PPL (100%)
b1526	Install a new Honeybrook  – Twin Valley 69/138 kV tie		PPL (100%)
b1528	Install Motor-Operated switches on the Wescosville-Trexlertown #1 & #2 69 kV lines at East Texas Substation		PPL (100%)
b1529	Add a double breaker 230 kV bay 3 at Hosensack		PPL (100%)
b1530	Replace Lock Haven 69 kV ring bus with standard breaker and half design		PPL (100%)
b1532	Install new 32.4 MVAR capacitor bank at Sunbury		PPL (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Rebuild Lycoming-Lock Haven #1 and b1533 Lycoming-Lock Haven #2 69 kV lines PPL (100%) Rebuild 1.4 miles of the b1534 Sunbury-Milton 69 kV PPL (100%) AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / Re-configure the DEOK (3.37%) / DL (1.76%) / Breinigsville 500 kV DPL (2.55%) / Dominion b1601 substation with addition (12.97%) / EKPC (1.81%) / two 500 kV circuit JCPL (3.92%) / ME (1.95%) / NEPTUNE\* (0.24%) / OVEC breakers (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)† Re-configure the Elimsport 230 kV b1602 substation to breaker and half scheme and install 80 MVAR capacitor PPL (100%) Install a 90 MVAR cap b1740 bank on the Frackville 230 kV bus #207973 PPL (100%) Install a 3rd West Shore b1756 230/69 kV transformer PPL (100%) Install a 230 kV motoroperated air-break switch b1757 on the Clinton - Elimsport 230 kV line PPL (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>†</sup>Cost allocations associated with Regional Facilities and Necessary Lower Voltage Facilities associated with the project

Required	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
ь1758	Rebuild 1.65 miles of Columbia - Danville 69 kV line		PPL (100%)
b1759	Install a 69 kV 16.2 MVAR Cap at Milton substation		PPL (100%)
b1760	Install motor operated devices on the existing disconnect switches that are located on each side of all four 230 kV CBs at Stanton		PPL (100%)
b1761	Build a new Paupack - North 230 kV line (Approximately 21 miles)		PPL (100%)
b1762	Replace 3.7 miles of the existing 230 kV Blooming Grove - Peckville line by building 8.4 miles of new 230 kV circuit onto the Lackawanna - Hopatcong tower-line		PPL (100%)
b1763	Re-terminate the Peckville - Jackson and the Peckville - Varden 69 kV lines from Peckville into Lackawanna		PPL (100%)
b1764	Build a new 230-69 kV substations (Paupack)		PPL (100%)
b1765	Install a 16.2 MVAR capacitor bank at Bohemia 69-12 kV substation		PPL (100%)
b1766	Reconductor/rebuild 3.3 miles of the Siegfried - Quarry #1 and #2 lines		PPL (100%)
b1767	Install 6 motor-operated disconnect switches at Quarry substation		PPL (100%)

Required	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b1788	Install a new 500 kV circuit breaker at Wescosville		PPL (100%)
b1890	Add a second 230/69 kV transformer at North Pocono (NE/Pocono Reliability Project)		PPL (100%)
b1891	Build a new 230/138 kV Yard at Lackawanna (138 kV conversion from Lackawanna to Jenkins)		PPL (100%)
b1892	Rebuild the Throop Taps for 138 kV operation (138 kV Conversion from Lackawanna to Jenkins)		PPL (100%)
b1893	Swap the Staton - Old Forge and Stanton - Brookside 69 kV circuits at Stanton (138 kV Conversion from Lackawanna to Jenkins)		PPL (100%)
b1894	Rebuild and re-conductor 2.5 miles of the Stanton - Avoca 69 kV line		PPL (100%)
b1895	Rebuild and re-conductor 4.9 miles of the Stanton - Providence #1 69 kV line		PPL (100%)
b1896	Install a second 230/138 kV transformer and expand the 138 kV yard at Monroe		PPL (100%)
ь1897	Build a new 230/138 kV substation at Jenkins (138 kV Conversion from Lackawanna to Jenkins)		PPL (100%)
b1898	Install a 69 kV Tie Line between Richfield and Dalmatia substations		PPL (100%)
b2004	Replace the CTs and switch in South Akron Bay 4 to increase the rating		PPL (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace the CTs and switch in SAKR Bay 3 to increase the rating of the b2005 Millwood-South Akron 230 kV Line and of the rating in Bay 3 PPL (100%) AEC (1.10%) / ECP\*\* (0.37%) / HTP\*\*\* (0.37%) / **Install North Lancaster** JCPL (9.61%) / ME (19.42%) / b2006 500/230 kV substation NEPTUNE\* (0.75%) / PECO (below 500 kV portion) (6.01%) / PPL (50.57%) / PSEG (11.35%) / RE (0.45%) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion Install North Lancaster b2006.1 500/230 kV substation (12.97%) / EKPC (1.81%) / (500 kV portion) JCPL (3.92%) / ME (1.95%) / NEPTUNE\* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** PPL (100%) Construct a new  $230/\overline{69}$ kV North Lancaster substation. The sub will b2006.2 be supplied from the SAKR-BERK 230 kV Line PPL (100%) Construct new 69/138 kV transmission from North b2006.3 Lancaster 230/69 kV sub to Brecknock and Honeybrook areas PPL (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup> East Coast Power, L.L.C.

<sup>\*\*\*</sup> Hudson Transmission Partners, LLC

Required Transmission Enhancements		Annual Revenue Requirem	nent ]	Responsible Customer(s)
b2007	Install a 90 MVAR capacitor bank at the Frackville 230 kV			
	Substation		]	PPL (100%)
b2158	Install 10.8 MVAR capacitor at West Carlisle 69/12 kV substation		]	PPL (100%)

#### **SCHEDULE 12 – APPENDIX**

### (12) Public Service Electric and Gas Company

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Convert the Bergen-Leonia 138 kV circuit to b0025 230 kV circuit. PSEG (100%) Add 150 MVAR capacitor b0090 at Camden 230 kV PSEG (100%) Add 150 MVAR capacitor at Aldene 230 kV b0121 PSEG (100%) Bypass the Essex 138 kV b0122 series reactors PSEG (100%) Add Special Protection Scheme at Bridgewater to automatically open 230 kV breaker for outage of Branchburg – Deans 500 kV and Deans 500/230 kV b0125 #1 transformer PSEG (100%) Replace wavetrap on Branchburg – Flagtown b0126 230 kV PSEG (100%) Replace terminal equipment to increase Brunswick - Adams -Bennetts Lane 230 kV to b0127 conductor rating PSEG (100%) Replace wavetrap on Flagtown - Somerville b0129 230 kV PSEG (100%) Replace all derated Branchburg 500/230 kV AEC (1.36%) / JCPL (47.76%) / b0130 transformers PSEG (50.88%) Upgrade or Retension PSEG portion of Kittatinny – Newton 230 JCPL (51.11%) / PSEG Kv circuit (45.96%) / RE (2.93%) b0134

The Annual Revenue Requirement for all Public Service Electric and Gas Company Projects (Required Transmission Enhancements) in this Section 12 shall be as specified in Attachment 7 of Attachment H-10A and under the procedures detailed in Attachment H-10B.

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Build new Essex – Aldene 230 kV cable connected through a phase angle PSEG (21.78%) / JCPL regulator at Essex b0145 (73.45%) /RE (4.77%) Add 100 MVAR capacitor at West Orange 138 kV b0157 substation PSEG (100%) Close the Sunnymeade "C" and "F" bus tie b0158 PSEG (100%) Make the Bayonne reactor b0159 permanent installation PSEG (100%) Relocate the X-2250 circuit from Hudson 1-6 PSEG (100%) b0160 bus to Hudson 7-12 bus Install 230/138 kV transformer at Metuchen b0161 substation PSEG (99.80%) / RE (0.20%) Upgrade the Edison – Meadow Rd 138 kV "Q" b0162 circuit PSEG (100%) Upgrade the Edison – Meadow Rd 138 kV "R" b0163 circuit PSEG (100%) Build a new 230 kV section from Branchburg – Flagtown and move the b0169 Flagtown – Somerville AEC (1.72%) / JCPL (25.94%) 230 kV circuit to the new / NEPTUNE\* (10.62%) / PSEG section (59.59%) / ECP\*\* (2.13%) Reconductor the JCLP (42.95%) / NEPTUNE\* Flagtown-Somervilleb0170 Bridgewater 230 kV (17.90%) / PSEG (38.36%) RE circuit with 1590 ACSS (0.79%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

Required	Transmission Enhancements	Annual Revenue Requirement Responsible Customer(s)
		<b>Load-Ratio Share Allocation:</b>
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd
		(13.46%) / Dayton (2.12%) /
		DEOK (3.37%) / DL (1.76%) /
		DPL (2.55%) / Dominion
		(12.97%) / EKPC (1.81%) /
1 0 1 7 0 0	Replace wave trap at	JCPL (3.92%) / ME (1.95%) /
b0172.2	Branchburg 500 kV	NEPTUNE* (0.24%) / OVEC
	substation	(0.07%) / PECO (5.39%) /
		PENELEC (1.84%) / PEPCO
		(3.71%) / PPL (4.78%) / PSEG
		(6.40%) / RE (0.27%)
		DFAX Allocation:
		AEC (7.32%) / JCPL (30.49%)
		/ NEPTUNE* (4.90%) / PSEG
		(55.15%) / RE (2.14%)
	Replace Hudson 230 kV	
b0184	circuit breakers #1-2	PSEG (100%)
	Replace Deans 230 kV	
b0185	circuit breakers #9-10	PSEG (100%)
	Replace Essex 230 kV	
b0186	circuit breaker #5-6	PSEG (100%)
	Install 230/138 kV	
	transformer at Bergen	PENELEC (16.52%) / PSEG
b1082	substation	(80.29%) / RE (3.19%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Branchburg substation: replace wave trap on b0201 Branchburg-Readington 230 kV circuit PSEG (100%) Replace New Freedom 230 b0213.1 kV breaker BS2-6 PSEG (100%) Replace New Freedom 230 b0213.3 kV breaker BS2-8 PSEG (100%) Replace both 230/138 kV b0274 transformers at Roseland PSEG (96.77%) / ECP\*\* (3.23%) Upgrade the two 138 kV circuits between Roseland b0275 and West Orange PSEG (100%) Install 228 MVAR b0278 capacitor at Roseland 230 PSEG (100%) kV substation **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME Install 400 MVAR (1.95%) / NEPTUNE\* (0.24%) / b0290 capacitor in the Branchburg OVEC (0.07%) / PECO (5.39%) / 500 kV vicinity PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** AEC (7.32%) / JCPL (30.49%) / NEPTUNE\* (4.90%) / PSEG (55.15%) / RE (2.14%) Reconductor the PSEG portion of Buckingham – b0358 Pleasant Valley 230 kV, replace wave trap and metering transformer PSEG (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

Required T	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b0368	Reconductor Tosco – G22_MTX 230 kV circuit with 1033 bundled ACSS		PSEG (100%)
b0371	Make the Metuchen 138 kV bus solid and upgrade 6 breakers at the Metuchen substation		PSEG (100%)
b0372	Make the Athenia 138 kV bus solid and upgrade 2 breakers at the Athenia substation		PSEG (100%)
b0395	Replace Hudson 230 kV breaker BS4-5		PSEG (100%)
b0396	Replace Hudson 230 kV breaker BS1-6		PSEG (100%)
b0397	Replace Hudson 230 kV breaker BS3-4		PSEG (100%)
b0398	Replace Hudson 230 kV breaker BS5-6		PSEG (100%)
b0401.1	Replace Roseland 230 kV breaker BS6-7		PSEG (100%)
b0401.2	Replace Roseland 138 kV breaker O-1315		PSEG (100%)
b0401.3	Replace Roseland 138 kV breaker S-1319		PSEG (100%)
b0401.4	Replace Roseland 138 kV breaker T-1320		PSEG (100%)
b0401.5	Replace Roseland 138 kV breaker G-1307		PSEG (100%)
b0401.6	Replace Roseland 138 kV breaker P-1316		PSEG (100%)
b0401.7	Replace Roseland 138 kV breaker 220-4		PSEG (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace W. Orange 138 kV b0401.8 breaker 132-4 PSEG (100%) AEC (47.01%) / JCPL (7.04%) / Install 4<sup>th</sup> 500/230 kV NEPTUNE\* (0.28%) / PECO transformer at New Freedom b0411 (23.36%) / PSEG (22.31%) Reconductor Readington b0423 (2555) – Branchburg (4962) 230 kV circuit w/1590 ACSS PSEG (100%) Replace Readington wavetrap on Readington (2555) b0424 Roseland (5017) 230 kV circuit PSEG (100%) Reconductor Linden (4996) – Tosco (5190) 230 kV circuit w/1590 ACSS (Assumes b0425 operating at 220 degrees C) PSEG (100%) Reconductor Tosco (5190) -G22 MTX5 (90220) 230 kV circuit w/1590 ACSS (Assumes operation at 220 b0426 degrees C) PSEG (100%) Reconductor Athenia (4954) – Saddle Brook (5020) 230 kV b0427 circuit river section PSEG (100%) Replace Roseland wavetrap on Roseland (5019) – West Caldwell "G" (5089) 138 kV b0428 circuit PSEG (100%) Reconductor Kittatinny (2553) JCPL (41.91%) / NEPTUNE\* b0429 (3.59%) / PSEG (50.59%) / RE Newton (2535) 230 kV circuit w/1590 ACSS (2.23%) / ECP\*\* (1.68%) Spare Deans 500/230 kV transformer PSEG (100%) b0439 Upgrade Bayway 138 kV breaker #2-3 b0446.1 PSEG (100%) Upgrade Bayway 138 kV breaker #3-4 b0446.2 PSEG (100%) Upgrade Bayway 138 kV b0446.3 breaker #6-7 PSEG (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup> East Coast Power, L.L.C.

Required T	ransmission Enhancements	Annual Revenue Requires	ment Responsible Customer(s)
	Upgrade the breaker		
	associated with TX 132-5		
b0446.4	on Linden 138 kV		PSEG (100%)
	Install 138 kV breaker at		
b0470	Roseland and close the		
	Roseland 138 kV buses		PSEG (100%)
	Replace the wave traps at		
	both Lawrence and		
b0471	Pleasant Valley on the		
	Lawrence – Pleasant		
	Vallen 230 kV circuit		PSEG (100%)
	Increase the emergency		
b0472	rating of Saddle Brook –		
00472	Athenia 230 kV by 25%		ECP** (2.06%) / PSEG (94.41%)
	by adding forced cooling		/ RE (3.53%)
	Move the 150 MVAR		
	mobile capacitor from		
b0473	Aldene 230 kV to		
	Lawrence 230 kV		
	substation		PSEG (100%)
			<b>Load-Ratio Share Allocation:</b>
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd (13.46%)
			/ Dayton (2.12%) / DEOK
			(3.37%) / DL (1.76%) / DPL
	Build new 500 kV		(2.55%) / Dominion (12.97%) /
	transmission facilities		EKPC (1.81%) / JCPL (3.92%) /
b0489			ME (1.95%) / NEPTUNE*
00409	from Pennsylvania – New		(0.24%) / OVEC (0.07%) / PECO
	Jersey border at Bushkill		(5.39%) / PENELEC (1.84%) /
	to Roseland		PEPCO (3.71%) / PPL (4.78%) /
			PSEG (6.40%) / RE (0.27%)†
			<b>DFAX Allocation:</b>
			JCPL (36.99%) / NEPTUNE*
			(3.95%) / PSEG (56.85%) / RE
			(2.21%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

<sup>†</sup>Cost allocations associated with Regional Facilities and Necessary Lower Voltage Facilities associated with the project

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace Athenia 230 kV b0489.1 breaker 31H PSEG (100%) Replace Bergen 230 kV b0489.2 breaker 10H PSEG (100%) Replace Saddlebrook 230 b0489.3 kV breaker 21P PSEG (100%) AEC (5.09%) / ComEd (0.29%) / Dayton (0.03%) / DPL (1.76%) Install two Roseland / JCPL (32.73%) / NEPTUNE\* 500/230 kV transformers b0489.4 (6.32%) / PECO (10.04%) / as part of the Susquehanna PENELEC (0.56%) / ECP\*\* - Roseland 500 kV project (0.95%) / PSEG (40.71%) / RE (1.52%)†† **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE\* Replace Roseland 230 kV (0.24%) / OVEC (0.07%) / b0489.5 breaker '42H' with 80 kA PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)**DFAX Allocation:** JCPL (36.99%) / NEPTUNE\* (3.95%) / PSEG (56.85%) / RE (2.21%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

<sup>††</sup>Cost allocations associated with below 500 kV elements of the project

Required T	ransmission Enhancements	Annual Revenue Requirement Responsible Customer(s)
b0489.6	Replace Roseland 230 kV breaker '51H' with 80 kA	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0489.7	Replace Roseland 230 kV breaker '71H' with 80 kA	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required T	ransmission Enhancements	Annual Revenue Requirement	nt Responsible Customer(s)
b0489.8	Replace Roseland 230 kV breaker '31H' with 80 kA	B	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / GGE (4.12%) / ComEd (13.46%)
			DFAX Allocation: JCPL (36.99%) / NEPTUNE* (3.95%) / PSEG (56.85%) / RE (2.21%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Tra	ansmission Enhancements	Annual Revenue Requirement Responsible Customer(s)
b0489.9	Replace Roseland 230 kV breaker '11H' with 80 kA	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0489.10	Replace Roseland 230 kV breaker '21H'	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements		Annual Revenue Requireme	ent Responsible Customer(s)
b0489.11	Replace Roseland 230 kV breaker '32H'		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0489.12	Replace Roseland 230 kV breaker '12H'		JCPL (36.99%) / NEPTUNE* (3.95%) / PSEG (56.85%) / RE (2.21%)  Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements		Annual Revenue Requirement	
b0489.13	Replace Roseland 230 kV breaker '52H'		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0489.14	Replace Roseland 230 kV breaker '41H'		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Tra	ansmission Enhancements	Annual Revenue Requirement Responsible Customer(s)
b0489.15	Replace Roseland 230 kV breaker '72H'	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0498	Loop the 5021 circuit into New Freedom 500 kV substation	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Upgrade the 20H circuit b0498.1 breaker PSEG (100%) Upgrade the 22H circuit b0498.2 breaker PSEG (100%) Upgrade the 30H circuit b0498.3 breaker PSEG (100%) Upgrade the 32H circuit b0498.4 breaker PSEG (100%) Upgrade the 40H circuit b0498.5 breaker PSEG (100%) Upgrade the 42H circuit b0498.6 breaker PSEG (100%) AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd MAPP Project – install (13.46%) / Dayton (2.12%) / new 500 kV transmission DEOK (3.37%) / DL (1.76%) / from Possum Point to DPL (2.55%) / Dominion Calvert Cliffs and install a (12.97%) / EKPC (1.81%) / b0512 DC line from Calvert JCPL (3.92%) / ME (1.95%) / Cliffs to Vienna and a DC NEPTUNE\* (0.24%) / OVEC line from Calvert Cliffs to (0.07%) / PECO (5.39%) / Indian River PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) Install 100 MVAR b0565 capacitor at Cox's Corner 230 kV substation PSEG (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace Essex 138 kV b0578 breaker 4LM (C1355 line to ECRRF) PSEG (100%) Replace Essex 138 kV b0579 breaker 1LM (220-1 TX) PSEG (100%) Replace Essex 138 kV b0580 breaker 1BM (BS1-3 tie) PSEG (100%) Replace Essex 138 kV b0581 breaker 2BM (BS3-4 tie) PSEG (100%) Replace Linden 138 kV b0582 breaker 3 (132-7 TX) PSEG (100%) Replace Metuchen 138 kV b0592 breaker '2-2 Transfer' PSEG (100%) JCPL (36.35%) / NEPTUNE\* Reconductor with 2x1033 b0664 (18.80%) / PSEG (43.24%) / ACSS conductor RE (1.61%) JCPL (36.35%) / NEPTUNE\* Reconductor with 2x1033 b0665 (18.80%) / PSEG (43.24%) / ACSS conductor RE (1.61%) JCPL (39.41%) / NEPTUNE\* Reconductor with 2x1033 b0668 (20.38%) / PSEG (38.76%) / ACSS conductor RE (1.45%) Replace terminal b0671 equipment at both ends of line PSEG (100%) Add a bus tie breaker at b0743 Roseland 138 kV PSEG (100%) Increase operating temperature on line for b0812 one year to get 925E MVA rating PSEG (100%) BGE (1.25%) / JCPL (9.92%) / Reconductor Hudson -NEPTUNE\* (0.87%) / PEPCO b0813 South Waterfront 230 kV (1.11%) / PSEG (83.73%) / RE circuit (3.12%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) New Essex – Kearney 138 JCPL (23.49%) / NEPTUNE\* b0814 kV circuit and Kearney (1.61%) / PENELEC (5.37%) / PSEG (67.03%) / RE (2.50%) 138 kV bus tie Replace Kearny 138 kV JCPL (23.49%) / NEPTUNE\* breaker '1-SHT' with 80 b0814.1 (1.61%) / PENELEC (5.37%) / kA breaker PSEG (67.03%) / RE (2.50%) Replace Kearny 138 kV JCPL (23.49%) / NEPTUNE\* b0814.2 breaker '15HF' with 80 kA (1.61%) / PENELEC (5.37%) / PSEG (67.03%) / RE (2.50%) breaker Replace Kearny 138 kV JCPL (23.49%) / NEPTUNE\* b0814.3 breaker '14HF' with 80 kA (1.61%) / PENELEC (5.37%) / breaker PSEG (67.03%) / RE (2.50%) Replace Kearny 138 kV JCPL (23.49%) / NEPTUNE\* b0814.4 breaker '10HF' with 80 kA (1.61%) / PENELEC (5.37%) / PSEG (67.03%) / RE (2.50%) breaker Replace Kearny 138 kV JCPL (23.49%) / NEPTUNE\* b0814.5 breaker '2HT' with 80 kA (1.61%) / PENELEC (5.37%) / breaker PSEG (67.03%) / RE (2.50%) Replace Kearny 138 kV JCPL (23.49%) / NEPTUNE\* b0814.6 breaker '22HF' with 80 kA (1.61%) / PENELEC (5.37%) / PSEG (67.03%) / RE (2.50%) breaker JCPL (23.49%) / NEPTUNE\* Replace Kearny 138 kV b0814.7 breaker '4HT' with 80 kA (1.61%) / PENELEC (5.37%) / PSEG (67.03%) / RE (2.50%) breaker Replace Kearny 138 kV JCPL (23.49%) / NEPTUNE\* b0814.8 breaker '25HF' with 80 kA (1.61%) / PENELEC (5.37%) / breaker PSEG (67.03%) / RE (2.50%) Replace Essex 138 kV breaker '2LM' with 63 kA JCPL (23.49%) / NEPTUNE\* b0814.9 breaker and 2.5 cycle (1.61%) / PENELEC (5.37%) / contact parting time PSEG (67.03%) / RE (2.50%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace Essex 138 kV breaker '1BT' with 63 kA JCPL (23.49%) / NEPTUNE\* b0814.10 breaker and 2.5 cycle (1.61%) / PENELEC (5.37%) / PSEG (67.03%) / RE (2.50%) contact parting time Replace Essex 138 kV breaker '2PM' with 63 kA JCPL (23.49%) / NEPTUNE\* b0814.11 breaker and 2.5 cycle (1.61%) / PENELEC (5.37%) / contact parting time PSEG (67.03%) / RE (2.50%) JCPL (23.49%) / NEPTUNE\* Replace Marion 138 kV breaker '2HM' with 63 kA b0814.12 (1.61%) / PENELEC (5.37%) / PSEG (67.03%) / RE (2.50%) breaker Replace Marion 138 kV JCPL (23.49%) / NEPTUNE\* b0814.13 breaker '2LM' with 63 kA (1.61%) / PENELEC (5.37%) / breaker PSEG (67.03%) / RE (2.50%) Replace Marion 138 kV JCPL (23.49%) / NEPTUNE\* breaker '1LM' with 63 kA b0814.14 (1.61%) / PENELEC (5.37%) / breaker PSEG (67.03%) / RE (2.50%) Replace Marion 138 kV JCPL (23.49%) / NEPTUNE\* b0814.15 breaker '6PM' with 63 kA (1.61%) / PENELEC (5.37%) / breaker PSEG (67.03%) / RE (2.50%) Replace Marion 138 kV JCPL (23.49%) / NEPTUNE\* breaker '3PM' with 63 kA (1.61%) / PENELEC (5.37%) / b0814.16 breaker PSEG (67.03%) / RE (2.50%) Replace Marion 138 kV JCPL (23.49%) / NEPTUNE\* breaker '4LM' with 63 kA b0814.17 (1.61%) / PENELEC (5.37%) / breaker PSEG (67.03%) / RE (2.50%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace Marion 138 kV JCPL (23.49%) / NEPTUNE\* b0814.18 breaker '3LM' with 63 kA (1.61%) / PENELEC (5.37%) / breaker PSEG (67.03%) / RE (2.50%) Replace Marion 138 kV JCPL (23.49%) / NEPTUNE\* b0814.19 breaker '1HM' with 63 kA (1.61%) / PENELEC (5.37%) / PSEG (67.03%) / RE (2.50%) breaker Replace Marion 138 kV JCPL (23.49%) / NEPTUNE\* breaker '2PM3' with 63 b0814.20 (1.61%) / PENELEC (5.37%) / PSEG (67.03%) / RE (2.50%) kA breaker Replace Marion 138 kV JCPL (23.49%) / NEPTUNE\* b0814.21 breaker '2PM1' with 63 (1.61%) / PENELEC (5.37%) / kA breaker PSEG (67.03%) / RE (2.50%) JCPL (23.49%) / NEPTUNE\* Replace ECRR 138 kV b0814.22 (1.61%) / PENELEC (5.37%) / breaker '903' PSEG (67.03%) / RE (2.50%) JCPL (23.49%) / NEPTUNE\* Replace Foundry 138 kV b0814.23 (1.61%) / PENELEC (5.37%) / breaker '21P' PSEG (67.03%) / RE (2.50%) Change the contact parting time on Essex 138 kV JCPL (23.49%) / NEPTUNE\* b0814.24 breaker '3LM' to 2.5 (1.61%) / PENELEC (5.37%) / PSEG (67.03%) / RE (2.50%) cvcles Change the contact parting time on Essex 138 kV JCPL (23.49%) / NEPTUNE\* b0814.25 breaker '2BM' to 2.5 (1.61%) / PENELEC (5.37%) / cycles PSEG (67.03%) / RE (2.50%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Change the contact parting time on Essex 138 kV JCPL (23.49%) / NEPTUNE\* b0814.26 breaker '1BM' to 2.5 (1.61%) / PENELEC (5.37%) / PSEG (67.03%) / RE (2.50%) cycles Change the contact parting time on Essex 138 kV JCPL (23.49%) / NEPTUNE\* b0814.27 breaker '3PM' to 2.5 (1.61%) / PENELEC (5.37%) / cycles PSEG (67.03%) / RE (2.50%) Change the contact parting time on Essex 138 kV JCPL (23.49%) / NEPTUNE\* b0814.28 breaker '4LM' to 2.5 (1.61%) / PENELEC (5.37%) / cycles PSEG (67.03%) / RE (2.50%) Change the contact parting time on Essex 138 kV JCPL (23.49%) / NEPTUNE\* b0814.29 breaker '1PM' to 2.5 (1.61%) / PENELEC (5.37%) / cycles PSEG (67.03%) / RE (2.50%) Change the contact parting time on Essex 138 kV JCPL (23.49%) / NEPTUNE\* b0814.30 breaker '1LM' to 2.5 (1.61%) / PENELEC (5.37%) / cycles PSEG (67.03%) / RE (2.50%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Tr	ransmission Enhancements	Annual Revenue Requirement	nt Responsible Customer(s)
b0829	Build Branchburg to Roseland 500 kV circuit as part of Branchburg – Hudson 500 kV project		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0829.6	Replace Branchburg 500 kV breaker 91X		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0829.9	Replace Branchburg 230 kV breaker 102H		PSEG (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace Branchburg 230 b0829.11 kV breaker 32H PSEG (100%) Replace Branchburg 230 b0829.12 kV breaker 52H PSEG (100%) AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL Build Roseland - Hudson (2.55%) / Dominion (12.97%) / 500 kV circuit as part of EKPC (1.81%) / JCPL (3.92%) / b0830 Branchburg – Hudson ME (1.95%) / NEPTUNE\* 500 kV project (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)Replace Roseland 230 b0830.1 kV breaker '82H' with 80 kA PSEG (100% Replace Roseland 230 b0830.2 kV breaker '91H' with 80 kA PSEG (100%) Replace Roseland 230 kV breaker '22H' with 80 b0830.3 PSEG (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace 138/13 kV transformers with 230/13 ComEd (2.51%) / Dayton b0831 kV units as part of (0.09%) / PENELEC (2.75%) / Branchburg – Hudson 500 ECP\*\* (2.45%) / PSEG kV project (88.74%) / RE (3.46%) AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL Build Hudson 500 kV (2.55%) / Dominion (12.97%) / switching station as part of EKPC (1.81%) / JCPL (3.92%) / b0832 Branchburg – Hudson 500 ME (1.95%) / NEPTUNE\* kV project (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL Build Roseland 500 kV (2.55%) / Dominion (12.97%) / switching station as part of EKPC (1.81%) / JCPL (3.92%) / b0833 Branchburg – Hudson 500 ME (1.95%) / NEPTUNE\* kV project (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Convert the E-1305/F-ComEd (2.51%) / Dayton (0.09%) / PENELEC (2.75%) / 1306 to one 230 kV circuit b0834 ECP\*\* (2.45%) / PSEG as part of Branchburg – Hudson 500 kV project (88.74%) / RE (3.46%) Build Hudson 230 kV transmission lines as part of Roseland – Hudson 500 ComEd (2.51%) / Dayton b0835 kV project as part of (0.09%) / PENELEC (2.75%) / ECP\*\* (2.45%) / PSEG Branchburg – Hudson 500 kV project (88.74%) / RE (3.46%) Install transformation at new Hudson 500 kV switching station and b0836 perform Hudson 230 kV ComEd (2.51%) / Dayton (0.09%) / PENELEC (2.75%) / and 345 kV station work as ECP\*\* (2.45%) / PSEG part of Branchburg – (88.74%) / RE (3.46%) Hudson 500 kV project Replace Hudson 230 kV b0882 breaker 1HA with 80 kA PSEG (100%) Replace Hudson 230 kV b0883 breaker 2HA with 80 kA PSEG (100%) Replace Hudson 230 kV b0884 breaker 3HB with 80 kA PSEG (100%) Replace Hudson 230 kV b0885 breaker 4HA with 80 kA PSEG (100%) Replace Hudson 230 kV b0886 breaker 4HB with 80 kA PSEG (100%) Replace Bergen 230 kV b0889 breaker '21H' PSEG (100%) Upgrade New Freedom b0890 230 kV breaker '21H' PSEG (100%) Upgrade New Freedom b0891 230 kV breaker '31H' PSEG (100%) Replace ECRR 138 kV b0899 breaker 901 PSEG (100%) Replace ECRR 138 kV b0900 breaker 902 PSEG (100%)

<sup>\*\*</sup>East Coast Power, L.L.C.

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace Linden 138 kV b1013 breaker '7PB' PSEG (100%) JCPL (29.01%) / NEPTUNE\* Reconductor South Mahwah b1017 Waldwick 345 kV J-3410 (2.74%) / PSEG (64.85%) / RE (2.53%) / ECP\*\* (0.87%) circuit JCPL (29.18%) / NEPTUNE\* Reconductor South Mahwah b1018 (2.74%) / PSEG (64.68%) / RE Waldwick 345 kV K-3411 (2.53%) / ECP\*\* (0.87%) circuit Replace wave trap, line disconnect and ground switch b1019.1 at Roseland on the F-2206 circuit PSEG (100%) Replace wave trap, line disconnect and ground switch b1019.2 at Roseland on the B-2258 circuit PSEG (100%) Replace 1-2 and 2-3 section disconnect and ground b1019.3 switches at Cedar Grove on the F-2206 circuit PSEG (100%) Replace 1-2 and 2-3 section disconnect and ground b1019.4 switches at Cedar Grove on the B-2258 circuit PSEG (100%) Replace wave trap, line disconnect and ground switch b1019.5 at Cedar Grove on the F-2206 circuit PSEG (100%) Replace line disconnect and b1019.6 ground switch at Cedar Grove on the K-2263 circuit PSEG (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace 2-4 and 4-5 section disconnect and ground b1019.7 switches at Clifton on the B-2258 circuit PSEG (100%) Replace 1-2 and 2-3 section disconnect and ground b1019.8 switches at Clifton on the K-2263 circuit PSEG (100%) Replace line, ground, 230 kV main bus disconnects at b1019.9 Athenia on the B-2258 circuit PSEG (100%) Replace wave trap, line, ground 230 kV breaker b1019.10 disconnect and 230 kV main bus disconnects at Athenia on the K-2263 circuit PSEG (100%)

Responsible Customer(s)
PSEG (100%)
PS.

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Convert the West Orange 138 kV substation, the two Roseland – West Orange b1154 138 kV circuits, and the Roseland – Sewaren 138 kV circuit from 138 kV to 230 kV PSEG (96.18%) / RE (3.82%) Build a new 230 kV circuit from Branchburg to Middlesex Sw. Rack. Build b1155 a new 230 kV substation at JCPL (4.61%) / PSEG (91.75%) / RE (3.64%) Middlesex Replace Branchburg 230 kV breaker '81H' with 63 b1155.3 PSEG (100%) Replace Branchburg 230 kV breaker '72H' with 63 b1155.4 PSEG (100%) Replace Branchburg 230 b1155.5 kV breaker '61H' with 63 PSEG (100%) Replace Branchburg 230 kV breaker '41H' with 63 b1155.6 PSEG (100%) Convert the Burlington, Camden, and Cuthbert Blvd 138 kV substations, the 138 kV circuits from Burlington b1156 to Camden, and the 138 kV circuit from Camden to Cuthbert Blvd. from 138 kV to 230 kV PSEG (96.18%) / RE (3.82%) Replace Camden 230 kV b1156.13 breaker '22H' with 80 kA PSEG (100%) Replace Camden 230 kV b1156.14 breaker '32H' with 80 kA PSEG (100%) Replace Camden 230 kV b1156.15 breaker '21H' with 80 kA PSEG (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace New Freedom b1156.16 230 kV breaker '50H' with 63 kA PSEG (100%) Replace New Freedom b1156.17 230 kV breaker '41H' with 63 kA PSEG (100%) Replace New Freedom 230 kV breaker '51H' with b1156.18 63 kA PSEG (100%) Rebuild Camden 230 kV b1156.19 to 80 kA PSEG (100%) Rebuild Burlington 230 b1156.20 kV to 80 kA PSEG (100%) Reconductor the PSEG portion of the Burlington – b1197.1 Croydon circuit with 1590 ACSS PSEG (100%) Re-configure the Lawrence 230 kV HTP\*\*\* (0.14%) / ECP\*\* b1228 (0.22%) / PSEG (95.83%) / RE substation to breaker and half (3.81%)Build a new 69 kV substation (Ridge Road) and build new 69 kV b1255 circuits from Montgomery - Ridge Road - Penns Neck/Dow Jones PSEG (96.18%) / RE (3.82%) AEC (0.23%) / BGE (0.97%) / ComEd (2.32%) / Dayton Convert the existing 'D1304' and 'G1307' 138 (0.13%) / JCPL (1.17%) / kV circuits between NEPTUNE\* (0.07%) / HTP\*\*\* b1304.1 (16.05%) / PENELEC (2.97%) / Roseland – Kearny – PEPCO (1.04%) / ECP\*\* Hudson to 230 kV operation (2.11%) / PSEG (70.16%) / RE (2.78%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

Required Tr	ansmission Enhancements	Annual Revenue Requirem	nent Responsible Customer(s)
b1304.2	Expand existing Bergen 230 kV substation and reconfigure the Athenia 230 kV substation to breaker and a half scheme		AEC (0.23%) / BGE (0.97%) / ComEd (2.32%) / Dayton (0.13%) / JCPL (1.17%) / NEPTUNE* (0.07%) / HTP*** (16.05%) / PENELEC (2.97%) / PEPCO (1.04%) / ECP** (2.11%) / PSEG (70.16%) / RE (2.78%)
b1304.3	Build second 230 kV underground cable from Bergen to Athenia		AEC (0.23%) / BGE (0.97%) / ComEd (2.32%) / Dayton (0.13%) / JCPL (1.17%) / NEPTUNE* (0.07%) / HTP*** (16.05%) / PENELEC (2.97%) / PEPCO (1.04%) / ECP** (2.11%) / PSEG (70.16%) / RE (2.78%)
b1304.4	Build second 230 kV underground cable from Hudson to South Waterfront		AEC (0.23%) / BGE (0.97%) / ComEd (2.32%) / Dayton (0.13%) / JCPL (1.17%) / NEPTUNE* (0.07%) / HTP*** (16.05%) / PENELEC (2.97%) / PEPCO (1.04%) / ECP** (2.11%) / PSEG (70.16%) / RE (2.78%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

Required Tra	ansmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b1304.5	Replace Athenia 230 kV breaker '21H' with 80 kA		PSEG (100%)
b1304.6	Replace Athenia 230 kV breaker '41H' with 80 kA		PSEG (100%)
b1304.7	Replace South Waterfront 230 kV breaker '12H' with 80 kA		PSEG (100%)
b1304.8	Replace South Waterfront 230 kV breaker '22H' with 80 kA		PSEG (100%)
b1304.9	Replace South Waterfront 230 kV breaker '32H' with 80 kA		PSEG (100%)
b1304.10	Replace South Waterfront 230 kV breaker '52H' with 80 kA		PSEG (100%)
b1304.11	Replace South Waterfront 230 kV breaker '62H' with 80 kA		PSEG (100%)
b1304.12	Replace South Waterfront 230 kV breaker '72H' with 80 kA		PSEG (100%)
b1304.13	Replace South Waterfront 230 kV breaker '82H' with 80 kA		PSEG (100%)
b1304.14	Replace Essex 230 kV breaker '20H' with 80 kA		PSEG (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace Essex 230 kV b1304.15 breaker '21H' with 80 kA PSEG (100%) Replace Essex 230 kV b1304.16 breaker '10H' with 80 kA PSEG (100%) Replace Essex 230 kV b1304.17 breaker '11H' with 80 kA PSEG (100%) Replace Essex 230 kV b1304.18 breaker '11HL' with 80 kA PSEG (100%) Replace Newport R 230 kV breaker '23H' with 63 b1304.19 kA PSEG (100%) Rebuild Athenia 230 kV b1304.20 substation to 80 kA PSEG (100%) Rebuild Bergen 230 kV b1304.21 substation to 80 kA PSEG (100%) JCPL (12.82%) / NEPTUNE\* Build two new parallel (1.18%) / HTP\*\*\* (0.79%) / b1398 underground circuits from PECO (51.08%) / PEPCO (0.57%) / ECP\*\* (0.85%) / Gloucester to Camden PSEG (31.46%) / RE (1.25%) JCPL (12.82%) / NEPTUNE\* (1.18%) / HTP\*\*\* (0.79%) / Install shunt reactor at b1398.1 PECO (51.08%) / PEPCO Gloucester to offset cable (0.57%) / ECP\*\* (0.85%) / charging PSEG (31.46%) / RE (1.25%) JCPL (12.82%) / NEPTUNE\* (1.18%) / HTP\*\*\* (0.79%) / Reconfigure the Cuthbert b1398.2 station to breaker and a PECO (51.08%) / PEPCO (0.57%) / ECP\*\* (0.85%) / half scheme PSEG (31.46%) / RE (1.25%) JCPL (12.82%) / NEPTUNE\* Build a second 230 kV (1.18%) / HTP\*\*\* (0.79%) / parallel overhead circuit b1398.3 PECO (51.08%) / PEPCO from Mickelton -(0.57%) / ECP\*\* (0.85%) / Gloucester PSEG (31.46%) / RE (1.25%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) JCPL (12.82%) / NEPTUNE\* Reconductor the existing (1.18%) / HTP\*\*\* (0.79%) / Mickleton – Gloucester PECO (51.08%) / PEPCO b1398.4 230 kV circuit (PSEG (0.57%) / ECP\*\* (0.85%) / portion) PSEG (31.46%) / RE (1.25%) Reconductor the Camden Richmond 230 kV JCPL (12.82%) / NEPTUNE\* circuit (PSEG portion) and (1.18%) / HTP\*\*\* (0.79%) / b1398.7 upgrade terminal PECO (51.08%) / PEPCO equipments at Camden (0.57%) / ECP\*\* (0.85%) / substations PSEG (31.46%) / RE (1.25%) Replace Gloucester 230 kV breaker '21H' with 63 b1398.15 kΑ PSEG (100%) Replace Gloucester 230 b1398.16 kV breaker '51H' with 63 kA PSEG (100%) Replace Gloucester 230 kV breaker '56H' with 63 b1398.17 kA PSEG (100%) Replace Gloucester 230 b1398.18 kV breaker '26H' with 63 kAPSEG (100%) Replace Gloucester 230 kV breaker '71H' with 63 b1398.19 kA PSEG (100%) Convert the 138 kV path from Aldene – Springfield b1399 Rd. – West Orange to 230 kV PSEG (96.18%) / RE (3.82%) Install 230 kV circuit b1400 breakers at Bennetts Ln. "F" and "X" buses PSEG (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

Required T	ransmission Enhancements	Annual Revenue Requirement Responsible Customer(s)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd (13.46%)
		/ Dayton (2.12%) / DEOK
		(3.37%) / DL (1.76%) / DPL
		(2.55%) / Dominion (12.97%) /
1 1 4 1 0	Replace Salem 500 kV	EKPC (1.81%) / JCPL (3.92%) /
b1410	breaker '11X'	ME (1.95%) / NEPTUNE*
		(0.24%) / OVEC (0.07%) /
		PECO (5.39%) / PENELEC
		(1.84%) / PEPCO (3.71%) / PPL
		(4.78%) / PSEG (6.40%) / RE
		(0.27%)
		DFAX Allocation:
		PSEG (96.26%) / RE (3.74%)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd (13.46%)
		/ Dayton (2.12%) / DEOK
		(3.37%) / DL (1.76%) / DPL
		(2.55%) / Dominion (12.97%) /
	Replace Salem 500 kV	EKPC (1.81%) / JCPL (3.92%) /
b1411	breaker '12X'	ME (1.95%) / NEPTUNE*
		(0.24%) / OVEC (0.07%) /
		PECO (5.39%) / PENELEC
		(1.84%) / PEPCO (3.71%) / PPL
		(4.78%) / PSEG (6.40%) / RE
		(0.27%)
		DFAX Allocation:
		PSEG (96.26%) / RE (3.74%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required T	ransmission Enhancements	Annual Revenue Requirement Responsible Customer(s)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd (13.46%)
		/ Dayton (2.12%) / DEOK
		(3.37%) / DL (1.76%) / DPL
		(2.55%) / Dominion (12.97%) /
	Replace Salem 500 kV	EKPC (1.81%) / JCPL (3.92%) /
b1412	breaker '20X'	ME (1.95%) / NEPTUNE*
	oreaker 2011	(0.24%) / OVEC (0.07%) /
		PECO (5.39%) / PENELEC
		(1.84%) / PEPCO (3.71%) / PPL
		(4.78%) / PSEG (6.40%) / RE
		(0.27%)
		DFAX Allocation:
		PSEG (96.26%) / RE (3.74%)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd (13.46%)
		/ Dayton (2.12%) / DEOK
		(3.37%) / DL (1.76%) / DPL
		(2.55%) / Dominion (12.97%) /
	Replace Salem 500 kV	EKPC (1.81%) / JCPL (3.92%) /
b1413	breaker '21X'	ME (1.95%) / NEPTUNE*
	breaker 21A	(0.24%) / OVEC (0.07%) /
		PECO (5.39%) / PENELÉC
		(1.84%) / PEPCO (3.71%) / PPL
		(4.78%) / PSEG (6.40%) / RE
		(0.27%)
		DEAVAIL C
		DFAX Allocation:
		PSEG (96.26%) / RE (3.74%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required T	ransmission Enhancements	Annual Revenue Requirement Responsible Customer(s)
b1414	Replace Salem 500 kV breaker '31X'	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b1415	Replace Salem 500 kV breaker '32X'	PSEG (96.26%) / RE (3.74%)  Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace Tosco 230 kV b1539 breaker 'CB1' with 63 kA PSEG (100%) Replace Tosco 230 kV b1540 breaker 'CB2' with 63 kA PSEG (100%) Open the Hudson 230 kV b1541 bus tie PSEG (100%) JCPL (10.31%) / NEPTUNE\* Reconductor the Eagle (0.98%) / HTP\*\*\* (0.75%) / Point - Gloucester 230 kV b1588 PECO (30.81%) / ECP\*\* circuit #1 and #2 with (0.82%) / PSEG (54.17%) / RE higher conductor rating (2.16%)Re-configure the Kearny 230 kV substation and b1589 loop the P-2216-1 ATSI (8.00%) / HTP\*\*\* (20.18%) / PENELEC (7.77%) / (Essex - NJT Meadows) 230 kV circuit PSEG (61.59%) / RE (2.46%) Upgrade the PSEG portion of the Camden Richmond 230 kV circuit to six wire BGE (3.05%) / ME (0.83%) / b1590 HTP\*\*\* (0.21%) / PECO conductor and replace terminal equipment at (91.36%) / PEPCO (1.93%) / Camden PPL (2.46%) / ECP\*\* (0.16%) Advance n1237 (Replace Essex 230 kV breaker b1749 '22H' with 80kA) PSEG (100%) Advance n0666.5 (Replace Hudson 230 kV b1750 breaker '1HB' with 80 kA (without TRV cap, so actually 63 kA)) PSEG (100%) Advance n0666.3 (Replace Hudson 230 kV breaker '2HA' with 80 kA b1751 (without TRV cap, so actually 63 kA)) PSEG (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Advance n0666.10 (Replace Hudson 230 kV b1752 breaker '2HB' with 80 kA (without TRV cap, so actually 63 kA)) PSEG (100%) Marion 138 kV breaker '7PM' - delay the relay b1753 time to increase the contact parting time to 2.5 PSEG (100%) cycles Marion 138 kV breaker '3PM' - delay the relay time to increase the b1754 contact parting time to 2.5 cycles PSEG (100%) Marion 138 kV breaker '6PM' - delay the relay b1755 time to increase the contact parting time to 2.5 PSEG (100%) cycles AEC (4.96%) / JCPL (44.20%) / Build a second 230 kV NEPTUNE\* (0.53%) / HTP\*\*\* b1787 circuit from Cox's Corner (0.15%) / ECP\*\* (0.16%) / - Lumberton PSEG (48.08%) / RE (1.92%) Install a reactor along the b2034 Kearny - Essex 138 kV PSEG (100%) Replace Sewaren 138 kV b2035 breaker '11P' PSEG (100%) Replace Sewaren 138 kV b2036 breaker '21P' PSEG (100%) Replace PVSC 138 kV b2037 breaker '452' PSEG (100%) Replace PVSC 138 kV b2038 breaker '552' PSEG (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace Bayonne 138 kV b2039 breaker '11P' PSEG (100%) Reconductor the Mickleton - Gloucester b2139 230 kV parallel circuits with double bundle PSEG (61.11%) / PECO conductor (36.45%) / RE (2.44%) Re-configure the b2146 Brunswick 230 kV and 69 kV substations PSEG (96.16%) / RE (3.84%) Construct Jackson Rd. 69 kV substation and loop the Cedar Grove - Hinchmans Ave into Jackson Rd. and b2151 construct Hawthorne 69 kV substation and build 69 kV circuit from Hinchmans Ave -Hawthorne - Fair Lawn PSEG (100%) Reconfigure the Linden, Bayway, North Ave, and Passaic Valley S.C. 138 b2159 kV substations. Construct and loop new 138 kV circuit to new airport PSEG (72.61%) / HTP\*\*\* station (24.49%) / RE (2.90%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

#### SCHEDULE 12 – APPENDIX

#### (14) Monongahela Power Company, The Potomac Edison Company, and West Penn Power Company, all doing business as Allegheny Power

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC Install -100/+525 As specified under the (1.81%) / JCPL (3.92%) / ME procedures detailed in MVAR dynamic (1.95%) / NEPTUNE\* (0.24%) / b0216 Attachment H-18B, reactive device at Black OVEC (0.07%) / PECO (5.39%) / Section 1.b Oak PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** APS (39.86%) / BGE (11.89%) / Dominion (32.02%) / PEPCO (16.23%)As specified under the Install third Wylie AEC (11.83%) / DPL (19.40%) / procedures detailed in b0218 Ridge 500/345 kV Dominion (13.81%) / JCPL Attachment H-18B, (15.56%) / PECO (39.40%) transformer Section 1.b Upgrade coolers on AEC (11.83%) / DPL (19.40%) / Wylie Ridge 500/345 Dominion (13.81%) / JCPL b0220 kV #7 (15.56%) / PECO (39.40%) APS (50.98%) / BGE (13.42%) / Install fourth Bedington DPL (2.03%) / Dominion b0229 500/138 kV (14.50%) / ME (1.43%) / PEPCO (17.64%)APS (79.16%) / BGE (3.61%) / As specified under the Install fourth procedures detailed in DPL (0.86%) / Dominion Meadowbrook 500/138 b0230 Attachment H-18B, (11.75%) / ME (0.67%) / PEPCO kV Section 1.b (3.95%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required	Transmission Enhancements	Annual Revenue Requirement	t Responsible Customer(s)
b0238	Reconductor Doubs – Dickerson and Doubs – Aqueduct 1200 MVA	As specified under the procedures detailed in Attachment H-18B, Section 1.b	BGE (16.66%) / Dominion (33.66%) / PEPCO (49.68%)
b0240	Open the Black Oak #3 500/138 kV transformer for the loss of Hatfield – Back Oak 500 kV line		APS (100%)
b0245	Replacement of the existing 954 ACSR conductor on the Bedington – Nipetown 138 kV line with high temperature/low sag conductor		APS (100%)
b0246	Rebuild of the Double Tollgate – Old Chapel 138 kV line with 954 ACSR conductor	As specified under the procedures detailed in Attachment H-18B, Section 1.b	APS (100%)
b0273	Open both North Shenandoah #3 transformer and Strasburg – Edinburgh 138 kV line for the loss of Mount Storm – Meadowbrook 572 500 kV		APS (100%)
b0322	Convert Lime Kiln substation to 230 kV operation		APS (100%)
b0323	Replace the North Shenandoah 138/115 kV transformer	As specified under the procedures detailed in Attachment H-18B, Section 1.b	APS (100%)

Required In	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
			<b>Load-Ratio Share Allocation:</b>
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd (13.46%)
			/ Dayton (2.12%) / DEOK
			(3.37%) / DL (1.76%) / DPL
			(2.55%) / Dominion (12.97%) /
	Build new Meadow	As specified under the	EKPC (1.81%) / JCPL (3.92%) /
b0328.2	Brook – Loudoun 500	procedures detailed in	ME (1.95%) / NEPTUNE*
	kV circuit (20 of 50	Attachment H-18B,	(0.24%) / OVEC (0.07%) /
	miles)	Section 1.b	PECO (5.39%) / PENELEC
			(1.84%) / PEPCO (3.71%) / PPL
			(4.78%) / PSEG (6.40%) / RE
			(0.27%)
			DFAX Allocation:
			BGE (7.44%) / Dominion
			(80.66%) / PEPCO (11.90%)
			AEC (1.070/) / DCE (21.400/) /
	B 1 B 1 500/220	As specified under the	AEC (1.85%) / BGE (21.49%) /
b0343	Replace Doubs 500/230 kV transformer #2	procedures detailed in	DPL (3.91%) / Dominion
	k v transformer #2	Attachment H-18B, Section 1.b	(28.86%) / ME (2.97%) / PECO
		Section 1.6	(5.73%) / PEPCO (35.19%)
		As specified under the	AEC (1.86%) / BGE (21.50%) /
	Replace Doubs 500/230	procedures detailed in	DPL (3.91%) / Dominion
b0344	kV transformer #3	Attachment H-18B,	(28.82%) / ME (2.97%) / PECO
	liv visualization no	Section 1.b	(5.74%) / PEPCO (35.20%)
		As specified under the	AEC (1.85%) / BGE (21.49%) /
	Replace Doubs 500/230	As specified under the procedures detailed in	DPL (3.90%) / Dominion
b0345	kV transformer #4	Attachment H-18B,	(28.83%) / ME (2.98%) / PECO
	K v transformer #4	Section 1.b	(5.75%) / PEPCO (35.20%)
		Section 1.0	(3.7370) / 1 L1 CO (33.2070)

Required I	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd (13.46%)
			/ Dayton (2.12%) / DEOK
			(3.37%) / DL (1.76%) / DPL
			(2.55%) / Dominion (12.97%) /
	Build new Mt. Storm –	As specified under the	EKPC (1.81%) / JCPL (3.92%) /
b0347.1	502 Junction 500 kV	procedures detailed in	ME (1.95%) / NEPTUNE*
00347.1	circuit	Attachment H-18B,	(0.24%) / OVEC (0.07%) /
	Circuit	Section 1.b	PECO (5.39%) / PENELEC
			(1.84%) / PEPCO (3.71%) / PPL
			(4.78%) / PSEG (6.40%) / RE
			(0.27%)
			DEAW All 4
			DFAX Allocation:
			APS (49.03%) / BGE (17.87%) / PEPCO (33.10%)
			FEFCO (55.1070)
			Load Datio Chara Allocations
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) /
			AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) /
			AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
			AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK
			AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL
		As specified under the	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) /
	Build new Mt. Storm –	As specified under the procedures detailed in	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) /
b0347.2	Meadow Brook 500 kV	procedures detailed in	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE*
b0347.2			AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.2	Meadow Brook 500 kV	procedures detailed in Attachment H-18B,	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.2	Meadow Brook 500 kV	procedures detailed in Attachment H-18B,	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.2	Meadow Brook 500 kV	procedures detailed in Attachment H-18B,	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.2	Meadow Brook 500 kV	procedures detailed in Attachment H-18B,	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.2	Meadow Brook 500 kV	procedures detailed in Attachment H-18B,	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.2	Meadow Brook 500 kV	procedures detailed in Attachment H-18B,	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Ttoquirea 1		Allitual Revenue Requirement	Responsible Customer(s)
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd (13.46%)
			/ Dayton (2.12%) / DEOK
			(3.37%) / DL (1.76%) / DPL
			(2.55%) / Dominion (12.97%) /
		As specified under the	EKPC (1.81%) / JCPL (3.92%) /
1.0247.2	Build new 502 Junction	procedures detailed in	ME (1.95%) / NEPTUNE*
b0347.3	500 kV substation	Attachment H-18B,	(0.24%) / OVEC (0.07%) /
		Section 1.b	PECO (5.39%) / PENELEC
			(1.84%) / PEPCO (3.71%) / PPL
			(4.78%) / PSEG (6.40%) / RE
			(0.27%)
			DFAX Allocation:
			APS (49.03%) / BGE (17.87%) /
			PEPCO (33.10%)
			1 E1 60 (33.1070)
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) /
			AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) /
			AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
			AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK
			AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL
			AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) /
		As specified under the	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) /
b0247.4	Upgrade Meadow Brook	As specified under the procedures detailed in	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.4	Upgrade Meadow Brook 500 kV substation		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.4	10	procedures detailed in	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.4	10	procedures detailed in Attachment H-18B,	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.4	10	procedures detailed in Attachment H-18B,	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.4	10	procedures detailed in Attachment H-18B,	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.4	10	procedures detailed in Attachment H-18B,	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.4	10	procedures detailed in Attachment H-18B,	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.4	10	procedures detailed in Attachment H-18B,	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required 1	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd (13.46%)
			/ Dayton (2.12%) / DEOK
			(3.37%) / DL (1.76%) / DPL
			(2.55%) / Dominion (12.97%) /
			EKPC (1.81%) / JCPL (3.92%) /
1.02.47.5	Replace Harrison 500		ME (1.95%) / NEPTUNE*
b0347.5	kV breaker HL-3		(0.24%) / OVEC (0.07%) /
			PECO (5.39%) / PENELEC
			(1.84%) / PEPCO (3.71%) / PPL
			(4.78%) / PSEG (6.40%) / RE
			(0.27%)
			DELWAR (*
			DFAX Allocation:
			APS (49.03%) / BGE (17.87%) /
			PEPCO (33.10%)
			Load-Ratio Share Allocation:
			<b>Load-Ratio Share Allocation:</b> AEC (1.67%) / AEP (13.94%) /
			AEC (1.67%) / AEP (13.94%) /
			AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) /
			AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
			AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK
			AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL
			AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) /
	Ungrade (per ARR		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) /
b0347.6	Upgrade (per ABB		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE*
b0347.6	Upgrade (per ABB inspection) breaker HL-6		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) /
b0347.6	10 4		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.6	10 4		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.6	10 4		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.6	10 4		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.6	10 4		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.6	10 4		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.6	10 4		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required 1	ransmission Enhancements	Annual Revenue Requirement	1
			<b>Load-Ratio Share Allocation:</b>
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd (13.46%)
			/ Dayton (2.12%) / DEOK
			(3.37%) / DL (1.76%) / DPL
			(2.55%) / Dominion (12.97%) /
			EKPC (1.81%) / JCPL (3.92%) /
b0347.7	Upgrade (per ABB inspection) breaker HL-7		ME (1.95%) / NEPTUNE*
			(0.24%) / OVEC (0.07%) / PECO
			(5.39%) / PENELEC (1.84%) /
			PEPCO (3.71%) / PPL (4.78%) /
			PSEG (6.40%) / RE (0.27%)
			DFAX Allocation:
			APS (49.03%) / BGE (17.87%) /
			PEPCO (33.10%)
			Load-Ratio Share Allocation:
			<b>Load-Ratio Share Allocation:</b> AEC (1.67%) / AEP (13.94%) /
			AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
			AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK
			AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL
			AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) /
			AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL
b0347.8	Upgrade (per ABB		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE*
b0347.8	Upgrade (per ABB inspection) breaker HL-8		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) /
b0347.8	10 4		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE*
b0347.8	10 4		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.8	10 4		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.8	10 4		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.8	10 4		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0347.8	10 4		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

110000000000000000000000000000000000000		Affilial Revenue Requirement Responsible Customer(s)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) / APS
		(5.64%) / ATSI (8.02%) / BGE
		(4.12%) / ComEd (13.46%) / Dayton
		(2.12%) / DEOK (3.37%) / DL
		(1.76%) / DPL (2.55%) / Dominion
		(12.97%) / EKPC (1.81%) / JCPL
	Upgrade (per ABB	(3.92%) / ME (1.95%) /
b0347.9	inspection) breaker HL-	NEPTUNE* (0.24%) / OVEC
	10	(0.07%) / PECO (5.39%) /
		PENELEC (1.84%) / PEPCO
		(3.71%) / PPL (4.78%) / PSEG
		(6.40%) / RE (0.27%)
		DFAX Allocation:
		APS (49.03%) / BGE (17.87%) /
		PEPCO (33.10%)
		I ID C CL All C
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) / APS
		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE
		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton
		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL
		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion
		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL
	Upgrade (per ABB	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) /
b0347.10	Inspection) Hatfield 500	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC
b0347.10	1 10 4	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) /
b0347.10	Inspection) Hatfield 500	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO
b0347.10	Inspection) Hatfield 500	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG
b0347.10	Inspection) Hatfield 500	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO
b0347.10	Inspection) Hatfield 500	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation:
b0347.10	Inspection) Hatfield 500	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: APS (49.03%) / BGE (17.87%) /
b0347.10	Inspection) Hatfield 500	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation:

<sup>\*</sup>Neptune Regional Transmission System, LLC

required Tre	ansmission Ennancements	Annual Revenue Requirement Responsible Customer(s)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) / APS
		(5.64%) / ATSI (8.02%) / BGE
		(4.12%) / ComEd (13.46%) / Dayton
		(2.12%) / DEOK (3.37%) / DL
		(1.76%) / DPL (2.55%) / Dominion
		(12.97%) / EKPC (1.81%) / JCPL
	Upgrade (per ABB	(3.92%) / ME (1.95%) /
b0347.11	Inspection) Hatfield	NEPTUNE* (0.24%) / OVEC
	500 kV breakers HFL-3	(0.07%) / PECO (5.39%) /
	500 KV SICAKOIS III E 5	PENELEC (1.84%) / PEPCO
		(3.71%) / PPL (4.78%) / PSEG
		(6.40%) / RE (0.27%)
		DFAX Allocation:
		APS (49.03%) / BGE (17.87%) /
		PEPCO (33.10%)
		Load-Ratio Share Allocation:
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) / APS
		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE
		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton
		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL
		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion
	II. 1 ( ADD	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL
1.02.47.12	Upgrade (per ABB	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) /
b0347.12	Inspection) Hatfield	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC
b0347.12	1 10 4	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) /
b0347.12	Inspection) Hatfield	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO
b0347.12	Inspection) Hatfield	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG
b0347.12	Inspection) Hatfield	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO
b0347.12	Inspection) Hatfield	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG
b0347.12	Inspection) Hatfield	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)
b0347.12	Inspection) Hatfield	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation:

<sup>\*</sup>Neptune Regional Transmission System, LLC

required 110	ansmission Ennancements	Annual Revenue Requirement Responsible Customer(s)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) / APS
		(5.64%) / ATSI (8.02%) / BGE
		(4.12%) / ComEd (13.46%) / Dayton
		(2.12%) / DEOK (3.37%) / DL
		(1.76%) / DPL (2.55%) / Dominion
		(12.97%) / EKPC (1.81%) / JCPL
	Upgrade (per ABB	(3.92%) / ME (1.95%) /
b0347.13	Inspection) Hatfield	NEPTUNE* (0.24%) / OVEC
00317.13	500 kV breakers HFL-6	(0.07%) / PECO (5.39%) /
	Soo it v steamers iii E s	PENELEC (1.84%) / PEPCO
		(3.71%) / PPL (4.78%) / PSEG
		(6.40%) / RE (0.27%)
		DFAX Allocation:
		APS (49.03%) / BGE (17.87%) /
		PEPCO (33.10%)
		Load-Ratio Share Allocation:
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) / APS
		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE
		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton
		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL
		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion
	Ha sun da (non ADD	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL
b0247.14	Upgrade (per ABB	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) /
b0347.14	Inspection) Hatfield	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC
b0347.14	1 10 4	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) /
b0347.14	Inspection) Hatfield	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO
b0347.14	Inspection) Hatfield	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG
b0347.14	Inspection) Hatfield	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO
b0347.14	Inspection) Hatfield	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG
b0347.14	Inspection) Hatfield	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)
b0347.14	Inspection) Hatfield	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation:

<sup>\*</sup>Neptune Regional Transmission System, LLC

Ttoquinou TTo		Affilial Revenue Requirement Responsible Cusiomer(s)	
		<b>Load-Ratio Share Allocation:</b>	
		AEC (1.67%) / AEP (13.94%) / AE	PS
		(5.64%) / ATSI (8.02%) / BGE	
		(4.12%) / ComEd (13.46%) / Dayte	on
		(2.12%) / DEOK (3.37%) / DL	
		(1.76%) / DPL (2.55%) / Dominio	
		(12.97%) / EKPC (1.81%) / JCPI	
	Upgrade (per ABB	(3.92%) / ME (1.95%) /	
b0347.15	Inspection) Hatfield	NEPTUNE* (0.24%) / OVEC	
	500 kV breakers HFL-9	(0.07%) / PECO (5.39%) /	
		PENELEC (1.84%) / PEPCO	
		(3.71%) / PPL (4.78%) / PSEG	
		(6.40%) / RE (0.27%)	
		DFAX Allocation:	
		APS (49.03%) / BGE (17.87%) /	/
		PEPCO (33.10%)	
		Load-Ratio Share Allocation:	
		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / AE	PS
			PS
		AEC (1.67%) / AEP (13.94%) / AE	
		AEC (1.67%) / AEP (13.94%) / AE (5.64%) / ATSI (8.02%) / BGE	
		AEC (1.67%) / AEP (13.94%) / AE (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayto	on
		AEC (1.67%) / AEP (13.94%) / AE (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayto (2.12%) / DEOK (3.37%) / DL	on on
	Ungrade (ner ABB	AEC (1.67%) / AEP (13.94%) / AE (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayto (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominio	on on
b0347.16	Upgrade (per ABB inspection) Harrison	AEC (1.67%) / AEP (13.94%) / AE (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayto (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominio (12.97%) / EKPC (1.81%) / JCPI	on on
b0347.16	inspection) Harrison	AEC (1.67%) / AEP (13.94%) / AE (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayto (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominio (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) /	on on
b0347.16	1 10 4	AEC (1.67%) / AEP (13.94%) / AE (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayto (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominio (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC	on on
b0347.16	inspection) Harrison	AEC (1.67%) / AEP (13.94%) / AE (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayto (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominio (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) /	on on
b0347.16	inspection) Harrison	AEC (1.67%) / AEP (13.94%) / AE (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayto (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominio (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO	on on
b0347.16	inspection) Harrison	AEC (1.67%) / AEP (13.94%) / AE (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayto (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominio (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG	on on
b0347.16	inspection) Harrison	AEC (1.67%) / AEP (13.94%) / AE (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayto (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominio (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)	on
b0347.16	inspection) Harrison	AEC (1.67%) / AEP (13.94%) / AE (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayto (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominio (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)	on

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL Replace Meadow (3.92%) / ME (1.95%) / Brook 138 kV breaker b0347.17 NEPTUNE\* (0.24%) / OVEC 'MD-10' (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** APS (33.17%) / Dominion (51.31%) / PEPCO (15.52%) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / Replace Meadow NEPTUNE\* (0.24%) / OVEC b0347.18 Brook 138 kV breaker (0.07%) / PECO (5.39%) / 'MD-11' PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** APS (33.17%) / Dominion (51.31%) / PEPCO (15.52%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required 118	ansmission Ennancements		tible Customer(s)
			atio Share Allocation:
		AEC (1.	67%) / AEP (13.94%) /
		APS (5.	64%) / ATSI (8.02%) /
		BGE (4.12	2%) / ComEd (13.46%) /
		Dayton (2	.12%) / DEOK (3.37%) /
		DL (1.	76%) / DPL (2.55%) /
		Domin	ion (12.97%) / EKPC
	Replace Meadow	(1.81%)	) / JCPL (3.92%) / ME
b0347.19	Brook 138 kV breaker		/ NEPTUNE* (0.24%) /
00347.17	'MD-12'	· · · · · · · · · · · · · · · · · · ·	.07%) / PECO (5.39%) /
	14115-12	`	LEC (1.84%) / PEPCO
			/ PPL (4.78%) / PSEG
		· , ,	40%) / RE (0.27%)
			(0.2770)
		Di	FAX Allocation:
		APS (	(33.17%) / Dominion
		(51.319	%) / PEPCO (15.52%)
		I	
			atio Share Allocation:
		AEC (1.	67%) / AEP (13.94%) /
		AEC (1. APS (5.	67%) / AEP (13.94%) / 64%) / ATSI (8.02%) /
		AEC (1. APS (5. BGE (4.1)	67%) / AEP (13.94%) / 64%) / ATSI (8.02%) / 2%) / ComEd (13.46%) /
		AEC (1. APS (5. BGE (4.1)	67%) / AEP (13.94%) / 64%) / ATSI (8.02%) /
		AEC (1. APS (5. BGE (4.12 Dayton (2	67%) / AEP (13.94%) / 64%) / ATSI (8.02%) / 2%) / ComEd (13.46%) /
		AEC (1. APS (5. BGE (4.1: Dayton (2 DL (1.	67%) / AEP (13.94%) / 64%) / ATSI (8.02%) / 2%) / ComEd (13.46%) / .12%) / DEOK (3.37%) /
	Replace Meadow	AEC (1. APS (5. BGE (4.12 Dayton (2 DL (1.12) Domin	67%) / AEP (13.94%) / 64%) / ATSI (8.02%) / 2%) / ComEd (13.46%) / .12%) / DEOK (3.37%) / 76%) / DPL (2.55%) /
b0347 20	Replace Meadow  Brook 138 kV breaker	AEC (1. APS (5. BGE (4.1) Dayton (2 DL (1.' Domin (1.81%)	67%) / AEP (13.94%) / 64%) / ATSI (8.02%) / 2%) / ComEd (13.46%) / .12%) / DEOK (3.37%) / 76%) / DPL (2.55%) / tion (12.97%) / EKPC
b0347.20	Brook 138 kV breaker	AEC (1. APS (5. BGE (4.1: Dayton (2 DL (1. Domin (1.81%)	67%) / AEP (13.94%) / 64%) / ATSI (8.02%) / 2%) / ComEd (13.46%) / .12%) / DEOK (3.37%) / 76%) / DPL (2.55%) / nion (12.97%) / EKPC ) / JCPL (3.92%) / ME
b0347.20	*	AEC (1. APS (5. BGE (4.12) Dayton (2 DL (1.7) Domin (1.81%) (1.95%) OVEC (0	67%) / AEP (13.94%) / 64%) / ATSI (8.02%) / 2%) / ComEd (13.46%) / .12%) / DEOK (3.37%) / 76%) / DPL (2.55%) / tion (12.97%) / EKPC ) / JCPL (3.92%) / ME / NEPTUNE* (0.24%) / .07%) / PECO (5.39%) /
b0347.20	Brook 138 kV breaker	AEC (1. APS (5. BGE (4.1) Dayton (2 DL (1. Domin (1.81%) (1.95%) OVEC (0 PENEL	67%) / AEP (13.94%) / 64%) / ATSI (8.02%) / 2%) / ComEd (13.46%) / .12%) / DEOK (3.37%) / 76%) / DPL (2.55%) / tion (12.97%) / EKPC ) / JCPL (3.92%) / ME / NEPTUNE* (0.24%) / .07%) / PECO (5.39%) / LEC (1.84%) / PEPCO
b0347.20	Brook 138 kV breaker	AEC (1. APS (5. BGE (4.1: Dayton (2) DL (1. Domin (1.81%) (1.95%) OVEC (0) PENEL (3.71%)	67%) / AEP (13.94%) / 64%) / ATSI (8.02%) / 2%) / ComEd (13.46%) / .12%) / DEOK (3.37%) / 76%) / DPL (2.55%) / tion (12.97%) / EKPC ) / JCPL (3.92%) / ME / NEPTUNE* (0.24%) / .07%) / PECO (5.39%) / LEC (1.84%) / PEPCO
b0347.20	Brook 138 kV breaker	AEC (1. APS (5. BGE (4.1: Dayton (2) DL (1. Domin (1.81%) (1.95%) OVEC (0) PENEL (3.71%)	67%) / AEP (13.94%) / 64%) / ATSI (8.02%) / 2%) / ComEd (13.46%) / .12%) / DEOK (3.37%) / 76%) / DPL (2.55%) / tion (12.97%) / EKPC ) / JCPL (3.92%) / ME / NEPTUNE* (0.24%) / .07%) / PECO (5.39%) / LEC (1.84%) / PEPCO
b0347.20	Brook 138 kV breaker	AEC (1. APS (5. BGE (4.1) Dayton (2 DL (1.' Domin (1.81%) (1.95%) OVEC (0 PENEL (3.71%) (6.4)	67%) / AEP (13.94%) / 64%) / ATSI (8.02%) / 2%) / ComEd (13.46%) / .12%) / DEOK (3.37%) / 76%) / DPL (2.55%) / tion (12.97%) / EKPC ) / JCPL (3.92%) / ME / NEPTUNE* (0.24%) / .07%) / PECO (5.39%) / LEC (1.84%) / PEPCO
b0347.20	Brook 138 kV breaker	AEC (1. APS (5. BGE (4.1) Dayton (2 DL (1. Domin (1.81%) (1.95%) OVEC (0 PENEL (3.71%) (6.4	67%) / AEP (13.94%) / 64%) / ATSI (8.02%) / 2%) / ComEd (13.46%) / .12%) / DEOK (3.37%) / 76%) / DPL (2.55%) / nion (12.97%) / EKPC ) / JCPL (3.92%) / ME / NEPTUNE* (0.24%) / .07%) / PECO (5.39%) / LEC (1.84%) / PEPCO / PPL (4.78%) / PSEG
b0347.20	Brook 138 kV breaker	AEC (1. APS (5. BGE (4.1: Dayton (2) DL (1.' Domin (1.81%) (1.95%) OVEC (0 PENEL (3.71%) (6.4)  DI APS (	67%) / AEP (13.94%) / 64%) / ATSI (8.02%) / 2%) / ComEd (13.46%) / .12%) / DEOK (3.37%) / 76%) / DPL (2.55%) / tion (12.97%) / EKPC ) / JCPL (3.92%) / ME / NEPTUNE* (0.24%) / .07%) / PECO (5.39%) / LEC (1.84%) / PEPCO / PPL (4.78%) / PSEG 40%) / RE (0.27%)  FAX Allocation:

<sup>\*</sup>Neptune Regional Transmission System, LLC

insmission Enhancements	Annual Revenue Requireme	ent Responsible Customer(s)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd (13.46%) /
		Dayton (2.12%) / DEOK (3.37%) /
		DL (1.76%) / DPL (2.55%) /
		Dominion (12.97%) / EKPC
Replace Meadow		(1.81%) / JCPL (3.92%) / ME
		(1.95%) / NEPTUNE* (0.24%) /
		OVEC (0.07%) / PECO (5.39%) /
1.22		PENELEC (1.84%) / PEPCO
		(3.71%) / PPL (4.78%) / PSEG
		(6.40%) / RE (0.27%)
		DFAX Allocation:
		APS (33.17%) / Dominion
		(51.31%) / PEPCO (15.52%)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd (13.46%) /
		Dayton (2.12%) / DEOK (3.37%) /
		DL (1.76%) / DPL (2.55%) /
		Dominion (12.97%) / EKPC
Replace Meadow		(1.81%) / JCPL (3.92%) / ME
Brook 138 kV breaker		(1.95%) / NEPTUNE* (0.24%) /
'MD-15'		OVEC (0.07%) / PECO (5.39%) /
		PENELEC (1.84%) / PEPCO
		(3.71%) / PPL (4.78%) / PSEG
		(6.40%) / RE (0.27%)
		DFAX Allocation:
		APS (33.17%) / Dominion (51.31%) / PEPCO (15.52%)
	Brook 138 kV breaker	Replace Meadow Brook 138 kV breaker 'MD-14'  Replace Meadow Brook 138 kV breaker

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Tra	ansmission Enhancements	Annual Revenue Requireme	
b0347.23	Replace Meadow Brook 138 kV breaker 'MD-16'		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: APS (33.17%) / Dominion (51.31%) / PEPCO (15.52%)
b0347.24	Replace Meadow Brook 138 kV breaker 'MD-17'		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: APS (33.17%) / Dominion (51.31%) / PEPCO (15.52%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required 11a	ansmission Ennancements	Annual Revenue Requirement Responsible Customer(s)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd (13.46%) /
		Dayton (2.12%) / DEOK (3.37%) /
		DL (1.76%) / DPL (2.55%) /
		Dominion (12.97%) / EKPC
	Replace Meadow	(1.81%) / JCPL (3.92%) / ME
	Brook 138 kV breaker	(1.95%) / NEPTUNE* (0.24%) /
b0347.25	'MD-18'	OVEC (0.07%) / PECO (5.39%) /
		PENELEC (1.84%) / PEPCO
		(3.71%) / PPL (4.78%) / PSEG
		(6.40%) / RE (0.27%)
		DFAX Allocation:
		APS (33.17%) / Dominion
		(51.31%) / PEPCO (15.52%)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) /
		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) /
		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) /
		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC
	Replace Meadow	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME
b0347.26	Replace Meadow Brook 138 kV breaker	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC
b0347.26	Brook 138 kV breaker	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME
b0347.26	<u> </u>	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) /
b0347.26	Brook 138 kV breaker	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) /
b0347.26	Brook 138 kV breaker	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO
b0347.26	Brook 138 kV breaker	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG
b0347.26	Brook 138 kV breaker	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)
b0347.26	Brook 138 kV breaker	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation:

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required 11	ansmission Enhancements	Allitual Revenue Requirem	ent Responsible Customer(s)
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) / APS
			(5.64%) / ATSI (8.02%) / BGE
			(4.12%) / ComEd (13.46%) / Dayton
			(2.12%) / DEOK (3.37%) / DL
			(1.76%) / DPL (2.55%) / Dominion
			(12.97%) / EKPC (1.81%) / JCPL
	Replace Meadow		(3.92%) / ME (1.95%) /
b0347.27	Brook 138 kV breaker		NEPTUNÉ* (0.24%) / OVEC
00347.27	'MD-4'		(0.07%) / PECO (5.39%) /
	WID-4		PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			DFAX Allocation:
			APS (33.17%) / Dominion (51.31%)
			/ PEPCO (15.52%)
			T 15 (1 C) 17 (1
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) / APS
			AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE
			AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton
			AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL
			AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion
			AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL
	Replace Meadow		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) /
b0347.28	Replace Meadow Brook 138 kV breaker		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC
b0347.28	<u> </u>		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) /
b0347.28	Brook 138 kV breaker		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO
b0347.28	Brook 138 kV breaker		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) /
b0347.28	Brook 138 kV breaker		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO
b0347.28	Brook 138 kV breaker		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)
b0347.28	Brook 138 kV breaker		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation:
b0347.28	Brook 138 kV breaker		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation:  APS (33.17%) / Dominion (51.31%)
b0347.28	Brook 138 kV breaker		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation:

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required 11	ansmission Ennancements	Annual Revenue Requirement Responsible Customer(s)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) / APS
		(5.64%) / ATSI (8.02%) / BGE
		(4.12%) / ComEd (13.46%) / Dayton
		(2.12%) / DEOK (3.37%) / DL
		(1.76%) / DPL (2.55%) / Dominion
		(12.97%) / EKPC (1.81%) / JCPL
		(3.92%) / ME (1.95%) /
	Replace Meadowbrook	NEPTUNÉ* (0.24%) / OVEC
b0347.29	138 kV breaker 'MD-6'	(0.07%) / PECO (5.39%) /
		PENELEC (1.84%) / PEPCO
		(3.71%) / PPL (4.78%) / PSEG
		(6.40%) / RE (0.27%)
		(611070)7142 (612170)
		DFAX Allocation:
		APS (33.17%) / Dominion (51.31%)
		/ PEPCO (15.52%)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) / APS
		(5.64%) / ATSI (8.02%) / BGE
		(4.12%) / ComEd (13.46%) / Dayton
		(2.12%) / DEOK (3.37%) / DL
		(1.76%) / DPL (2.55%) / Dominion
		(12.97%) / EKPC (1.81%) / JCPL
b0347.30	Replace Meadowbrook	(12.97%) / EKPC (1.81%) / JCPL
b0347.30	Replace Meadowbrook 138 kV breaker 'MD-7'	(12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) /
b0347.30		(12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC
b0347.30		(12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO
b0347.30		(12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) /
b0347.30		(12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)
b0347.30		(12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)
b0347.30		(12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME Replace Meadowbrook (1.95%) / NEPTUNE\* (0.24%) / b0347.31 138 kV breaker 'MD-8' OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** APS (33.17%) / Dominion (51.31%) / PEPCO (15.52%) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME Replace Meadowbrook (1.95%) / NEPTUNE\* (0.24%) / b0347.32 138 kV breaker 'MD-9' OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** APS (33.17%) / Dominion (51.31%) / PEPCO (15.52%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required 1 ra	ansmission Enhancements	Annual Revenue Requirement	t Responsible Customer(s)
b0347.33	Replace Meadow Brook 138 kV breaker 'MD-1'		APS (100%)
b0347.34	Replace Meadow Brook 138 kV breaker 'MD-2'		APS (100%)
b0348	Upgrade Stonewall – Inwood 138 kV with 954 ACSR conductor		APS (100%)
b0373	Convert Doubs – Monocacy 138 kV facilities to 230 kV operation		AEC (1.82%) / APS (76.84%) / DPL (2.64%) / JCPL (4.53%) / ME (9.15%) / NEPTUNE* (0.42%) / PPL (4.60%)
b0393	Replace terminal equipment at Harrison 500 kV and Belmont 500 kV		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: APS (44.89%) / Dayton (17.18%) / DEOK (28.83%) / EKPC (9.10%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
Replace Mitchell 138 kV breaker "#4 bank"		APS (100%)
Replace Mitchell 138 kV breaker "#5 bank"		APS (100%)
Replace Mitchell 138 kV breaker "#2 transf"		APS (100%)
Replace Mitchell 138 kV breaker "#3 bank"		APS (100%)
Replace Mitchell 138 kV breaker "Charlerio #2"		APS (100%)
Replace Mitchell 138 kV breaker "Charlerio #1"		APS (100%)
Replace Mitchell 138 kV breaker "Shepler Hill Jct"		APS (100%)
Replace Mitchell 138 kV breaker "Union Jct"		APS (100%)
Replace Mitchell 138 kV breaker "#1-2 138 kV bus tie"		APS (100%)
Replace Marlowe 138 kV breaker "#1 transf"		APS (100%)
Replace Marlowe 138 kV breaker "MBO"		APS (100%)
Replace Marlowe 138 kV breaker "BMA"		APS (100%)
Replace Marlowe 138 kV breaker "BMR"		APS (100%)
Replace Marlowe 138 kV breaker "WC-1"		APS (100%)
	Replace Mitchell 138 kV breaker "#4 bank"  Replace Mitchell 138 kV breaker "#5 bank"  Replace Mitchell 138 kV breaker "#2 transf"  Replace Mitchell 138 kV breaker "#3 bank"  Replace Mitchell 138 kV breaker "Charlerio #2"  Replace Mitchell 138 kV breaker "Charlerio #1"  Replace Mitchell 138 kV breaker "Shepler Hill Jct"  Replace Mitchell 138 kV breaker "Shepler Hill Jct"  Replace Mitchell 138 kV breaker "Union Jct"  Replace Mitchell 138 kV breaker "#1-2 138 kV breaker "#1-2 138 kV bus tie"  Replace Marlowe 138 kV breaker "#1 transf"  Replace Marlowe 138 kV breaker "BMA"  Replace Marlowe 138 kV breaker "BMA"  Replace Marlowe 138 kV breaker "BMA"  Replace Marlowe 138	Replace Mitchell 138 kV breaker "#4 bank"  Replace Mitchell 138 kV breaker "#5 bank"  Replace Mitchell 138 kV breaker "#2 transf"  Replace Mitchell 138 kV breaker "#3 bank"  Replace Mitchell 138 kV breaker "Charlerio #2"  Replace Mitchell 138 kV breaker "Charlerio #1"  Replace Mitchell 138 kV breaker "Shepler Hill Jct"  Replace Mitchell 138 kV breaker "Union Jct"  Replace Mitchell 138 kV breaker "#1-2 138 kV breaker "#1-2 138 kV breaker "#1 transf"  Replace Marlowe 138 kV breaker "MBO"  Replace Marlowe 138 kV breaker "BMA"  Replace Marlowe 138 kV breaker "BMA"

Required 1	Tansinission Enhancements	Allitual Revenue Requirement	Responsible Customer(s)
b0407.6	Replace Marlowe 138 kV breaker "R11"		APS (100%)
b0407.7	Replace Marlowe 138 kV breaker "W"		APS (100%)
b0407.8	Replace Marlowe 138 kV breaker "138 kV bus tie"		APS (100%)
b0408.1	Replace Trissler 138 kV breaker "Belmont 604"		APS (100%)
b0408.2	Replace Trissler 138 kV breaker "Edgelawn 90"		APS (100%)
b0409.1	Replace Weirton 138 kV breaker "Wylie Ridge 210"		APS (100%)
b0409.2	Replace Weirton 138 kV breaker "Wylie Ridge 216"		APS (100%)
b0410	Replace Glen Falls 138 kV breaker "McAlpin 30"		APS (100%)
b0417	Reconductor Mitchell – Shepler Hill Junction 138 kV with 954 ACSR		APS (100%)

Required	Transmission Enhancements	Annual Revenue Requir	rement Responsible Customer(s)
b0418	Install a breaker failure auto-restoration scheme at Cabot 500 kV for the failure of the #6 breaker		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)
b0419	Install a breaker failure auto-restoration scheme at Bedington 500 kV for the failure of the #1 and #2 breakers		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)
			DFAX Allocation: APS (100%)
b0420	Operating Procedure to open the Black Oak 500/138 kV transformer #3 for the loss of Hatfield – Ronco 500 kV and the Hatfield #3 Generation		APS (100%)
b0445	Upgrade substation equipment and reconductor the Tidd – Mahans Lane – Weirton 138 kV circuit with 954 ACSR		APS (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Raise limiting structures on Albright - Bethelboro 138 kV to b0460 raise the rating to 175 MVA normal 214 MVA emergency APS (100%) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE\* (0.24%) / OVEC (0.07%) / PECO Construct an Amos to (5.39%) / PENELEC (1.84%) / Welton Spring to WV As specified under the PEPCO (3.71%) / PPL (4.78%) / b0491 procedures detailed in state line 765 kV PSEG (6.40%) / RE (0.27%) Attachment H-19B circuit (APS equipment) **DFAX Allocation:** AEC (5.01%) / AEP (4.39%) / APS (9.26%) / BGE (4.43%) / DL (0.02%) / DPL (6.91%) / Dominion (10.82%) / JCPL (11.64%) / ME (2.94%) / NEPTUNE\* (1.12%) / PECO (14.51%) / PEPCO (6.11%) / PPL (6.39%) / PSEG (15.86%) / RE (0.59%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE\* (0.24%) / OVEC (0.07%) / PECO (5.39%) / Construct a Welton As specified under the PENELEC (1.84%) / PEPCO Spring to Kemptown b0492 procedures detailed in (3.71%) / PPL (4.78%) / PSEG 765 kV line (APS Attachment H-19B (6.40%) / RE (0.27%) equipment) **DFAX Allocation:** AEC (5.01%) / AEP (4.39%) / APS (9.26%) / BGE (4.43%) / DL (0.02%) / DPL (6.91%) / Dominion (10.82%) / JCPL (11.64%) / ME (2.94%) / NEPTUNE\* (1.12%) / PECO (14.51%) / PEPCO (6.11%) / PPL (6.39%) / PSEG (15.86%) / RE (0.59%)Replace Eastalco 230 b0492.3 kV breaker D-26 APS (100%) Replace Eastalco 230 kV breaker D-28 b0492.4 APS (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace Eastalco 230 kV breaker D-31 b0492.5 APS (100%) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME Replace existing (1.95%) / NEPTUNE\* (0.24%) / Kammer 765/500 kV b0495 OVEC (0.07%) / PECO (5.39%) / transformer with a new PENELEC (1.84%) / PEPCO larger transformer (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** AEP (2.21%) / APS (1.71%) / BGE (45.34%) / Dayton (0.76%) / DEOK (1.02%) / EKPC (0.26%) / PEPCO (48.70%) Reconductor the Powell b0533 Mountain – Sutton 138 kV line APS (100%) Install a 28.61 MVAR b0534 capacitor on Sutton 138 kV APS (100%) Install a 44 MVAR b0535 capacitor on Dutch Fork 138 kV APS (100%) Replace Doubs circuit b0536 breaker DJ1 APS (100%) Replace Doubs circuit b0537 breaker DJ7 APS (100%) Replace Doubs circuit b0538 breaker DJ10 APS (100%) Reconductor Albright -Mettiki - Williams b0572.1 Parsons – Loughs Lane

APS (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

required 1	Tansinission Enhancements	Annual Revenue Requirement	responsible editionier(s)
	Reconductor Albright –		
b0572.2	Mettiki – Williams –		
00372.2	Parsons – Loughs Lane		
	138 kV with 954 ACSR		APS (100%)
	Reconfigure circuits in		
b0573	Butler – Cabot 138 kV		
	area		APS (100%)
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd (13.46%) /
			Dayton (2.12%) / DEOK (3.37%) /
			DL (1.76%) / DPL (2.55%) /
			Dominion (12.97%) / EKPC
b0577	Replace Fort Martin 500		(1.81%) / JCPL (3.92%) / ME
00377	kV breaker FL-1		(1.95%) / NEPTUNE* (0.24%) /
			OVEC (0.07%) / PECO (5.39%) /
			PENÈLEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			DFAX Allocation:
			APS (100%)
	Install 33 MVAR 138		
b0584	kV capacitor at		
	Necessity 138 kV		APS (100%)
	Increase Cecil 138 kV		
	capacitor size to 44		
	MVAR, replace five 138		
b0585	kV breakers at Cecil due		
00000	to increased short circuit		
	fault duty as a result of		
	the addition of the Prexy		
	substation		APS (100%)
	Increase Whiteley 138		
b0586	kV capacitor size to 44		
	MVAR		APS (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required 1	ransmission Enhancements	Annuai Revenue Requirement	Responsible Customer(s)
	Reconductor AP portion		
	of Tidd – Carnegie 138		
b0587	kV and Carnegie –		
	Weirton 138 kV with		
	954 ACSR		APS (100%)
	Install a 40.8 MVAR		
b0588	138 kV capacitor at		
	Grassy Falls		APS (100%)
	Replace five 138 kV		
b0589	breakers at Cecil		
	breakers at Cecii		APS (100%)
	Replace #1 and #2		
b0590	breakers at Charleroi		
	138 kV		APS (100%)
	Install a 25.2 MVAR		·
b0591	capacitor at Seneca		
	Caverns 138 kV		APS (100%)
	Rebuild Elko – Carbon		, , ,
b0673	Center Junction using		
	230 kV construction		APS (100%)
			APS (97.68%) / DL (0.96%) /
4 0 5 - 4	Construct new Osage –		PENELEC (1.09%) / ECP**
b0674	Whiteley 138 kV circuit		(0.01%) / PSEG (0.25%) / RE
	Windsieg 120 HV Chicale		(0.01%)
	Replace the Osage 138		(0.0170)
b0674.1	kV breaker		
0007111	'CollinsF126'		APS (100%)
	120		AEC (1.02%) / APS (81.96%)
			/ DPL (0.85%) / JCPL (1.75%)
	Convert Monocacy -		/ ME (6.37%) / NEPTUNE*
b0675.1	Walkersville 138 kV to		(0.15%) / PECO (3.09%) / PPL
	230 kV		(2.24%) / PSEG (2.42%) / RE
			(0.09%) / ECP** (0.06%)
			AEC (1.02%) / APS (81.96%)
	Convert Walkersville -		/ DPL (0.85%) / JCPL (1.75%)
	Catoctin 138 kV to 230		/ ME (6.37%) / NEPTUNE*
b0675.2	kV		(0.15%) / PECO (3.09%) / PPL
	K V		
			(2.24%) / PSEG (2.42%) / RE
			(0.09%) / ECP** (0.06%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

AEC (1.02%) / APS (81.96   Convert Ringgold - DPL (0.85%) / JCPL (1.75	,
Convert Ringgold - DPL (0.85%) / JCPL (1.75	
	%) /
b0675.3   Catoctin 138 kV to 230   ME (6.37%) / NEPTUN	∃*
00073.3   kV   (0.15%) / PECO (3.09%) /	PPL
(2.24%) / PSEG (2.42%) /	
(0.09%) / ECP** (0.06%)	5)
AEC (1.02%) / APS (81.96	%)/
Convert Catoctin - DPL (0.85%) / JCPL (1.75	%) /
b0675.4   Carroll 138 kV to 230   ME (6.37%) / NEPTUN	
60073.4   kV   (0.15%) / PECO (3.09%) /	PPL
(2.24%) / PSEG (2.42%) /	RE
(0.09%) / ECP** (0.06%)	
AEC (1.02%) / APS (81.96	
Convert portion of DPL (0.85%) / JCPL (1.75	,
b0675.5 Ringgold Substation ME (6.37%) / NEPTUN	
from 138 kV to 230 kV (0.15%) / PECO (3.09%) /	
(2.24%) / PSEG (2.42%) /	
(0.09%) / ECP** (0.06%)	<u>(</u>
AEC (1.02%) / APS (81.96	
Convert Catoctin DPL (0.85%) / JCPL (1.75	
b0675.6 Substation from 138 kV ME (6.37%) / NEPTUN	
to 230 kV (0.15%) / PECO (3.09%) /	
(2.24%) / PSEG (2.42%) /	
(0.09%) / ECP** (0.06%)	
AEC (1.02%) / APS (81.96	,
Convert portion of DPL (0.85%) / JCPL (1.75	,
b0675.7   Carroll Substation from   ME (6.37%) / NEPTUN	
138 KV to 230 KV (0.15%) / PECO (3.09%) /	
(2.24%) / PSEG (2.42%) /	
(0.09%) / ECP** (0.06%)	
AEC (1.02%) / APS (81.96	,
Convert Monocacy DPL (0.85%) / JCPL (1.75	
b0675.8   Substation from 138 kV   ME (6.37%) / NEPTUN	
to 230 kV (0.15%) / PECO (3.09%) /	
(2.24%) / PSEG (2.42%) /	
(0.09%) / ECP** (0.06%)	<u>(</u>

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

required 11		Annual Revenue Requirement	responsible edisioner(s)
b0675.9	Convert Walkersville Substation from 138 kV to 230 kV		AEC (1.02%) / APS (81.96%) / DPL (0.85%) / JCPL (1.75%) / ME (6.37%) / NEPTUNE* (0.15%) / PECO (3.09%) / PPL (2.24%) / PSEG (2.42%) / RE (0.09%) / ECP** (0.06%)
b0676.1	Reconductor Doubs - Lime Kiln (#207) 230 kV		AEC (0.64%) / APS (86.70%) / DPL (0.53%) / JCPL (1.93%) / ME (4.04%) / NEPTUNE* (0.18%) / PECO (1.93%) / PENELEC (0.93%) / PSEG (2.92%) / RE (0.12%) / ECP** (0.08%)
b0676.2	Reconductor Doubs - Lime Kiln (#231) 230 kV		AEC (0.64%) / APS (86.70%) / DPL (0.53%) / JCPL (1.93%) / ME (4.04%) / NEPTUNE* (0.18%) / PECO (1.93%) / PENELEC (0.93%) / PSEG (2.92%) / RE (0.12%) / ECP** (0.08%)
b0677	Reconductor Double Toll Gate – Riverton with 954 ACSR		APS (100%)
b0678	Reconductor Glen Falls - Oak Mound 138 kV with 954 ACSR		APS (100%)
b0679	Reconductor Grand Point – Letterkenny with 954 ACSR		APS (100%)
b0680	Reconductor Greene – Letterkenny with 954 ACSR		APS (100%)
b0681	Replace 600/5 CT's at Franklin 138 kV		APS (100%)
b0682	Replace 600/5 CT's at Whiteley 138 kV		APS (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

Required		Minuai Revenue Requirement	Responsible Customer(s)
	Reconductor Guilford –		
b0684	South Chambersburg		
	with 954 ACSR		APS (100%)
			APS (71.93%) / JCPL (4.17%)
			/ ME (6.79%) / NEPTUNE*
	Replace Ringgold		(0.38%) / PECO (4.05%) /
b0685	230/138 kV #3 with		
	larger transformer		PENELEC (5.88%) / ECP**
			(0.18%) / PSEG (6.37%) / RE
			(0.25%)
	Install a third Cabot		
b0704	500/138 kV transformer		APS (74.36%) / DL (2.73%)
	300/138 KV transformer		PENELEC (22.91%)
	Advance n0321 (Replace		
b0797	Doubs Circuit Breaker		
	DJ2)		APS (100%)
	Advance n0322 (Replace		( )
b0798	Doubs Circuit Breaker		
00170	DJ3)		APS (100%)
	/		Al 5 (10070)
1.0700	Advance n0323 (Replace		
b0799	Doubs Circuit Breaker		177 (1000)
	DJ6)		APS (100%)
	Advance n0327 (Replace		
b0800	Doubs Circuit Breaker		
	DJ16)		APS (100%)
	Day 1 a a On a green 129		
b0941	Replace Opequon 138		
	kV breaker 'BUSTIE'		APS (100%)
	D 1 D /1 120177		
b0942	Replace Butler 138 kV		
007.2	breaker '#1 BANK'		APS (100%)
			1112 (10070)
b0943	Replace Butler 138 kV		
00943	breaker '#2 BANK'		APS (100%)
			AFS (10070)
<b>b</b> 0044	Replace Yukon 138 kV		
b0944	breaker 'Y-8'		A DC (1000/)
			APS (100%)
1.0045	Replace Yukon 138 kV		
b0945	breaker 'Y-3'		A DG (4.000/)
			APS (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

Requirea i	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b0946	Replace Yukon 138 kV breaker 'Y-1'		APS (100%)
b0947	Replace Yukon 138 kV breaker 'Y-5'		APS (100%)
b0948	Replace Yukon 138 kV breaker 'Y-2'		APS (100%)
b0949	Replace Yukon 138 kV breaker 'Y-19'		APS (100%)
b0950	Replace Yukon 138 kV breaker 'Y-4'		APS (100%)
b0951	Replace Yukon 138 kV breaker 'Y-9'		APS (100%)
b0952	Replace Yukon 138 kV breaker 'Y-11'		APS (100%)
b0953	Replace Yukon 138 kV breaker 'Y-13'		APS (100%)
b0954	Replace Charleroi 138 kV breaker '#1 XFMR BANK'		APS (100%)
b0955	Replace Yukon 138 kV breaker 'Y-7'		APS (100%)
b0956	Replace Pruntytown 138 kV breaker 'P-9'		APS (100%)
b0957	Replace Pruntytown 138 kV breaker 'P-12'		APS (100%)
b0958	Replace Pruntytown 138 kV breaker 'P-15'		APS (100%)

Required	Fransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b0959	Replace Charleroi 138 kV breaker '#2 XFMR BANK'		APS (100%)
b0960	Replace Pruntytown 138 kV breaker 'P-2'		APS (100%)
b0961	Replace Pruntytown 138 kV breaker 'P-5'		APS (100%)
b0962	Replace Yukon 138 kV breaker 'Y-18'		APS (100%)
b0963	Replace Yukon 138 kV breaker 'Y-10'		APS (100%)
b0964	Replace Pruntytown 138 kV breaker 'P-11'		APS (100%)
b0965	Replace Springdale 138 kV breaker '138E'		APS (100%)
b0966	Replace Pruntytown 138 kV breaker 'P-8'		APS (100%)
b0967	Replace Pruntytown 138 kV breaker 'P-14'		APS (100%)
b0968	Replace Ringgold 138 kV breaker '#3 XFMR BANK'		APS (100%)
b0969	Replace Springdale 138 kV breaker '138C'		APS (100%)
b0970	Replace Rivesville 138 kV breaker '#8 XFMR BANK'		APS (100%)
b0971	Replace Springdale 138 kV breaker '138F'		APS (100%)

Tansinission Emianecinents	Annual Revenue Requirement	Responsible Cusionici(s)
Replace Belmont 138 kV breaker 'B-16'		APS (100%)
Replace Springdale 138 kV breaker '138G'		APS (100%)
Replace Springdale 138 kV breaker '138V'		APS (100%)
Replace Armstrong 138 kV breaker 'BROOKVILLE'		APS (100%)
Replace Springdale 138 kV breaker '138P'		APS (100%)
Replace Belmont 138 kV breaker 'B-17'		APS (100%)
Replace Springdale 138 kV breaker '138U'		APS (100%)
Replace Springdale 138 kV breaker '138D'		APS (100%)
Replace Springdale 138 kV breaker '138R'		APS (100%)
Replace Yukon 138 kV breaker 'Y-12'		APS (100%)
Replace Yukon 138 kV breaker 'Y-17'		APS (100%)
Replace Yukon 138 kV breaker 'Y-14'		APS (100%)
Replace Rivesville 138 kV breaker '#10 XFMR BANK'		APS (100%)
Replace Belmont 138 kV breaker 'B-14'		APS (100%)
	Replace Belmont 138 kV breaker 'B-16'  Replace Springdale 138 kV breaker '138G'  Replace Springdale 138 kV breaker '138V'  Replace Armstrong 138 kV breaker 'BROOKVILLE'  Replace Springdale 138 kV breaker '138P'  Replace Belmont 138 kV breaker 'B-17'  Replace Springdale 138 kV breaker '138U'  Replace Springdale 138 kV breaker '138D'  Replace Springdale 138 kV breaker '138R'  Replace Springdale 138 kV breaker '138R'  Replace Yukon 138 kV breaker 'Y-12'  Replace Yukon 138 kV breaker 'Y-17'  Replace Yukon 138 kV breaker 'Y-14'  Replace Rivesville 138 kV breaker 'Y-14'  Replace Belmont 138 kV breaker 'H10 XFMR BANK'  Replace Belmont 138 kV	Replace Belmont 138 kV breaker 'B-16'  Replace Springdale 138 kV breaker '138G'  Replace Springdale 138 kV breaker '138V'  Replace Armstrong 138 kV breaker 'BROOKVILLE'  Replace Springdale 138 kV breaker '138P'  Replace Belmont 138 kV breaker 'B-17'  Replace Springdale 138 kV breaker '138U'  Replace Springdale 138 kV breaker '138D'  Replace Springdale 138 kV breaker '138R'  Replace Yukon 138 kV breaker 'Y-12'  Replace Yukon 138 kV breaker 'Y-17'  Replace Yukon 138 kV breaker 'Y-14'  Replace Rivesville 138 kV breaker 'Y-14'  Replace Rivesville 138 kV breaker 'H0 XFMR BANK'  Replace Belmont 138 kV

Required	Fransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b0986	Replace Armstrong 138 kV breaker 'RESERVE BUS'		APS (100%)
ь0987	Replace Yukon 138 kV breaker 'Y-16'		APS (100%)
ь0988	Replace Springdale 138 kV breaker '138T'		APS (100%)
b0989	Replace Edgelawn 138 kV breaker 'GOFF RUN #632'		APS (100%)
b0990	Change reclosing on Cabot 138 kV breaker 'C-9'		APS (100%)
b0991	Change reclosing on Belmont 138 kV breaker 'B-7'		APS (100%)
b0992	Change reclosing on Belmont 138 kV breaker 'B-12'		APS (100%)
b0993	Change reclosing on Belmont 138 kV breaker 'B-9'		APS (100%)
b0994	Change reclosing on Belmont 138 kV breaker 'B-19'		APS (100%)
b0995	Change reclosing on Belmont 138 kV breaker 'B-21'		APS (100%)
b0996	Change reclosing on Willow Island 138 kV breaker 'FAIRVIEW #84'		APS (100%)
b0997	Change reclosing on Cabot 138 kV breaker 'C-4'		APS (100%)
ь0998	Change reclosing on Cabot 138 kV breaker 'C-1'		APS (100%)

Required 1	ransmission Ennancements	Annual Revenue Requirement	Responsible Customer(s)
ь0999	Replace Redbud 138 kV breaker 'BUS TIE'		APS (100%)
b1022.1	Reconfigure the Peters to Bethel Park 138 kV line and Elrama to Woodville 138 kV line to create a 138 kV path from Woodville to Peters and a 138 kV path from Elrama to Bethel Park		APS (96.98%) / DL (3.02%)
b1022.3	Add static capacitors at Smith 138 kV		APS (96.98%) / DL (3.02%)
b1022.4	Add static capacitors at North Fayette 138 kV		APS (96.98%) / DL (3.02%)
b1022.5	Add static capacitors at South Fayette 138 kV		APS (96.98%) / DL (3.02%)
b1022.6	Add static capacitors at Manifold 138 kV		APS (96.98%) / DL (3.02%)
b1022.7	Add static capacitors at Houston 138 kV		APS (96.98%) / DL (3.02%)
b1023.1	Install a 500/138 kV transformer at 502 Junction		APS (100%)
b1023.2	Construct a new Franklin - 502 Junction 138 kV line including a rebuild of the Whiteley - Franklin 138 kV line to double circuit		APS (100%)
b1023.3	Construct a new 502 Junction - Osage 138 kV line		APS (100%)

Required 1	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
	Construct Braddock 138		
	kV breaker station that		
	connects the Charleroi -		
	Gordon 138 kV line,		
b1023.4	Washington - Franklin		
	138 kV line and the		
	Washington - Vanceville		
	138 kV line including a		
	66 MVAR capacitor		APS (100%)
	Increase the size of the		
b1027	shunt capacitors at Enon		
	138 kV		APS (100%)
	Raise three structures on		
b1028	the Osage - Collins Ferry		
01026	138 kV line to increase		
	the line rating		APS (100%)
	Reconductor the		
	Edgewater – Vasco Tap;		
b1128	Edgewater – Loyalhanna		
	138 kV lines with 954		
	ACSR		APS (100%)
	Reconductor the East		
b1129	Waynesboro – Ringgold		
01129	138 kV line with 954		
	ACSR		APS (100%)
	Upgrade Double Tollgate		
b1131	– Meadowbrook MDT		
	Terminal Equipment		APS (100%)
	Upgrade Double		
b1132	Tollgate-Meadowbrook		
01132	MBG terminal		
	equipment		APS (100%)
b1133	Upgrade terminal		
51155	equipment at Springdale		APS (100%)
	Reconductor the		
	Bartonville –		
b1135	Meadowbrook 138 kV		
	line with high		
	temperature conductor		APS (100%)

Required T	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
	Reconductor the Eastgate		
b1137	– Luxor 138 kV;		APS (78.59%) / PENELEC
01137	Eastgate – Sony 138 kV		(14.08%) / ECP** (0.23%) /
	line with 954 ACSR		PSEG (6.83%) / RE (0.27%)
	Reconductor the King		
b1138	Farm – Sony 138 kV line		
	with 954 ACSR		APS (100%)
	Reconductor the Yukon		
b1139	– Waltz Mills 138 kV		
01139	line with high		
	temperature conductor		APS (100%)
	Reconductor the Bracken		
b1140	Junction – Luxor 138 kV		
	line with 954 ACSR		APS (100%)
	Reconductor the		
	Sewickley – Waltz Mills		
b1141	Tap 138 kV line with		
	high temperature		
	conductor		APS (100%)
	Reconductor the		
	Bartonsville –		
b1142	Stephenson 138 kV;		
01172	Stonewall – Stephenson		
	138 kV line with 954		
	ACSR		APS (100%)
	Reconductor the		
b1143	Youngwood – Yukon		
01173	138 kV line with high		APS (89.92%) / PENELEC
	temperature conductor		(10.08%)
	Reconductor the Bull		
b1144	Creek Junction – Cabot		
01144	138 kV line with high		
	temperature conductor		APS (100%)

<sup>\*\*</sup>East Coast Power, L.L.C.

Reconductor the Lawson   Junction – Cabot 138 kV   line with high   temperature conductor   APS (100%)	Required 1	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
1145   line with high temperature conductor				
Inter with high   temperature conductor   Replace Layton -   Smithton #61 138 kV   line structures to increase line rating   APS (100%)   Replace Smith - Yukon   138 kV line structures to increase line rating   APS (100%)   Reconductor the   Loyalhanna - Luxor 138 kV line with 954 ACSR   APS (100%)   APS (100%)	b1145	Junction – Cabot 138 kV		
Replace Layton - Smithton #61 138 kV   line structures to increase line rating   APS (100%)		_		
Smithton #61 138 kV   line structures to increase   line rating   APS (100%)		temperature conductor		APS (100%)
Seconductor the				
Ine structures to increase   line rating   Replace Smith – Yukon	h1146			
Replace Smith - Yukon   138 kV line structures to increase line rating   APS (100%)	01170	line structures to increase		
b1147		ŭ		APS (100%)
increase line rating				
Reconductor the   Loyalhanna – Luxor 138   kV line with 954 ACSR   Reconductor the Luxor – Stony Springs Junction 138 kV line with 954   ACSR   APS (100%)	b1147	138 kV line structures to		
b1148		increase line rating		APS (100%)
Reconductor the Luxor - Stony Springs Junction   138 kV line with 954				
Reconductor the Luxor - Stony Springs Junction 138 kV line with 954   ACSR	b1148			
Stony Springs Junction   138 kV line with 954   ACSR				APS (100%)
138 kV line with 954   ACSR				
holiso bilion with 954 ACSR  Digrade terminal equipment at Social Hall  Reconductor the Greenwood – Redbud 138 kV line with 954 ACSR  APS (100%)  Bilion Reconductor Grand Point — South Chambersburg  Beplace Peters 138 kV breaker 'Bethel P OCB'  Bilion Replace Peters 138 kV breaker 'Cecil OCB'  Replace Peters 138 kV breaker 'Cecil OCB'  Replace Peters 138 kV breaker 'Union JctOCB'  Replace Double Toll Gate 138 kV breaker 'DRB-2'  Replace Double Toll Gate 138 kV breaker  APS (100%)  APS (100%)  APS (100%)  APS (100%)	b1149			
b1150   Upgrade terminal equipment at Social Hall   APS (100%)	01147			
Bilist				APS (100%)
Reconductor the   Greenwood - Redbud   138 kV line with 954   ACSR   APS (100%)	h1150	10		
b1151       Greenwood – Redbud 138 kV line with 954 ACSR       APS (100%)         b1152       Reconductor Grand Point – South Chambersburg       APS (100%)         b1159       Replace Peters 138 kV breaker 'Bethel P OCB'       APS (100%)         b1160       Replace Peters 138 kV breaker 'Cecil OCB'       APS (100%)         b1161       Replace Peters 138 kV breaker 'Union JctOCB'       APS (100%)         b1162       Gate 138 kV breaker 'DRB-2'       APS (100%)         Replace Double Toll Gate 138 kV breaker       APS (100%)         b1163       Gate 138 kV breaker	01130	1 1		APS (100%)
138 kV line with 954 ACSR  Reconductor Grand Point — South Chambersburg  Replace Peters 138 kV breaker 'Bethel P OCB'  APS (100%)  Replace Peters 138 kV breaker 'Cecil OCB'  APS (100%)  Replace Peters 138 kV breaker 'Cecil OCB'  APS (100%)  Replace Peters 138 kV breaker 'Union JctOCB'  Replace Double Toll Gate 138 kV breaker 'DRB-2'  Replace Double Toll Gate 138 kV breaker				
ACSR	h1151			
B1152 Reconductor Grand Point - South Chambersburg  Replace Peters 138 kV breaker 'Bethel P OCB'  APS (100%)  Replace Peters 138 kV breaker 'Cecil OCB'  APS (100%)  Replace Peters 138 kV breaker 'Cecil OCB'  APS (100%)  Replace Peters 138 kV breaker 'Union JctOCB'  Replace Double Toll Gate 138 kV breaker 'DRB-2'  APS (100%)  Replace Double Toll Gate 138 kV breaker  APS (100%)	01131			
- South Chambersburg  Replace Peters 138 kV breaker 'Bethel P OCB'  APS (100%)  Replace Peters 138 kV breaker 'Cecil OCB'  APS (100%)  Replace Peters 138 kV breaker 'Union JctOCB'  Replace Double Toll Gate 138 kV breaker 'DRB-2'  Replace Double Toll Gate 138 kV breaker  APS (100%)				APS (100%)
- South Chambersburg  Replace Peters 138 kV breaker 'Bethel P OCB'  Replace Peters 138 kV breaker 'Cecil OCB'  APS (100%)  Replace Peters 138 kV breaker 'Cecil OCB'  APS (100%)  Replace Peters 138 kV breaker 'Union JctOCB'  Replace Double Toll  Gate 138 kV breaker 'DRB-2'  Replace Double Toll  Gate 138 kV breaker  APS (100%)	b1152			
breaker 'Bethel P OCB'  Replace Peters 138 kV breaker 'Cecil OCB'  APS (100%)  Replace Peters 138 kV breaker 'Union JctOCB'  Replace Double Toll Gate 138 kV breaker 'DRB-2'  Replace Double Toll  Gate 138 kV breaker  APS (100%)  APS (100%)	01132	7		APS (100%)
breaker 'Bethel P OCB'  Replace Peters 138 kV breaker 'Cecil OCB'  APS (100%)  Replace Peters 138 kV breaker 'Union JctOCB'  Replace Double Toll Gate 138 kV breaker 'DRB-2'  Replace Double Toll  Gate 138 kV breaker  Gate 138 kV breaker	h1159			
breaker 'Cecil OCB'  Replace Peters 138 kV breaker 'Union JctOCB'  Replace Double Toll  Gate 138 kV breaker 'DRB-2'  Replace Double Toll  Gate 138 kV breaker  Gate 138 kV breaker	01137			APS (100%)
breaker 'Cecil OCB'  Replace Peters 138 kV breaker 'Union JctOCB'  Replace Double Toll Gate 138 kV breaker 'DRB-2'  Replace Double Toll  Gate 138 kV breaker  APS (100%)  APS (100%)	b1160			
breaker 'Union JctOCB'  Replace Double Toll  b1162 Gate 138 kV breaker  'DRB-2'  Replace Double Toll  B1163 Gate 138 kV breaker	01100	breaker 'Cecil OCB'		APS (100%)
breaker 'Union JctOCB'  Replace Double Toll  Gate 138 kV breaker  'DRB-2'  Replace Double Toll  B1163 Gate 138 kV breaker	h1161	Replace Peters 138 kV		
b1162 Gate 138 kV breaker 'DRB-2'  Replace Double Toll b1163 Gate 138 kV breaker	01101	breaker 'Union JctOCB'		APS (100%)
'DRB-2' Replace Double Toll Gate 138 kV breaker  APS (100%)		_ <del>-</del>		
Replace Double Toll b1163 Gate 138 kV breaker	b1162			
b1163 Gate 138 kV breaker		1		APS (100%)
		Replace Double Toll		
'DT 138 kV OCB' APS (100%)	b1163			
		'DT 138 kV OCB'		APS (100%)

Required 1	ransmission Enhancements	Annual Revenue Requiremen	it Responsible Cusiomer(s)
b1164	Replace Cecil 138 kV breaker 'Enlow OCB'		APS (100%)
b1165	Replace Cecil 138 kV breaker 'South Fayette'		APS (100%)
b1166	Replace Wylie Ridge 138 kV breaker 'W-9'		APS (100%)
b1167	Replace Reid 138 kV breaker 'RI-2'		APS (100%)
b1171.1	Install the second Black Oak 500/138 kV transformer, two 138 kV breaker, and related substation work		BGE (20.76%) / DPL (3.14%) / Dominion (39.55%) / ME (2.71%) / PECO (3.36%) / PEPCO (30.48%)
b1171.3	Install six 500 kV breakers and remove BOL1 500 kV breaker at Black Oak		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b1200	Reconductor Double Toll Gate – Greenwood 138 kV with 954 ACSR conductor		APS (100%)
b1221.1	Convert Carbon Center from 138 kV to a 230 kV ring bus		APS (100%)
b1221.2	Construct Bear Run 230 kV substation with 230/138 kV transformer		APS (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required 1	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
	Loop Carbon Center		
b1221.3	Junction – Williamette		
	line into Bear Run		APS (100%)
	Carbon Center – Carbon		
	Center Junction &		
b1221.4	Carbon Center Junction		
	– Bear Run conversion		
	from 138 kV to 230 kV		APS (100%)
	Reconductor Willow-		,
b1230	Eureka & Eurkea-St		
	Mary 138 kV lines		APS (100%)
	,		AEC (1.40%) / APS (75.74%) /
			DPL (1.92%) / JCPL (2.92%) /
	Reconductor Nipetown –		ME (6.10%) / NEPTUNE*
b1232	Reid 138 kV with 1033		(0.27%) / PECO (4.40%) /
	ACCR		PENELEC (3.26%) / PPL
			(3.99%)
	Upgrade terminal		(5.32.13)
b1233.1	equipment at		
0120011	Washington		APS (100%)
	Replace structures		
b1234	between Ridgeway and		
	Paper city		APS (100%)
	Reconductor the Albright		
	– Black Oak AFA 138		APS (30.25%) / BGE (16.10%)
b1235	kV line with 795		/ Dominion (30.51%) / PEPCO
	ACSS/TW		(23.14%)
	Upgrade terminal		(====,0)
	equipment at Albright,		
	replace bus and line side		
b1237	breaker disconnects and		
	leads, replace breaker		
	risers, upgrade RTU and		
	line		APS (100%)
	Install a 138 kV 44		1112 (10070)
b1238	MVAR capacitor at		
01230	Edgelawn substation		APS (100%)
L		1	122 ~ (100/0)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
	Install a 138 kV 44		
b1239	MVAR capacitor at		
	Ridgeway substation		APS (100%)
	Install a 138 kV 44		
b1240	MVAR capacitor at Elko		
	Substation		APS (100%)
	Upgrade terminal		
	equipment at		
b1241	Washington substation		
	on the GE		
	Plastics/DuPont terminal		APS (100%)
	Replace structures		
b1242	between Collins Ferry		
	and West Run		APS (100%)
	Install a 138 kV		
b1243	capacitor at Potter		
	Substation		APS (100%)
b1261	Replace Butler 138 kV		
	breaker '1-2 BUS 138'		APS (100%)
1.1000	Install 2nd 500/138 kV		. 77 (22 272) (77 (7 222)
b1383	transformer at 502		APS (93.27%) / DL (5.39%) /
	Junction		PENELEC (1.34%)
	Reconductor		
1.1204	approximately 2.17 miles		
b1384	of Bedington –		
	Shepherdstown 138 kV		A DG (1000/)
	with 954 ACSR		APS (100%)
b1385	Reconductor Halfway –		
	Paramount 138 kV with		A DC (1000/)
	1033 ACCR		APS (100%)
b1386	Reconductor Double		
	Tollgate – Meadow		ADS (02 220/) / DOE (2 200/) /
	Brook 138 kV ckt 2 with		APS (93.33%) / BGE (3.39%) /
b1387	1033 ACCR		PEPCO (3.28%)
	Reconductor Double Tollgate – Meadow		ABS (02 220/) / BGE (2 200/) /
	Brook 138 kV		APS (93.33%) / BGE (3.39%) /
b1388	Reconductor Feagans		PEPCO (3.28%)
	Mill – Millville 138 kV		
	with 954 ACSR		APS (100%)
	WILLI JUA ACOK	<u> </u>	MIS (10070)

1100	Turisiinssieli Eimaileenielia	HINGE TEC CONCENTED TO	rtespensiere eusterner(s)
	Reconductor Bens Run –		
b1389	St. Mary's 138 kV with		AEP (12.40%) / APS (17.80%)
	954 ACSR		/ DL (69.80%)
b1390	Replace Bus Tie Breaker		
	at Opequon		APS (100%)
b1391	Replace Line Trap at		
	Gore		APS (100%)
	Replace structure on		
b1392	Belmont – Trissler 138		
	kV line		APS (100%)
	Replace structures		
b1393	Kingwood – Pruntytown		
	138 kV line		APS (100%)
1.1205	Upgrade Terminal		
b1395	Equipment at Kittanning		APS (100%)
	Change reclosing on		
1 1 401	Pruntytown 138 kV		
b1401	breaker 'P-16' to 1 shot		
	at 15 seconds		APS (100%)
	Change reclosing on		
	Rivesville 138 kV		
b1402	breaker 'Pruntytown		
	#34' to 1 shot at 15		
	seconds		APS (100%)
	Change reclosing on		
1,1402	Yukon 138 kV breaker		
b1403	'Y21 Shepler' to 1 shot		
	at 15 seconds		APS (100%)
b1404	Replace the Kiski Valley		
	138 kV breaker		
	'Vandergrift' with a 40		
	kA breaker		APS (100%)
b1405	Change reclosing on		
	Armstrong 138 kV		
	breaker 'GARETTRJCT'		
	at 1 shot at 15 seconds		APS (100%)

Required T	ransmission Enhancements	Annual Revenue Requiremen	t Responsible Customer(s)
	Change reclosing on		
b1406	Armstrong 138 kV		
	breaker 'KITTANNING'		
	to 1 shot at 15 seconds		APS (100%)
	Change reclosing on		
b1407	Armstrong 138 kV		
01407	breaker 'BURMA' to 1		
	shot at 15 seconds		APS (100%)
	Replace the Weirton 138		
b1408	kV breaker 'Tidd 224'		
	with a 40 kA breaker		APS (100%)
	Replace the Cabot 138		
b1409	kV breaker 'C9 Kiski		
01409	Valley' with a 40 kA		
	breaker		APS (100%)
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd (13.46%)
			/ Dayton (2.12%) / DEOK
			(3.37%) / DL (1.76%) / DPL
			(2.55%) / Dominion (12.97%) /
			EKPC (1.81%) / JCPL (3.92%) /
	Terminal Equipment		ME (1.95%) / NEPTUNE*
b1507.2	upgrade at Doubs		(0.24%) / OVEC (0.07%) /
	substation		PECO (5.39%) / PENELEC
			(1.84%) / PEPCO (3.71%) / PPL
			(4.78%) / PSEG (6.40%) / RE
			(0.27%)
			DELW AR
			DFAX Allocation:
			APS (20.37%) / BGE (12.89%) /
			Dominion (53.52%) / PEPCO
			(13.22%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Trai	nsmission Enhancements	Annual Revenue Requiremen	1
			<b>Load-Ratio Share Allocation:</b>
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd (13.46%)
			/ Dayton (2.12%) / DEOK
			(3.37%) / DL (1.76%) / DPL
			(2.55%) / Dominion (12.97%) /
	Mt. Storm – Doubs		EKPC (1.81%) / JCPL (3.92%) /
1	transmission line rebuild		ME (1.95%) / NEPTUNE*
b1507.3	in Maryland – Total line		(0.24%) / OVEC (0.07%) /
1	mileage for APS is 2.71		PECO (5.39%) / PENELEC
1	miles		(1.84%) / PEPCO (3.71%) / PPL
			(4.78%) / PSEG (6.40%) / RE
			(0.27%)
			DFAX Allocation:
			APS (20.37%) / BGE (12.89%) /
			Dominion (53.52%) / PEPCO
			(13.22%)
			(======)
b1510	Install 59.4 MVAR		
(	capacitor at Waverly		APS (100%)
b1672	Install a 230 kV breaker		
01072	at Carbon Center		APS (100%)
niinay	Replace Doubs circuit		
	breaker DJ11		APS (100%)
	Replace Doubs circuit		
	breaker DJ12		APS (100%)
	Replace Doubs circuit		
00341	breaker DJ13		APS (100%)
b0542	Replace Doubs circuit		
00342	breaker DJ20		APS (100%)
	Replace Doubs circuit		
	breaker DJ21		APS (100%)
-			
	Remove instantaneous		
b0544			APS (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Remove instantaneous b0545 reclose from Eastalco circuit breaker D-28 APS (100%) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC Install 200 MVAR (1.81%) / JCPL (3.92%) / ME (1.95%) / capacitor at Meadow NEPTUNE\* (0.24%) / OVEC (0.07%) / b0559 Brook 500 kV PECO (5.39%) / PENELEC (1.84%) / substation PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** APS (33.17%) / Dominion (51.31%) / PEPCO (15.52%) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE\* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / Install 250 MVAR PEPCO (3.71%) / PPL (4.78%) / PSEG b0560 capacitor at Kemptown (6.40%) / RE (0.27%) 500 kV substation **DFAX Allocation:** AEC (5.01%) / AEP (4.39%) / APS (9.26%) / BGE (4.43%) / DL (0.02%) / DPL (6.91%) / Dominion (10.82%) / JCPL (11.64%) / ME (2.94%) / NEPTUNE\* (1.12%) / PECO (14.51%) / PEPCO (6.11%) / PPL (6.39%) /

PSEG (15.86%) / RE (0.59%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Tr	ansmission Enhancements	Annual Revenue Requireme	
b1803	Build a 300 MVAR Switched Shunt at Doubs 500 kV and increase (~50 MVAR) in size the existing Switched Shunt at Doubs 500 kV		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%)
			DFAX Allocation: APS (20.37%) / BGE (12.89%) / Dominion (53.52%) / PEPCO (13.22%)
b1804	Install a new 600 MVAR SVC at Meadowbrook 500 kV		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%)
			APS (33.17%) / Dominion (51.31%) / PEPCO (15.52%)
b1816.1	Replace relaying at the Mt. Airy substation on the Carroll - Mt. Airy 230 kV line		APS (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Adjust the control settings of all existing capacitors at Mt Airy 34.5 kV, Monocacy 138 kV, Ringgold 138 kV b1816.2 served by Potomac Edison's Eastern 230 kV network to ensure that all units will be on during the identified N-1-1 contingencies APS (100%) Replace existing unidirectional LTC controller on the No. 4, b1816.3 230/138 kV transformer at Carroll substation with a bidirectional unit APS (100%) Isolate and bypass the b1816.4 138 kV reactor at Germantown Substation APS (100%) Replace 336.4 ACSR conductor on the Catoctin - Carroll 138 kV line using 556.5 ACSR (26/7) or equivalent on existing structures (12.7 miles), b1816.6 800 A wave traps at Carroll and Catoctin with 1200 A units, and 556.5 ACSR SCCIR (Sub-conductor) line risers and bus traps with 795 ACSR or equivalent APS (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace the 1200 A wave trap, line risers, breaker risers with 1600 b1822 A capacity terminal equipment at Reid 138 kV SS APS (100%) Replace the 800 A wave trap with a 1200 A wave b1823 trap at Millville 138 kV substation APS (100%) Reconductor Grant Point - Guilford 138 kV line b1824 approximately 8 miles of 556 ACSR with 795 ACSR APS (100%) Replace the 800 Amp line trap at Butler 138 b1825 kV Sub on the Cabot APS (100%) East 138 kV line Change the CT ratio at b1826 Double Toll Gate 138 kV SS on MDT line APS (100%) Change the CT ratio at b1827 Double Toll Gate 138 kV SS on MBG line APS (100%) Reconductor the Bartonville – Stephenson b1828.1 3.03 mile 138 kV line of 556 ACSR with 795 ACSR APS (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Reconductor the Stonewall – Stephenson 2.08 mile 138 kV line of b1828.2 556 ACSR with 795 ACSR APS (100%) Replace the existing 138 kV 556.5 ACSR substation conductor risers with 954 ACSR at b1829 the Redbud 138 kV substation, including but not limited to the line side disconnect leads APS (100%) Replace 1200 A wave trap and 1024 ACAR breaker risers at Halfway 138 kV substation, and b1830 replace 1024 ACAR breaker risers at Paramount 138 kV substation APS (100%) Replace the 1200 A line side and bus side disconnect switches with 1600 A switches, replace b1832 bus side, line side, and disconnect leads at Lime Kiln SS on the Doubs -Lime Kiln 1 (207) 230 kV line terminal APS (100%) Replace the 1200 A line side and bus side disconnect switches with 1600 A switches, replace b1833 bus side, line side, and disconnect leads at Lime Kiln SS on the Doubs -Lime Kiln 2 (231) 230 kV line terminal APS (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Reconductor 14.3 miles of 556 ACSR with 795 ACSR from Old Chapel to Millville 138 kV and b1835 APS (37.68%) / Dominion upgrade line risers at Old Chapel 138 kV and (34.46%) / PEPCO (13.69%) / Millville 138 kV and BGE (11.45%) / ME (2.01%) / PENELEC (0.53%) / DL replace 1200 A wave trap at Millville 138 kV (0.18%)Replace 1200 A wave b1836 trap with 1600 A wave trap at Reid 138 kV SS APS (100%) Replace 750 CU breaker risers with 795 ACSR at Marlowe 138 kV and b1837 replace 1200 A wave traps with 1600 A wave traps at Marlowe 138 kV and Bedington 138 kV APS (100%) Replace the 1200 A Bedington 138 kV line air switch and the 1200 b1838 A 138 kV bus tie air switch at Nipetown 138 kV with 1600 A switches APS (100%) Install additional 33 MVAR capacitors at b1839 Grand Point 138 kV SS and Guildford 138 kV SS APS (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s)

Required	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
	Construct a 138 kV line		
b1840	between Buckhannon		
01040	and Weston 138 kV		
	substations		APS (100%)
	Replace line trap at		
b1902	Stonewall on the		
01902	Stephenson 138 kV line		
	terminal		APS (100%)
	Loop the Homer City-		
	Handsome Lake 345 kV		
b1941	line into the Armstrong		
01941	substation and install a		
	345/138 kV transformer		APS (67.86%) / PENELEC
	at Armstrong		(32.14%)
	Change the CT ratio at		
b1942	Millville to improve the		
01772	Millville – Old Chapel		
	138 kV line ratings		APS (100%)
	Convert Moshannon		APS (41.06%) / DPL (6.68%) /
b1964	substation to a 4 breaker		JCPL (5.48%) / ME (10.70%) /
01704	230 kV ring bus		NEPTUNE* (0.53%) / PECO
			(15.53%) / PPL (20.02%)
	Install a 44 MVAR 138		
b1965	kV capacitor at Luxor		
	substation		APS (100%)
	Upgrade the AP portion		
	of the Elrama – Mitchell		
b1986	138 kV line by replace		
01700	breaker risers on the		
	Mitchell 138 kV bus on		
	the Elrama terminal		APS (100%)
	Reconductor the Osage-		
	Collins Ferry 138 kV		
b1987	line with 795 ACSS.		
- 170,	Upgrade terminal		
	equipment at Osage and		
	Collins Ferry		APS (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Raise structures between Lake Lynn and West Run to eliminate the b1988 clearance de-rates on the West Run – Lake Lynn 138 kV line APS (100%) Raise structures between Collins Ferry and West Run to eliminate the b1989 clearance de-rates on the Collins Ferry - West Run 138 kV line APS (100%) Replace Weirt 138 kV breaker 'Sb2095 TORONTO226' with 63 kA rated breaker APS (100%) Revise the reclosing of b2096 Weirt 138 kV breaker '2&5 XFMR' APS (100%) Replace Ridgeley 138 kV breaker '#2 XFMR b2097 OCB' APS (100%) Revise the reclosing of Ridgeley 138 kV breaker b2098 'AR3' with 40 kA rated breaker APS (100%) Revise the reclosing of Ridgeley 138 kV breaker b2099 'RC1' APS (100%) Replace Ridgeley 138 kV breaker 'WC4' with b2100 40 kA rated breaker APS (100%) Replace Ridgeley 138 kV breaker '1 XFMR b2101 OCB' with 40 kA rated breaker APS (100%) Replace Armstrong 138 kV breaker b2102 'GARETTRJCT' with 40 kA rated breaker APS (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace Armstrong 138 b2103 kV breaker 'BURMA' with 40 kA rated breaker APS (100%) Replace Armstrong 138 kV breaker b2104 'KITTANNING' with 40 kA rated breaker APS (100%) Replace Armstrong 138 kV breaker b2105 'KISSINGERJCT' with 40 kA rated breaker APS (100%) Replace Wylie Ridge 345 kV breaker 'WK-1' b2106 with 63 kA rated breaker APS (100%) Replace Wylie Ridge 345 kV breaker 'WK-2' b2107 with 63 kA rated breaker APS (100%) Replace Wylie Ridge b2108 345 kV breaker 'WK-3' with 63 kA rated breaker APS (100%) Replace Wylie Ridge b2109 345 kV breaker 'WK-4' with 63 kA rated breaker APS (100%) Replace Wylie Ridge b2110 345 kV breaker 'WK-6' with 63 kA rated breaker APS (100%) Replace Wylie Ridge b2111 138 kV breaker 'WK-7' with 63 kA rated breaker APS (100%) Replace Wylie Ridge b2112 345 kV breaker 'WK-5' APS (100%) Replace Weirton 138 kV b2113 breaker 'NO 6 XFMR' with 63 kA rated breaker APS (100%) Replace Armstrong 138 kV breaker 'Bus-Tie' b2114 (Status On-Hold pending APS (100%) retirement)

Annual Revenue Requirement

Required Transmission Enhancements

turn-on voltage to 1.0 pu with a high limit of 1.04 pu, For Crupperneck and

Powell Mountain 138 kV Capacitor Banks adjust turn-on voltage to 1.01 pu with a high limit of 1.035

b2168

Add a new 138 kV line b2124.1 exit APS (100%) Construct a 138 kV ring bus and install a 138/69 b2124.2 kV autotransformer APS (100%) Add new 138 kV line exit and install a 138/25 kV b2124.3 transformer APS (100%) Construct approximately b2124.4 5.5 miles of 138 kV line APS (100%) Convert approximately 7.5 miles of 69 kV to 138 b2124.5 kV APS (100%) Install a 75 MVAR 230 b2156 kV capacitor at Shingletown Substation APS (100%) Replace 800A wave trap at Stonewall with a 1200 b2165 A wave trap APS (100%) Reconductor the Millville Sleepy Hollow 138 kV 4.25 miles of 556 ACSR with 795 ACSR, upgrade b2166 line risers at Sleepy Hollow, and change 1200 A CT tap at Millville to 800 APS (100%) For Grassy Falls 138 kV Capacitor bank adjust

APS (100%)

Responsible Customer(s)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace/Raise structures on the Yukon-Smithton b2169 138 kV line section to eliminate clearance de-APS (100%) Replace/Raise structures on the Smithton-Shepler b2170 Hill Jct 138 kV line section to eliminate clearance de-rate APS (100%) Replace/Raise structures on the Parsons-William b2171 138 kV line section to eliminate clearance de-APS (100%) Replace/Raise structures on the Parsons - Loughs b2172 Lane 138 kV line section to eliminate clearance de-rate APS (100%)

#### SCHEDULE 12 – APPENDIX

(17) American Electric Power Service Corporation on behalf of its affiliate companies: AEP Appalachian Transmission Company, Inc.; AEP Indiana Michigan Transmission Company, Inc.; AEP Kentucky Transmission Company, Inc.; AEP Ohio Transmission Company, Inc.; AEP West Virginia Transmission Company, Inc.; Appalachian Power Company; Indiana Michigan Power Company; Kentucky Power Company; Kingsport Power Company; Ohio Power Company and Wheeling Power Company

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Install a 765/138 kV b0318 AEP (99.00%) / PEPCO (1.00%) transformer at Amos Replace entrance conductors, wave traps, and risers at the Tidd 345 kV station on the Tidd – Canton b0324 Central 345 kV circuit AEP (100%) Replace Cook 345 kV b0447 breaker M2 AEP (100%) Replace Cook 345 kV b0448 breaker N2 AEP (100%) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE\* (0.24%) / OVEC (0.07%) / PECO (5.39%) / As specified under Construct an Amos – PENELEC (1.84%) / PEPCO the procedures b0490 Bedington 765 kV circuit (3.71%) / PPL (4.78%) / PSEG detailed in (AEP equipment) (6.40%) / RE (0.27%) Attachment H-19B **DFAX Allocation:** AEC (5.01%) / AEP (4.39%) / APS (9.26%) / BGE (4.43%) / DL (0.02%) / DPL (6.91%) / Dominion (10.82%) / JCPL (11.64%) / ME (2.94%) / NEPTUNE\* (1.12%) / PECO (14.51%) / PEPCO (6.11%) / PPL (6.39%) / PSEG (15.86%) / RE (0.59%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Res	ponsible Customer(s)
Load-Ratio 3     AEC (1.67%) / (5.64%) / AT (4.12%) / ComE (2.12%) / DE (1.76%) / DPL (12.97%) / EK (3.92%) / ME (1 (0.24%) / OVH (5.39%) / PE PEPCO (3.715 PSEG (6.40 PSEG (6.40 PSEG (6.40 PSEG (6.91%) / (9.26%) / BGE (7.016,64%) / DPL (6.91%) / JCPL (11.64% NEPTUNE* (14.51%) / PE (6.39%) / PSEG (6.39%)	Share Allocation: AEP (13.94%) / APS SI (8.02%) / BGE d (13.46%) / Dayton OK (3.37%) / DL (2.55%) / Dominion PC (1.81%) / JCPL .95%) / NEPTUNE* CC (0.07%) / PECO NELEC (1.84%) / %) / PPL (4.78%) / %) / RE (0.27%)  Allocation: AEP (4.39%) / APS 4.43%) / DL (0.02%) Dominion (10.82%) / %) / ME (2.94%) / (1.12%) / PECO PCO (6.11%) / PPL EG (15.86%) / RE 1.59%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required T	Transmission Enhancements	Annual Revenue Requ	uirement	Responsible Customer(s)
b0490.3	Replace Amos 138 kV		Load-F AEC (1.65 (5.64% (4.12%) / (2.12% (1.76%) / (12.97% (3.92%) / (0.24%) (5.39%	Ratio Share Allocation:  7%) / AEP (13.94%) / APS ) / ATSI (8.02%) / BGE ComEd (13.46%) / Dayton ) / DEOK (3.37%) / DL DPL (2.55%) / Dominion ) / EKPC (1.81%) / JCPL ME (1.95%) / NEPTUNE* / OVEC (0.07%) / PECO ) / PENELEC (1.84%) / (3.71%) / PPL (4.78%) /
00470.3	breaker 'B1'		AEC (5.0 (9.26%) / J / DPL (6.9 JCPL ( NEPT) (14.51%)	(6.40%) / RE (0.27%)  PFAX Allocation:  1%) / AEP (4.39%) / APS  BGE (4.43%) / DL (0.02%)  1%) / Dominion (10.82%) /  11.64%) / ME (2.94%) /  UNE* (1.12%) / PECO ) / PEPCO (6.11%) / PPL ) / PSEG (15.86%) / RE (0.59%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required T	Transmission Enhancements	Annual Revenue Requ	uirement	Responsible Customer(s)
		Aimai Revenue Requ	Load- AEC (1.6 (5.64% (4.12%)) (2.12% (1.76%) (12.97% (3.92%)) (0.24%) (5.39%)	Ratio Share Allocation:  67%) / AEP (13.94%) / APS  6) / ATSI (8.02%) / BGE  / ComEd (13.46%) / Dayton  6) / DEOK (3.37%) / DL  / DPL (2.55%) / Dominion  6) / EKPC (1.81%) / JCPL  / ME (1.95%) / NEPTUNE*  1) / OVEC (0.07%) / PECO  6) / PENELEC (1.84%) /
60490.4	Replace Amos 138 kV breaker 'C'		AEC (5. (9.26%) / DPL (6. JCPL NEP (14.51%)	D (3.71%) / PPL (4.78%) / G (6.40%) / RE (0.27%)  DFAX Allocation: 01%) / AEP (4.39%) / APS BGE (4.43%) / DL (0.02%) 91%) / Dominion (10.82%) / (11.64%) / ME (2.94%) / FUNE* (1.12%) / PECO 6) / PEPCO (6.11%) / PPL 6) / PSEG (15.86%) / RE (0.59%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Load-Patio	Share Allocation:
Belace Amos 138 kV breaker 'C1'  Replace Amos 138 kV breaker 'C1'  BFAX AEC (5.01%) (9.26%) / BGE / DPL (6.91%) JCPL (11.64 NEPTUNE (14.51%) / PI (6.39%) / PSE (6.39%	AEP (13.94%) / APS TSI (8.02%) / BGE Ed (13.46%) / Dayton EOK (3.37%) / DL L (2.55%) / Dominion KPC (1.81%) / JCPL (1.95%) / NEPTUNE* EC (0.07%) / PECO ENELEC (1.84%) / 1%) / PPL (4.78%) / 0%) / RE (0.27%)  K Allocation: / AEP (4.39%) / APS (4.43%) / DL (0.02%) / Dominion (10.82%) / 4%) / ME (2.94%) / * (1.12%) / PECO EPCO (6.11%) / PPL SEG (15.86%) / RE (0.59%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required 7	Transmission Enhancements	Annual Revenue Requi	rement Responsible Customer(s)
			Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE
b0490.6	Replace Amos 138 kV breaker 'D'		(4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)
			DFAX Allocation: AEC (5.01%) / AEP (4.39%) / APS (9.26%) / BGE (4.43%) / DL (0.02%) / DPL (6.91%) / Dominion (10.82%) / JCPL (11.64%) / ME (2.94%) / NEPTUNE* (1.12%) / PECO (14.51%) / PEPCO (6.11%) / PPL (6.39%) / PSEG (15.86%) / RE (0.59%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required T	Fransmission Enhancements	Annual Revenue Requ	uirement	Responsible Customer(s)
Required 1		Allitual Revenue Regi	Load-I AEC (1.6' (5.64%) (4.12%) / (2.12%) (1.76%) / (12.97%) (3.92%) / (0.24%) (5.39%)	Ratio Share Allocation: 7%) / AEP (13.94%) / APS 6) / ATSI (8.02%) / BGE ComEd (13.46%) / Dayton 6) / DEOK (3.37%) / DL / DPL (2.55%) / Dominion 6) / EKPC (1.81%) / JCPL ME (1.95%) / NEPTUNE* / OVEC (0.07%) / PECO 6) / PENELEC (1.84%) /
60490.7	Replace Amos 138 kV breaker 'D2'		PSEG AEC (5.0 (9.26%) / 1 / DPL (6.9 JCPL ( NEPT	(3.71%) / PPL (4.78%) / (6.40%) / RE (0.27%) (6.40%) / RE (0.27%) (6.40%) / AEP (4.39%) / APS (6.40%) / AEP (4.39%) / APS (6.40%) / DL (0.02%) (6.40%) / Dominion (10.82%) / APS (6.40%) / ME (2.94%) / APS (6.40%) / PECO
			`	6) / PEPCO (6.11%) / PPL 6) / PSEG (15.86%) / RE (0.59%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required T	Transmission Enhancements	Annual Revenue Requ	uirement	Responsible Customer(s)
Required 1	Talishiission Emiancements	Allitual Revenue Requ	Load-R AEC (1.67 (5.64%) (4.12%) / (2.12%) (1.76%) / (12.97%)	Ratio Share Allocation: 7%) / AEP (13.94%) / APS ) / ATSI (8.02%) / BGE ComEd (13.46%) / Dayton ) / DEOK (3.37%) / DL DPL (2.55%) / Dominion ) / EKPC (1.81%) / JCPL
b0490.8	Replace Amos 138 kV breaker 'E'		(0.24%) (5.39%) PEPCO	ME (1.95%) / NEPTUNE* / OVEC (0.07%) / PECO ) / PENELEC (1.84%) / (3.71%) / PPL (4.78%) / (6.40%) / RE (0.27%)
			AEC (5.0 (9.26%) / I / DPL (6.9 JCPL (1 NEPT) (14.51%)	PFAX Allocation:  1%) / AEP (4.39%) / APS  BGE (4.43%) / DL (0.02%)  1%) / Dominion (10.82%) /  11.64%) / ME (2.94%) /  UNE* (1.12%) / PECO  ) / PEPCO (6.11%) / PPL  ) / PSEG (15.86%) / RE  (0.59%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required T	Fransmission Enhancements	Annual Revenue Requ	iirement	Responsible Customer(s)
Required 1		Annual Revenue Regi	Load-F AEC (1.67 (5.64% (4.12%) / (2.12% (1.76%) / (12.97% (3.92%) / (0.24%) (5.39%	Ratio Share Allocation: 7%) / AEP (13.94%) / APS ) / ATSI (8.02%) / BGE ComEd (13.46%) / Dayton ) / DEOK (3.37%) / DL DPL (2.55%) / Dominion ) / EKPC (1.81%) / JCPL ME (1.95%) / NEPTUNE* / OVEC (0.07%) / PECO ) / PENELEC (1.84%) /
b0490.9	Replace Amos 138 kV breaker 'E2'		PEPCO PSEG D AEC (5.0 (9.26%) / I / DPL (6.9 JCPL ( NEPT (14.51%)	(3.71%) / PPL (4.78%) / (6.40%) / RE (0.27%) <b>PFAX Allocation:</b> 1%) / AEP (4.39%) / APS BGE (4.43%) / DL (0.02%) 1%) / Dominion (10.82%) / 11.64%) / ME (2.94%) / UNE* (1.12%) / PECO ) / PEPCO (6.11%) / PPL ) / PSEG (15.86%) / RE (0.59%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion Add two advanced (12.97%) / EKPC (1.81%) / JCPL technology circuit breakers (3.92%) / ME (1.95%) / b0504 at Hanging Rock 765 kV to NEPTUNE\* (0.24%) / OVEC improve operational (0.07%) / PECO (5.39%) / performance PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** AEP (100%) Reconductor East Side Lima b0570 – Sterling 138 kV AEP (41.99%) / ComEd (58.01%) Reconductor West b0571 Millersport – Millersport AEP (73.83%) / ComEd (19.26%) / Dayton (6.91%) 138 kV Establish a new 69 kV circuit between the Canal Road and East Wooster stations, establish a new 69 b0748 kV circuit between the West Millersburg and Moreland Switch stations (via Shreve), add reactive support via cap banks AEP (100%) Hazard Area 138 kV and 69 b0838 **kV** Improvement Projects AEP (100%) Replace existing 450 MVA transformer at Twin Branch b0839 345 / 138 kV with a 675 MVA transformer AEP (99.73%) / Dayton (0.27%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required T	ransmission Enhancements	Annual Revenue Requireme	ent Responsible Customer(s)
b0840	String a second 138 kV circuit on the open tower position between Twin Branch and East Elkhart		AEP (100%)
b0840.1	Establish a new 138/69-34.5 kV Station to interconnect the existing 34.5 kV network		AEP (100%)
b0917	Replace Baileysville 138 kV breaker 'P'		AEP (100%)
b0918	Replace Riverview 138 kV breaker '634'		AEP (100%)
b0919	Replace Torrey 138 kV breaker 'W'		AEP (100%)
b1032.1	Construct a new 345/138kV station on the Marquis-Bixby 345 kV line near the intersection with Ross - Highland 69 kV		AEP (89.97%) / Dayton (10.03%)
b1032.2	Construct two 138 kV outlets to Delano 138 kV station and to Camp Sherman station		AEP (89.97%) / Dayton (10.03%)
b1032.3	Convert Ross - Circleville 69kV to 138 kV		AEP (89.97%) / Dayton (10.03%)
b1032.4	Install 138/69 kV transformer at new station and connect in the Ross - Highland 69 kV line		AEP (89.97%) / Dayton (10.03%)
b1033	Add a third delivery point from AEP's East Danville Station to the City of Danville		AEP (100%)

Required T	ransmission Enhancements	Annual Revenue Requiremen	nt Responsible Customer(s)
	Establish new South		
	Canton - West Canton 138		
1 1024 1	kV line (replacing Torrey -		AEP (96.01%) / APS (0.62%) /
b1034.1	West Canton) and		ComEd (0.19%) / Dayton
	Wagenhals – Wayview 138		(0.44%) / DL (0.13%) /
	kV		PENELEC (2.61%)
	Loop the existing South		AEP (96.01%) / APS (0.62%) /
	Canton - Wayview 138 kV		ComEd (0.19%) / Dayton
b1034.2	circuit in-and-out of West		(0.44%) / DL (0.13%) /
	Canton		PENELEC (2.61%)
	Install a 345/138 kV 450		AEP (96.01%) / APS (0.62%) /
b1034.3	MVA transformer at		ComEd (0.19%) / Dayton
01034.3	Canton Central		(0.44%) / DL (0.13%) /
			PENELEC (2.61%)
	Dalassii 4/saaaa daadaa daa		AEP (96.01%) / APS (0.62%) /
b1034.4	Rebuild/reconductor the Sunnyside - Torrey 138 kV line		ComEd (0.19%) / Dayton
01034.4			(0.44%) / DL (0.13%) /
			PENELEC (2.61%)
	Disconnect/eliminate the		AEP (96.01%) / APS (0.62%) /
b1034.5	West Canton 138 kV terminal at Torrey Station		ComEd (0.19%) / Dayton
01034.3			(0.44%) / DL (0.13%) /
			PENELEC (2.61%)
	Replace all 138 kV circuit		
	breakers at South Canton		AEP (96.01%) / APS (0.62%) /
b1034.6	Station and operate the		ComEd (0.19%) / Dayton
	station in a breaker and a		(0.44%) / DL (0.13%) /
	half configuration		PENELEC (2.61%)
	Replace all obsolete 138		AEP (96.01%) / APS (0.62%) /
b1034.7	kV circuit breakers at the		ComEd (0.19%) / Dayton
01034./	Torrey and Wagenhals		(0.44%) / DL (0.13%) /
	stations		PENELEC (2.61%)

Required T	ransmission Enhancements	Annual Revenue Requirement	nt Responsible Customer(s)
	Install additional 138 kV circuit breakers at the West		
	Canton, South Canton,		
b1034.8	Canton Central, and		AEP (96.01%) / APS (0.62%) /
	Wagenhals stations to		ComEd (0.19%) / Dayton
	accommodate the new		(0.44%) / DL (0.13%) /
	circuits		PENELEC (2.61%)
	Establish a third 345 kV		
	breaker string in the West		
	Millersport Station.		
b1035	Construct a new West		
01033	Millersport – Gahanna 138		
	kV circuit. Miscellaneous		
	improvements to 138 kV		
	transmission system		AEP (100%)
	Upgrade terminal		
b1036	equipment at Poston		
	Station and update remote		A ED (1000()
	end relays		AEP (100%)
	Sag check Bonsack		
	Cloverdale 138 kV,		
	Cloverdale–Centerville 138		
b1037	kV, Centerville–Ivy Hill 138 kV, Ivy Hill–Reusens		
01037	138 kV, Bonsack–Reusens		
	138 kV and Reusens–		
	Monel–Gomingo–Joshua		
	Falls 138 kV		AEP (100%)
	Check the Crooksville -		(/
	Muskingum 138 kV sag		
b1038	and perform the required		
	work to improve the		
	emergency rating		AEP (100%)

Required 1	Transmission Enhancements	Annual Revenue Requirement	nt Responsible Customer(s)
	Perform a sag study for the		
	Madison – Cross Street 138		
b1039	kV line and perform the		
	required work to improve		
	the emergency rating		AEP (100%)
	Rebuild an 0.065 mile		
	section of the New Carlisle		
b1040	– Olive 138 kV line and		
	change the 138 kV line		
	switches at New Carlisle		AEP (100%)
	Perform a sag study for the		
b1041	Moseley - Roanoke 138 kV		
01041	to increase the emergency		
	rating		AEP (100%)
	Perform sag studies to raise		
b1042	the emergency rating of		
	Amos – Poca 138 kV		AEP (100%)
	Perform sag studies to raise		
b1043	the emergency rating of		
	Turner - Ruth 138 kV		AEP (100%)
	Perform sag studies to raise		
b1044	the emergency rating of		
01044	Kenova – South Point 138		
	kV		AEP (100%)
h1045	Perform sag studies of Tri		
b1045	State - Darrah 138 kV		AEP (100%)
	Perform sag study of		
b1046	Scottsville – Bremo 138 kV		
	to raise the emergency		
	rating		AEP (100%)
	Perform sag study of Otter		
1.1047	Switch - Altavista 138 kV		
b1047	to raise the emergency		
	rating		AEP (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Reconductor the Bixby -Three C - Groves and b1048 Bixby - Groves 138 kV tower line AEP (100%) Upgrade the risers at the Riverside station to b1049 increase the rating of Benton Harbor – Riverside 138 kV AEP (100%) Rebuilding and reconductor the Bixby – Pickerington b1050 Road - West Lancaster 138 kV line AEP (100%) Perform a sag study for the Kenzie Creek – Pokagon 138 kV line and perform b1051 the required work to improve the emergency rating AEP (100%) Unsix-wire the existing Hyatt - Sawmill 138 kV b1052 line to form two Hyatt -Sawmill 138 kV circuits AEP (100%) Perform a sag study and remediation of 32 miles b1053 between Claytor and Matt AEP (100%) Add 28.8 MVAR 138 kV capacitor bank at Huffman and 43.2 MVAR 138 kV b1091 Bank at Jubal Early and 52.8 MVAR 138 kV Bank at Progress Park Stations AEP (100%)

Required T	Fransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
	Add 28.8 MVAR 138 kV		
	capacitor bank at Sullivan		
b1092	Gardens and 52.8 MVAR		
	138 kV Bank at Reedy		
	Creek Stations		AEP (100%)
	Add a 43.2 MVAR		
b1093	capacitor bank at the		
01075	Morgan Fork 138 kV		
	Station		AEP (100%)
	Add a 64.8 MVAR		
b1094	capacitor bank at the West		
	Huntington 138 kV Station		AEP (100%)
b1108	Replace Ohio Central 138		
01100	kV breaker 'C2'		AEP (100%)
b1109	Replace Ohio Central 138		
01109	kV breaker 'D1'		AEP (100%)
b1110	Replace Sporn A 138 kV		
01110	breaker 'J'		AEP (100%)
1.1111	Replace Sporn A 138 kV		
b1111	breaker 'J2'		AEP (100%)
1 1 1 1 1 0	Replace Sporn A 138 kV		, ,
b1112	breaker 'L'		AEP (100%)
1 1 1 1 2	Replace Sporn A 138 kV		, ,
b1113	breaker 'L1'		AEP (100%)
1 1 1 1 1	Replace Sporn A 138 kV		( )
b1114	breaker 'L2'		AEP (100%)
	Replace Sporn A 138 kV		()
b1115	breaker 'N'		AEP (100%)
	Replace Sporn A 138 kV		1121 (10070)
b1116	breaker 'N2'		AEP (100%)
	Perform a sag study on		71121 (10070)
b1227	Altavista – Leesville 138		
01227	kV circuit		AEP (100%)
	K + Chouit		1111 (10070)

Required'	Transmission Enhancements	Annual Revenue Requirement	nt Responsible Customer(s)
	Replace the existing 138/69-		
	12 kV transformer at West		
b1231	Moulton Station with a		
	138/69 kV transformer and a		
	69/12 kV transformer		AEP (96.69%) / Dayton (3.31%)
b1375	Replace Roanoke 138 kV		
01375	breaker 'T'		AEP (100%)
b1376	Replace Roanoke 138 kV		
01370	breaker 'E'		AEP (100%)
b1377	Replace Roanoke 138 kV		
01377	breaker 'F'		AEP (100%)
b1378	Replace Roanoke 138 kV		
01370	breaker 'G'		AEP (100%)
b1379	Replace Roanoke 138 kV		
01377	breaker 'B'		AEP (100%)
b1380	Replace Roanoke 138 kV		
01360	breaker 'A'		AEP (100%)
b1381	Replace Olive 345 kV		
01361	breaker 'E'		AEP (100%)
b1382	Replace Olive 345 kV		
01362	breaker 'R2'		AEP (100%)
	Perform a sag study on the		
b1416	Desoto – Deer Creek 138 kV		
01410	line to increase the		
	emergency rating		AEP (100%)
	Perform a sag study on the		
b1417	Delaware – Madison 138 kV		
	line to increase the		
	emergency rating		AEP (100%)
	Perform a sag study on the		
b1418	Rockhill – East Lima 138 kV		
01410	line to increase the		
	emergency rating		AEP (100%)

Required'	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
	Perform a sag study on the		
1 1 410	Findlay Center – Fostoria Ct		
b1419	138 kV line to increase the		
	emergency rating		AEP (100%)
	A sag study will be required		
	to increase the emergency		
	rating for this line.		
b1420	Depending on the outcome o	f	
	this study, more action may		
	be required in order to		
	increase the rating		AEP (100%)
	Perform a sag study on the		
b1421	Sorenson – McKinley 138 kV	<b>V</b>	
01421	line to increase the		
	emergency rating		AEP (100%)
	Perform a sag study on John		
	Amos – St. Albans 138 kV		
b1422	line to allow for operation up	,	
	to its conductor emergency		
	rating		AEP (100%)
	A sag study will be performe	d	
	on the Chemical – Capitol		
b1423	Hill 138 kV line to determine		
	if the emergency rating can b	e e	
	utilized		AEP (100%)
	Perform a sag study for		
b1424	Benton Harbor – West Street		
01424	<ul> <li>Hartford 138 kV line to</li> </ul>		
	improve the emergency ratin	g	AEP (100%)
b1425	Perform a sag study for the		
	East Monument – East		
	Danville 138 kV line to allow	v	
	for operation up to the		
	conductor's maximum		
	operating temperature		AEP (100%)

Required'	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
	Perform a sag study for the		
	Reusens – Graves 138 kV line		
b1426	to allow for operation up to		
	the conductor's maximum		
	operating temperature		AEP (100%)
	Perform a sag study on Smith		
	Mountain – Leesville –		
b1427	Altavista – Otter 138 kV and		
	on Boones – Forest – New		
	London – JohnsMT – Otter		AEP (100%)
	Perform a sag study on Smith		
	Mountain – Candlers		
b1428	Mountain 138 kV and Joshua		
	Falls – Cloverdale 765 kV to		
	allow for operation up to		AEP (100%)
	Perform a sag study on		
	Fremont – Clinch River 138		
b1429	kV to allow for operation up		
	to its conductor emergency		
	ratings		AEP (100%)
	Install a new 138 kV circuit		
	breaker at Benton Harbor		
b1430	station and move the load		
	from Watervliet 34.5 kV		
	station to West street 138 kV		AEP (100%)
	Perform a sag study on the		
	Kenova – Tri State 138 kV		
b1432	line to allow for operation up		
	to their conductor emergency		
	rating		AEP (100%)
	Replace risers in the West		
	Huntington Station to		
b1433	increase the line ratings		
01733	which would eliminate the		
	overloads for the		
	contingencies listed		AEP (100%)

Required 7	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
	Perform a sag study on the		
	line from Desoto to Madison.		
b1434	Replace bus and risers at		
	Daleville station and replace		
	bus and risers at Madison		AEP (100%)
	Replace the 2870 MCM		
b1435	ACSR riser at the Sporn		
	station		AEP (100%)
	Perform a sag study on the		
	Sorenson – Illinois Road 138		
b1436	kV line to increase the		
01430	emergency MOT for this line		
	Replace bus and risers at		
	Illinois Road		AEP (100%)
	Perform sag study on Rock		
	Cr. – Hummel Cr. 138 kV to		
	increase the emergency MOT		
b1437	for the line, replace bus and		
01737	risers at Huntington J., and		
	replace relays for Hummel		
	Cr. – Hunt – Soren. Line at		
	Soren		AEP (100%)
	Replacement of risers at		
	McKinley and Industrial Park		
	stations and performance of a		
b1438	sag study for the 4.53 miles o	f	
01436	795 ACSR section is		
	expected to improve the		
	Summer Emergency rating to		
	335 MVA		AEP (100%)
	By replacing the risers at		
b1439	Lincoln both the Summar		
	Normal and Summer		
	Emergency ratings will		
	improve to 268 MVA		AEP (100%)

Required	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
	By replacing the breakers at		
b1440	Lincoln the Summer		
01110	Emergency rating will		
	improve to 251 MVA		AEP (100%)
	Replacement of risers at		
	South Side and performance		
	of a sag study for the 1.91		
b1441	miles of 795 ACSR section is	S	
	expected to improve the		
	Summer Emergency rating to	•	
	335 MVA		AEP (100%)
	Replacement of 954 ACSR		
	conductor with 1033 ACSR		
b1442	and performance of a sag		
	study for the 4.54 miles of 2-		
	636 ACSR section is		. 77 (1000)
	expected		AEP (100%)
	Station work at Thelma and		
b1443	Busseyville Stations will be		
	performed to replace bus and		A ED (1000/)
	risers		AEP (100%)
	Perform electrical clearance		
	studies on Clinch River –		
b1444	Clinchfield 139 kV line		
	(a.k.a. sag studies) to		
	determine if the emergency		A ED (1000/)
	ratings can be utilized		AEP (100%)
	Perform a sag study on the		
b1445	Addison (Buckeye CO-OP) -	-	
	Thinever and North Crown		
	City – Thivener 138 kV sag		A ED (1009/)
	study and switch		AEP (100%)

Required'	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b1446	Perform a sag study on the Parkersburg (Allegheny Power) – Belpre (AEP) 138 kV		AEP (100%)
b1447	Dexter – Elliot tap 138 kV sag check		AEP (100%)
b1448	Dexter – Meigs 138 kV Electrical Clearance Study		AEP (100%)
b1449	Meigs tap – Rutland 138 kV sag check		AEP (100%)
b1450	Muskingum – North Muskingum 138 kV sag check		AEP (100%)
b1451	North Newark – Sharp Road 138 kV sag check		AEP (100%)
b1452	North Zanesville – Zanesvill 138 kV sag check	e	AEP (100%)
b1453	North Zanesville – Powelson and Ohio Central – Powelson 138 kV sag check		AEP (100%)
b1454	Perform an electrical clearance study on the Ross Delano – Scioto Trail 138 kV line to determine if the emergency rating can be utilized		AEP (100%)
b1455	Perform a sag check on the Sunny – Canton Central – Wagenhals 138 kV line to determine if all circuits can be operated at their summer emergency rating	pe	AEP (100%)

Required	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
	The Tidd – West Bellaire 345		
	kV circuit has been de-rated		
	to its normal rating and would	1	
b1456	need an electrical clearance		
	study to determine if the		
	emergency rating can be		
	utilized		AEP (100%)
	The Tiltonsville – Windsor		
	138 kV circuit has been		
	derated to its normal rating		
b1457	and would need an electrical		
	clearance study to determine		
	if the emergency rating could		
	be utilized		AEP (100%)
	Install three new 345 kV		
	breakers at Bixby to separate		
	the Marquis 345 kV line and		
b1458	transformer #2. Operate		
01436	Circleville – Harrison 138 kV		
	and Harrison – Zuber 138 kV		
	up to conductor emergency		
	ratings		AEP (100%)
	Several circuits have been de-		
	rated to their normal		
	conductor ratings and could		
b1459	benefit from electrical		
	clearance studies to determine		
	if the emergency rating could		
	be utilized		AEP (100%)
b1460	Replace 2156 & 2874 risers		
01100	-		AEP (100%)
	Replace meter, metering CTs		
b1461	and associated equipment at		
	the Paden City feeder		AEP (100%)
	Replace relays at both South		
b1462	Cadiz 138 kV and Tidd 138		
	kV		AEP (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Reconductor the Bexley b1463 Groves 138 kV circuit AEP (100%) b1464 Corner 138 kV upgrades AEP (100%) AEC (0.71%) / AEP (75.06%) / APS (1.25%) / BGE (1.81%) / ComEd (5.91%) / Dayton (0.86%) / Add a 3rd 2250 MVA DL (1.23%) / DPL (0.95%) / Dominion (3.89%) / JCPL (1.58%) / b1465.1 765/345 kV transformer at NEPTUNE\* (0.15%) / HTP\*\*\* Sullivan station (0.07%) / PECO (2.08%) / PEPCO (1.66%) / ECP\*\* (0.07%) / PSEG (2.62%) / RE (0.10%) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Replace the 100 MVAR 765 Dominion (12.97%) / EKPC kV shunt reactor bank on (1.81%) / JCPL (3.92%) / ME b1465.2 Rockport – Jefferson 765 kV (1.95%) / NEPTUNE\* (0.24%) / line with a 300 MVAR bank OVEC (0.07%) / PECO (5.39%) / at Rockport Station PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** AEP (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s)

Load-Ratio Share Allocation:   AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / APS (6.40%) / RE (0.27%) / PEPCO (3.71%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DEOK (3.37%) / DL (1.76%) / DEOK (3.92%) / ME (1.95%) / Dayton (2.12%) / DeoK (3.37%) / DL (1.76%) / DEOK (3.37%) / DL (1.76%) / DEOK (3.37%) / DL (1.76%) / DEOK (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PEPCO (3.71%) / PEPCO (3.71%) / PPL (4.78%)	required 1	ransmission Enhancements A	nnual Revenue Requirement Responsible Customer(s)
Section   Comparison   Compar			
Create an in and out loop at   (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)      DFAX Allocation: AEP (100%)			
Careate an in and out loop at			
Transpose the Rockport – Sullivan 765 kV line and the Rockport – Jefferson 765 kV line    Color   Color			
Sullivan 765 kV line and the Rockport – Jefferson 765 kV line   (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)      DFAX Allocation: AEP (100%)			
Sullivan 765 kV line and the Rockport – Jefferson 765 kV line   (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)      DFAX Allocation: AEP (100%)		Transpose the Rockport –	
Sockport - Jefferson 765 kV line   (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)			
kV line   (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)	b1465.3		(3.92%) / ME (1.95%) / NEPTUNE*
(5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)		l ±	(0.24%) / OVEC (0.07%) / PECO
b1465.4  Make switching improvements at Sullivan and Jefferson 765 kV stations  b1465.4  DFAX Allocation: AEP (100%)  Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: AEP (100%)  Create an in and out loop at		K V IIIIC	
DFAX Allocation:   AEP (100%)     Load-Ratio Share Allocation:   AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)     DFAX Allocation:   AEP (100%)     Create an in and out loop at			
AEP (100%)   Load-Ratio Share Allocation:   AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)   DFAX Allocation:   AEP (100%)			PSEG (6.40%) / RE (0.27%)
Load-Ratio Share Allocation:   AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)    DFAX Allocation:   AEP (100%)			DFAX Allocation:
AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)    DFAX Allocation: AEP (100%)			
(5.64%) / ATSI (8.02%) / BGE			
Make switching   (4.12%) / ComEd (13.46%) / Dayton   (2.12%) / DEOK (3.37%) / DL   (1.76%) / DPL (2.55%) / Dominion   (12.97%) / EKPC (1.81%) / JCPL   (3.92%) / ME (1.95%) / NEPTUNE*   (0.24%) / OVEC (0.07%) / PECO   (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)      DFAX Allocation: AEP (100%)   Create an in and out loop at			
Make switching   (2.12%) / DEOK (3.37%) / DL     Make switching   improvements at Sullivan   (1.76%) / DPL (2.55%) / Dominion     (1.97%) / EKPC (1.81%) / JCPL     (3.92%) / ME (1.95%) / NEPTUNE*     (0.24%) / OVEC (0.07%) / PECO     (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)     DFAX Allocation: AEP (100%)     Create an in and out loop at			
Make switching improvements at Sullivan and Jefferson 765 kV stations    Make switching improvements at Sullivan and Jefferson 765 kV stations   (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)			
b1465.4 improvements at Sullivan and Jefferson 765 kV stations (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)    DFAX Allocation: AEP (100%)			
improvements at Sullivan and Jefferson 765 kV stations  (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: AEP (100%)			
and Jefferson 765 kV stations  (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)   DFAX Allocation: AEP (100%)  Create an in and out loop at	1 1 4 6 7 4		
(5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: AEP (100%)  Create an in and out loop at	61465.4	l ±	
PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: AEP (100%)  Create an in and out loop at		stations	
PSEG (6.40%) / RE (0.27%)  DFAX Allocation: AEP (100%)  Create an in and out loop at			
DFAX Allocation: AEP (100%)  Create an in and out loop at			
Create an in and out loop at AEP (100%)			PSEG (6.40%) / RE (0.27%)
Create an in and out loop at			
			AEP (100%)
		l *	
b1466.1 Adams Station by removing	h1466 1		
the hard tap that currently	01400.1		
exists AEP (100%)			AEP (100%)
b1466.2 Upgrade the Adams	h1466.2	10	
transformer to 90 MVA AEP (100%)	01700.2		

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required T	ransmission Enhancements	Annual Revenue Requirement	t Responsible Customer(s)
	At Seaman Station install a		
b1466.3	new 138 kV bus and two		
	new 138 kV circuit breakers		AEP (100%)
	Convert South Central Co-		
b1466.4	op's New Market 69 kV		
	Station to 138 kV		AEP (100%)
	The Seaman – Highland		
	circuit is already built to		
b1466.5	138 kV, but is currently		
01400.3	operating at 69 kV, which		
	would now increase to 138		
	kV		AEP (100%)
	At Highland Station, install		
	a new 138 kV bus, three		
b1466.6	new 138 kV circuit breakers		
	and a new 138/69 kV 90		
	MVA transformer		AEP (100%)
	Using one of the bays at		
	Highland, build a 138 kV		
b1466.7	circuit from Hillsboro –		
	Highland 138 kV, which is		
	approximately 3 miles		AEP (100%)
	Install a 14.4 MVAr		
b1467.1	Capacitor Bank at New		
	Buffalo station		AEP (100%)
b1467.2	Reconfigure the 138 kV bus		
	at LaPorte Junction station		
	to eliminate a contingency		
	resulting in loss of two 138		
	kV sources serving the		
	LaPorte area		AEP (100%)

Required T	Fransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
	Expand Selma Parker Station		
b1468.1	and install a 138/69/34.5 kV		
	transformer		AEP (100%)
	Rebuild and convert 34.5 kV		
b1468.2	line to Winchester to 69 kV,		
	including Farmland Station		AEP (100%)
b1468.3	Retire the 34.5 kV line from		
01400.5	Haymond to Selma Wire		AEP (100%)
	Conversion of the		
b1469.1	Newcomerstown –		
01707.1	Cambridge 34.5 kV system		
	to 69 kV operation		AEP (100%)
	Expansion of the Derwent 69	9	
b1469.2	kV Station (including		
01707.2	reconfiguration of the 69 kV		
	system)		AEP (100%)
	Rebuild 11.8 miles of 69 kV		
b1469.3	line, and convert additional		
01407.5	34.5 kV stations to 69 kV		
	operation		AEP (100%)
	Build a new 138 kV double		
b1470.1	circuit off the Kanawha –		
014/0.1	Bailysville #2 138 kV circui	t	
	to Skin Fork Station		AEP (100%)
b1470.2	Install a new 138/46 kV		
014/0.2	transformer at Skin Fork		AEP (100%)
	Replace 5 Moab's on the		
b1470.3	Kanawha – Baileysville line		
014/0.3	with breakers at the Sundial		
	138 kV station		AEP (100%)
	Perform a sag study on the		
	East Lima – For Lima –		
b1471	Rockhill 138 kV line to		
	increase the emergency		
	rating		AEP (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s				
b1472	Perform a sag study on the			
	East Lima – Haviland 138 kV	7		
	line to increase the			
	emergency rating		AEP (100%)	
b1473	Perform a sag study on the			
	East New Concord –			
	Muskingum River section of			
	the Muskingum River – West			
	Cambridge 138 kV circuit		AEP (100%)	
b1474	Perform a sag study on the			
	Ohio Central – Prep Plant tap			
	138 kV circuit		AEP (100%)	
b1475	Perform a sag study on the			
	S73 – North Delphos 138 kV			
	line to increase the			
	emergency rating		AEP (100%)	
	Perform a sag study on the			
b1476	S73 – T131 138 kV line to			
	increase the emergency rating	5	AEP (100%)	
	The Natrium – North Martin			
b1477	138 kV circuit would need an	1		
	electrical clearance study			
	among other equipment			
	upgrades		AEP (100%)	
b1478	Upgrade Strouds Run –			
	Strounds Tap 138 kV relay			
	and riser		AEP (100%)	
b1479	West Hebron station upgrade	e l		
017/9	west reoron station upgrade	3	AEP (100%)	
b1480	Perform upgrades and a sag			
	study on the Corner –			
	Layman 138 kV section of th	e		
	Corner – Muskingum River			
	138 kV circuit		AEP (100%)	

Required Transmission Enhancements		Annual Revenue Requirement	Responsible Customer(s)
b1481	Perform a sag study on the		
	West Lima – Eastown Road		
	– Rockhill 138 kV line and		
	replace the 138 kV risers at		
	Rockhill station to increase		
	the emergency rating		AEP (100%)
b1482	Perform a sag study for the		
	Albion – Robison Park 138		
	kV line to increase its		
	emergency rating		AEP (100%)
	Sag study 1 mile of the		
b1483	Clinch River – Saltville 138		
	kV line and replace the riser	S	
	and bus at Clinch River,		
	Lebanon and Elk Garden		
	Stations		AEP (100%)
	Perform a sag study on the		
b1484	Hacienda – Harper 138 kV		
	line to increase the		
	emergency rating		AEP (100%)
	Perform a sag study on the		
b1485	Jackson Road - Concord		
01403	183 kV line to increase the		
	emergency rating		AEP (100%)
b1486	The Matt Funk – Poages Mi	11	
	– Starkey 138 kV line		
	requires		AEP (100%)
b1487	Perform a sag study on the		
	New Carlisle – Trail Creek		
	138 kV line to increase the		
	emergency rating		AEP (100%)
b1488	Perform a sag study on the		
	Olive – LaPorte Junction 13	8	
	kV line to increase the		
	emergency rating		AEP (100%)

Required T	ransmission Enhancements Ann	nual Revenue Requirement	Responsible Customer(s)
	A sag study must be performed		
	for the 5.40 mile Tristate –		
b1489	Chadwick 138 kV line to		
	determine if a higher		
	emergency rating can be used		AEP (100%)
b1490.1	Establish a new 138/69 kV		
01490.1	Butler Center station		AEP (100%)
	Build a new 14 mile 138 kV		
b1490.2	line from Auburn station to		
01490.2	Woods Road station VIA		
	Butler Center station		AEP (100%)
	Replace the existing 40 MVA		
b1490.3	138/69 kV transformer at		
01490.3	Auburn station with a 90 MVA		
	138/96 kV transformer		AEP (100%)
	Improve the switching		
b1490.4	arrangement at Kendallville		
	station		AEP (100%)
	Replace bus and risers at		
	Thelma and Busseyville		
b1491	stations and perform a sag		
	study for the Big Sandy –		
	Busseyville 138 kV line		AEP (100%)
	Reconductor 0.65 miles of the		
b1492	Glen Lyn – Wythe 138 kV line		
	with $3 - 1590$ ACSR		AEP (100%)
	Perform a sag study for the		
b1493	Bellfonte – Grantston 138 kV		
01493	line to increase its emergency		
	rating		AEP (100%)
	Perform a sag study for the		
<b>h</b> 1404	North Proctorville – Solida –		
b1494	Bellefonte 138 kV line to		
	increase its emergency rating		AEP (100%)

Required 7	Transmission Enhancements Ann	nual Revenue Requirement Responsible Customer(s)
b1495	Add an additional 765/345 kV transformer at Baker Station	AEC (0.41%) / AEP (87.22%) / BGE (1.03%) / ComEd (3.38%) / Dayton (1.23%) / DL (1.46%) / DPL (0.54%) / JCPL (0.90%) / NEPTUNE* (0.09%) / HTP (0.04%) / PECO (1.18%) / PEPCO (0.94%) / ECP** (0.04%) / PSEG (1.48%) / RE (0.06%)
b1496	Replace 138 kV bus and risers at Johnson Mountain Station	AEP (100%)
b1497	Replace 138 kV bus and risers at Leesville Station	AEP (100%)
b1498	Replace 138 kV risers at Wurno Station	AEP (100%)
b1499	Perform a sag study on Sporn A – Gavin 138 kV to determine if the emergency rating can be improved	AEP (100%)
b1500	The North East Canton – Wagenhals 138 kV circuit would need an electrical clearance study to determine if the emergency rating can be utilized	AEP (100%)
b1501	The Moseley – Reusens 138 kV circuit requires a sag study to determine if the emergency rating can be utilized to address a thermal loading issue for a category C3	AEP (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Reconductor the Conesville East – Conesville Prep Plant Tap 138 kV section of b1502 the Conesville – Ohio Central to fix Reliability N-1-1 thermal overloads AEP (100%) AEP (93.61%) / ATSI (2.99%) / ComEd (2.07%) / HTP (0.03%) / Establish Sorenson 345/138 PENELEC (0.31%) / ECP\*\* b1659 kV station as a 765/345 kV station (0.03%) / PSEG (0.92%) / RE (0.04%)Replace Sorenson 138 kV b1659.1 breaker 'L1' AEP (100%) Replace Sorenson 138 kV b1659.2 breaker 'L2' breaker AEP (100%) Replace Sorenson 138 kV b1659.3 breaker 'M1' AEP (100%) Replace Sorenson 138 kV b1659.4 breaker 'M2' AEP (100%) Replace Sorenson 138 kV b1659.5 breaker 'N1' AEP (100%) Replace Sorenson 138 kV b1659.6 breaker 'N2' AEP (100%) Replace Sorenson 138 kV b1659.7 breaker 'O1' AEP (100%) Replace Sorenson 138 kV b1659.8 breaker 'O2' AEP (100%) Replace Sorenson 138 kV b1659.9 breaker 'M' AEP (100%) Replace Sorenson 138 kV b1659.10 breaker 'N' AEP (100%)

<sup>\*\*</sup>East Coast Power, L.L.C.

Required Transmission Enhancements Annual Revenue Requ		rement Responsible Customer(s)	
b1659.11	Replace Sorenson 138 kV breaker 'O'		AEP (100%)
b1659.12	Replace McKinley 138 kV breaker 'L1'		AEP (100%)
b1659.13	Establish 765 kV yard at Sorenson and install four 765 kV breakers		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation:
			AEP (79.31%) / Dayton (9.10%) / DEOK (11.59%)
b1659.14	Build approximately 14 miles of 765 kV line from existing Dumont - Marysville line		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)
			DFAX Allocation: AEP (69.56%) / ATSI (17.59%) / Dayton (7.73%) / DL (4.96%) / EKPC (0.16%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required T	Required Transmission Enhancements Annual Revenue Required		ement Responsible Customer(s)
ь1660	Install a 765/500 kV transformer at Cloverdale		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: BGE (43.47%) / Dayton (0.16%) / DEOK (0.40%) / Dominion (1.05%) / EKPC (0.24%) / PEPCO (54.68%)
b1661	Install a 765 kV circuit breaker at Wyoming station		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)
			DFAX Allocation: AEP (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Transmission Enhancements		Annual Revenue Requirer	ment	Responsible Customer(s)
1.1772	Rebuild 4 miles of 46 kV			
	line to 138 kV from			
b1662	Pemberton to Cherry			
	Creek			AEP (100%)
	Circuit Breakers are			
b1662.1	installed at Cherry Creek			
	(facing Pemberton) and at			
	Pemberton (facing Tams			
	Mtn. and Cherry Creek)			AEP (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Install three 138 kV breakers at Grandview Station (facing b1662.2 Cherry Creek, Hinton, and Bradley Stations) AEP (100%) Remove Sullivan Switching b1662.3 Station (46 kV) AEP (100%) Install a new 765/138 kV b1663 transformer at Jackson Ferry substation AEP (100%) Establish a new 10 mile double circuit 138 kV line b1663.1 between Jackson Ferry and Wythe AEP (100%) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton Install 2 765 kV circuit (2.12%) / DEOK (3.37%) / DL breakers, breaker disconnect (1.76%) / DPL (2.55%) / Dominion switches and associated bus (12.97%) / EKPC (1.81%) / JCPL b1663.2 work for the new 765 kV (3.92%) / ME (1.95%) / NEPTUNE\* breakers, and new relays for (0.24%) / OVEC (0.07%) / PECO the 765 kV breakers at (5.39%) / PENELEC (1.84%) / Jackson's Ferry PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** AEP (100%) Install switched capacitor b1664 banks at Kenwood 138 kV stations AEP (100%) Install a second 138/69 kV b1665 transformer at Thelma station AEP (100%) Construct a single circuit 69 kV line from West b1665.1 Paintsville to the new Paintsville station AEP (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

b1665.2 Install new 7.2 MVAR, 46 kV bank at Kenwood Station  Build an 8 breaker 138 kV station tapping both circuits of the Fostoria - East Lima 138 kV line  Establish Melmore as a switching station with both 138 kV circuits terminating at Melmore. Extend the double circuit 138 kV line from Melmore to Fremont Center  AEP (100%)	
bank at Kenwood Station  Build an 8 breaker 138 kV station tapping both circuits of the Fostoria - East Lima 138 kV line  Establish Melmore as a switching station with both 138 kV circuits terminating at Melmore. Extend the double circuit 138 kV line from	
b1666  station tapping both circuits of the Fostoria - East Lima 138 kV line  Establish Melmore as a switching station with both 138 kV circuits terminating at Melmore. Extend the double circuit 138 kV line from	
of the Fostoria - East Lima 138 kV line  Establish Melmore as a switching station with both 138 kV circuits terminating at Melmore. Extend the double circuit 138 kV line from	
b1667  of the Fostoria - East Lima 138 kV line  Establish Melmore as a switching station with both 138 kV circuits terminating at Melmore. Extend the double circuit 138 kV line from	
b1667  Establish Melmore as a switching station with both 138 kV circuits terminating at Melmore. Extend the double circuit 138 kV line from	
b1667 switching station with both 138 kV circuits terminating at Melmore. Extend the double circuit 138 kV line from	%)
b1667  138 kV circuits terminating at Melmore. Extend the double circuit 138 kV line from	
Melmore. Extend the double circuit 138 kV line from	
Melmore. Extend the double circuit 138 kV line from	
Melmore to Fremont Center AFP (100%)	
b1668 Revise the capacitor setting at	
Riverside 138 kV station AEP (100%)	
b1669 Capacitor setting changes at	
Ross 138 kV stations AEP (100%)	
b1670 Capacitor setting changes at	
Wooster 138 kV station AEP (100%)	
b1671 Install four 138 kV breakers	
in Danville area  AEP (100%)	
b1676 Replace Natrium 138 kV	
breaker 'G (rehab)'  AEP (100%)	
Replace Huntley 138 kV	
b1677   Replace Huntey 138 KV   breaker '106'   AEP (100%)	
Replace Kammer 138 kV	
b1678   Replace Rammer 138 kV   breaker 'G'   AEP (100%)	
Replace Kammer 138 kV	
b1679   Replace Kammer 138 kV   breaker 'H'   AEP (100%)	
Replace Kammer 138 kV	
b1680   Replace Kammer 138 kV   breaker 'J'   AEP (100%)	
Replace Kammer 138 kV	
b1681   Replace Rammer 138 kV   breaker 'K'   AEP (100%)	
Replace Kammer 138 kV	
b1682   Replace Rammer 138 kV   breaker 'M'   AEP (100%)	

b1683	Replace Kammer 138 kV	inual Revenue Requirement	responsible editioner(s)
	breaker 'N'		AEP (100%)
b1684	Replace Clinch River 138 kV breaker 'E1'		AEP (100%)
b1685	Replace Lincoln 138 kV breaker 'D'		AEP (100%)
b1687	Advance s0251.7 (Replace Corrid 138 kV breaker '104S')		AEP (100%)
b1688	Advance s0251.8 (Replace Corrid 138 kV breaker '104C')		AEP (100%)
b1712.1	Perform sag study on Altavista - Leesville 138 kV line		Dominion (75.30%) / PEPCO (24.70%)
b1712.2	Rebuild the Altavista - Leesville 138 kV line	]	Dominion (75.30%) / PEPCO (24.70%)
b1733	Perform a sag study of the Bluff Point - Jauy 138 kV line. Upgrade breaker, wavetrap, and risers at the terminal ends		AEP (100%)
b1734	Perform a sag study of Randoph - Hodgins 138 kV line. Upgrade terminal equipment		AEP (100%)
b1735	Perform a sag study of R03 - Magely 138 kV line. Upgrade terminal equipment		AEP (100%)
b1736	Perform a sag study of the Industrial Park - Summit 138 kV line		AEP (100%)
b1737	Sag study of Newcomerstown - Hillview 138 kV line. Upgrade - terminal equipment		AEP (100%)

Required	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
1.1720	Perform a sag study of the Wolf Creek - Layman 138 kV	7	
b1738	lineUpgrade terminal equipment including a 138		
	kV breaker and wavetrap		AEP (100%)
b1739	Perform a sag study of the Ohio Central - West Trinway		
	138 kV line		AEP (100%)
b1741	Replace Beatty 138 kV breaker '2C(IPP)'		AEP (100%)
b1742	Replace Beatty 138 kV breaker '1E'		AEP (100%)
b1743	Replace Beatty 138 kV breaker '2E'		AEP (100%)
b1744	Replace Beatty 138 kV breaker '3C'		AEP (100%)
b1745	Replace Beatty 138 kV breaker '2W'		AEP (100%)
b1746	Replace St. Claire 138 kV breaker '8'		AEP (100%)
b1747	Replace Cloverdale 138 kV breaker 'C'		AEP (100%)
b1748	Replace Cloverdale 138 kV breaker 'D1'		AEP (100%)
b1780	Install two 138 kV breakers and two 138 kV circuit switchers at South Princeton Station and one 138 kV breaker and one 138 kV circuit switcher at Switchback Station	K	AEP (100%)
b1781	Install three 138 kV breakers and a 138 kV circuit switcher at Trail Fork Station in Pineville, WV		AEP (100%)

Required T	Transmission Enhancements	Annual Revenue Requireme	ent Responsible Customer(s)
	Install a 46 kV Moab at		
b1782	Montgomery Station facing		
01/82	Carbondale (on the London -		
	Carbondale 46 kV circuit)		AEP (100%)
	Add two 138 kV Circuit		
	Breakers and two 138 kV		
b1783	circuit switchers on the		
	Lonesome Pine - South		
	Bluefield 138 kV line		AEP (100%)
	Install a 52.8 MVAR		
b1784	capacitor bank at the Clifford	1	
	138 kV station		AEP (100%)
	Perform a sag study of 4		
b1811.1	miles of the Waterford -		
	Muskingum line		AEP (100%)
	Rebuild 0.1 miles of		
b1811.2	Waterford - Muskingum 345		
	kV with 1590 ACSR		AEP (100%)
	Reconductor the AEP portion	n	
	of the South Canton -		
	Harmon 345 kV with 954		
b1812	ACSR and upgrade terminal		
01012	equipment at South Canton.		
	Expected rating is 1800		
	MVA S/N and 1800 MVA		
	S/E		AEP (100%)
	Install (3) 345 kV circuit		
b1817	breakers at East Elkhart		
0101/	station in ring bus designed		
	as a breaker and half scheme		AEP (100%)

Required 7	Fransmission Enhancements Annu	al Revenue Requireme	ent Responsible Customer(s)
	Expand the Allen station by		
	installing a second 345/138 kV		
	transformer and adding four 138		
b1818	kV exits by cutting in the		
	Lincoln - Sterling and Milan -		
	Timber Switch 138 kV double		AEP (88.30%) / ATSI (8.86%) /
	circuit tower line		Dayton (2.84%)
	Rebuild the Robinson Park -		
	Sorenson 138 kV line corridor as		
b1819	a 345 kV double circuit line with		
	one side operated at 345 kV and		AEP (87.18%) / ATSI (10.06%) /
	one side at 138 kV		Dayton (2.76%)
	Perform a sag study for Hancock		
	- Cave Spring - Roanoke 138 kV		
	circuit to reach new SE ratings		
b1859	of 272 MVA (Cave Spring-		
	Hancock), 205 MVA (Cave		
	Spring-Sunscape), 245 MVA		
	(ROANO2-Sunscape)		AEP (100%)
	Perform a sag study on the		
	Crooksville - Spencer Ridge		
	section (14.3 miles) of the		
b1860	Crooksville-Poston-Strouds Run		
	138 kV circuit to see if any		
	remedial action needed to reach		. == (4.000)
	the SE rating (175 MVA)		AEP (100%)
	Reconductor 0.83 miles of the		
b1861	Dale - West Canton 138 kV Tie-		
01001	line and upgrade risers at West		. == (4.000)
	Canton 138 kV		AEP (100%)
	Perform a sag study on the Grant		
	- Greentown 138 kV circuit and		
b1862	replace the relay CT at Grant		
	138 kV station to see if any		
	remedial action needed to reach		A ED (1000)
	the new ratings of 251/286 MVA		AEP (100%)

Required T	Fransmission Enhancements A	nnual Revenue Requiremen	nt Responsible Customer(s)
	Perform a sag study of the		
	Kammer - Wayman SW 138		
b1863	kV line to see if any remedial		
	action needed to reach the		
	new SE rating of 284 MVA		AEP (100%)
b1864.1	Add two additional 345/138		AEP (87.22%) / APS (8.22%) /
01004.1	kV transformers at Kammer		ATSI (3.52%) / DL (1.04%)
b1864.2	Add second West Bellaire -		AEP (87.22%) / APS (8.22%) /
01004.2	Brues 138 kV circuit		ATSI (3.52%) / DL (1.04%)
b1864.3	Replace Kammer 138 kV		
01804.3	breaker 'E'		AEP (100%)
	Perform a sag study on the		
	Kanawha - Carbondale 138		
b1865	kV line to see if any remedial		
	action needed to reach the		
	new ratings of 251/335 MVA		AEP (100%)
	Perform a sag study on the		
	Clinch River-Lock Hart-		
	Dorton 138 kV line, increase		
b1866	the Relay Compliance Trip		
01000	Limit at Clinch River on the		
	C.RDorton 138 kV line to		
	310 and upgrade the risers		
	with 1590 ACSR		AEP (100%)
	Perform a sag study on the		
	Newcomerstown - South		
b1867	Coshocton 138 kV line to see		
01007	if any remedial action is		
	needed to reach the new SE		
	rating of 179 MVA		AEP (100%)
	Perform sag study on the		
	East Lima - new Liberty 138		
b1868	kV line to see if any remedial		
	action is needed to reach the		
	new SE rating of 219 MVA		AEP (100%)

Required 7	Transmission Enhancements	Annual Revenue Requireme	nt Responsible Customer(s)
	Perform a sag study of the		
	Ohio Central - South		
b1869	Coshocton 138 kV circuit to		
01809	see if any remedial action		
	needed to reach the new SE		
	ratings of 250 MVA		AEP (100%)
	Replace the Ohio Central		
	transformer #1 345/138/12		
b1870	kV 450 MVA for a		AEP (68.16%) / ATSI (25.27%) /
	345/138/34.5 kV 675 MVA		Dayton (3.88%) / PENELEC
	transformer		(1.59%) / DEOK (1.10%)
	Perform a sag study on the		
	Central - West Coshocton		
b1871	138 kV line (improving the		
	emergency rating of this line		
	to 254 MVA)		AEP (100%)
	Add a 57.6 MVAr capacitor		
b1872	bank at East Elkhart 138 kv		
	station in Indiana		AEP (100%)
	Install two 138 kV circuit		
	breakers at Cedar Creek		
b1873	Station and primary side		
	circuit switcher on the		
	138/69/46 kV transformer		AEP (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Install two 138 kV circuit breakers and one 138 kV b1874 circuit switcher at Magely 138 kV station in Indiana AEP (100%) Build 25 miles of new 138 kV line from Bradlev Station through Tower 117 Station and terminating at McClung b1875 138 kV station. Existing 69 kV distribution transformers will be replaced with 138 kV transformers APS (100%) Install a 14.4 MVAr capacitor bank at Capital Avenue b1876 (AKA Currant Road) 34.5 kV bus AEP (100%) Relocate 138 kV Breaker G to the West Kingsport - Industry b1877 Drive 138 kV line and Remove 138 kV MOAB AEP (100%) Perform a sag study on the Lincoln - Robinson Park 138 b1878 kV line (Improve the emergency rating to 244 MVA) AEP (100%) Perform a sag study on the Hansonville - Meadowview 138 kV line (Improve the b1879 emergency rating to 245 MVA) AEP (100%) Rebuild the 15 miles of the Moseley - Roanoke 138 kV line. This project would b1880 consist of rebuilding both circuits on the double circuit line AEP (100%)

Required	Transmission Enhancements A	nnual Revenue Requirement	Responsible Customer(s)
	Replace existing 600 Amp		
	switches, station risers and		
	increase the CT ratios associate	ed	
b1881	with breaker 'G' at Sterling 138		
	kV Station. It will increase the		
	rating to 296 MVA S/N and 38	4	
	MVA S/E		AEP (100%)
	Perform a sag study on the Blu	ff	
	Point - Randolf 138 kV line to		
b1882	see if any remedial action need	ed	
	to reach the new SE rating of 2	55	
	MVA		AEP (100%)
	Switch the breaker position of		
b1883	transformer #1 and SW Lima a	t	
	East Lima 345 kV bus		AEP (100%)
	Perform a sag study on Strawto	on	
	station - Fisher Body - Deer		
b1884	Creek 138 kV line to see if any		
	remedial action needed to reach	ı	
	the new SE rating of 250 MVA		AEP (100%)
	Establish a new 138/69 kV sou	rce	
	at Carrollton and construct two		
b1887	new 69 kV lines from Carrollto	on	
01007	to tie into the Dennison - Mille	r	
	SW 69 kV line and to East Dov	/er	
	69 kV station respectively		AEP (100%)
	Install a 69 kV line breaker at		
b1888	Blue Pennant 69 kV Station		
01000	facing Bim Station and 14.4		
	MVAr capacitor bank		AEP (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Install a 43.2 MVAR capacitor b1889 bank at Hinton 138 kV station (APCO WV) AEP (100%) Rebuild the Ohio Central - West Trinway (4.84 miles) section of the Academia - Ohio Central 138 b1901 kV circuit. Upgrade the Ohio Central riser, Ohio Central switch and the West Trinway riser AEP (100%) Construct new 138/69 Michiana Station near Bridgman by tapping b1904.1 the new Carlisle - Main Street 138 kV and the Bridgman -Buchanan Hydro 69 kV line AEP (100%) Establish a new 138/12 kV New Galien station by tapping the b1904.2 Olive - Hickory Creek 138 kV line AEP (100%) Retire the existing Galien station and move its distribution load to b1904.3 New Galien station. Retire the Buchanan Hydro - New Carlisile 34.5 kV line AEP (100%) Implement an in and out scheme at Cook 69 kV by eliminating the b1904.4 Cook 69 kV tap point and by installing two new 69 kV circuit breakers AEP (100%) Rebuild the Bridgman - Cook 69 b1904.5 kV and the Derby - Cook 69 kV lines AEP (100%) Perform a sag study on the Brues b1946 - West Bellaire 138 kV line AEP (100%) A sag study of the Dequine -Meadowlake 345 kV line #1 line b1947 may improve the emergency rating to 1400 MVA AEP (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Establish a new 765/345 interconnection at Sporn. Install a 765/345 kV b1948 transformer at Mountaineer ATSI (61.08%) / DL (21.87%) / and build <sup>3</sup>/<sub>4</sub> mile of 345 kV to Dominion (13.97%) / PENELEC Sporn (3.08%)Perform a sag study on the Grant Tap – Deer Creek 138 b1949 kV line and replace bus and risers at Deer Creek station AEP (100%) Perform a sag study on the Kammer – Ormet 138 kV line b1950 of the conductor section AEP (100%) Perform a sag study of the Maddox- Convoy 345 kV line b1951 to improve the emergency rating to 1400 MVA AEP (100%) Perform a sag study of the Maddox - T130 345 kV line b1952 to improve the emergency rating to 1400 MVA AEP (100%) Perform a sag study of the Meadowlake - Olive 345 kV b1953 line to improve the emergency rating to 1400 MVA AEP (100%) Perform a sag study on the Milan - Harper 138 kV line b1954 and replace bus and switches at Milan Switch station AEP (100%) Perform a sag study of the R-049 - Tillman 138 kV line b1955 may improve the emergency rating to 245 MVA AEP (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Perform a sag study of the Tillman - Dawkins 138 kV b1956 line may improve the emergency rating to 245 **MVA** AEP (100%) AEP (69.41%) / ATSI (23.11%) / Terminate Transformer #2 at ECP\*\* (0.17%) / HTP (0.19%) / b1957 SW Lima in a new bay PENELEC (2.42%) / PSEG position (4.52%) / RE (0.18%) Perform a sag study on the Brookside - Howard 138 kV b1958 line and replace bus and risers at AEP Howard station AEP (100%) Sag Study on 7.2 miles SE b1960 Canton-Canton Central 138 kV ckt AEP (100%) Sag study on the Southeast b1961 Canton – Sunnyside 138 kV line

AEP (100%)

<sup>\*\*</sup>East Coast Power, L.L.C.

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC Add four 765 kV breakers at (1.81%) / JCPL (3.92%) / ME b1962 Kammer (1.95%) / NEPTUNE\* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** AEP (100%) Build approximately 1 mile of circuit comprising of 2-954 b1963 ACSR to get the rating of Waterford-Muskinum 345 kV higher AEP (100%) APS (33.51%) / ATSI (32.21%) / DL (18.64%) / Dominion (6.01%) / Reconductor 13 miles of the ECP\*\* (0.10%) / HTP (0.11%) / b1970 Kammer – West Bellaire 345 JCPL (1.68%) / NEPTUNE\* kV circuit (0.18%) / PENELEC (4.58%) / PSEG (2.87%) / RE (0.11%) Perform a sag study to improve the emergency rating b1971 on the Bridgville -Chandlersville 138 kV line AEP (100%) Replace disconnect switch on b1972 the South Canton 765/345 kV transformer AEP (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Perform a sag study to improve the emergency b1973 rating on the Carrollton – Sunnyside 138 kV line AEP (100%) Perform a sag study to improve the emergency b1974 rating on the Bethel Church – West Dover 138 kV line AEP (100%) Replace a switch at South b1975 Millersburg switch station AEP (100%) ATSI (37.04%) / AEP (34.35%) / DL (10.41%) / Dominion (6.19%) Reconductor or rebuild / APS (3.94%) / PENELEC Sporn - Waterford b2017 (3.09%) / JCPL (1.39%) / Dayton Muskingum River 345 kV (1.20%) / NEPTUNE\* (0.14%) / line HTP (0.09%) / ECP\*\* (0.08%) / PSEG (2.00%) / RE (0.08%) ATSI (58.58%) / AEP (14.16%) / APS (12.88%) / DL (7.93%) / Loop Conesville - Bixby 345 b2018 kV circuit into Ohio Central PENELEC (5.73%) / Dayton (0.72%)AEP (93.74%) / APS (4.40%) / Establish Burger 345/138 kV b2019 DL (1.11%) / ATSI (0.74%) / station PENELEC (0.01%) AEP (88.39%) / APS (7.12%) / Rebuild Amos - Kanawah b2020 ATSI (2.89%) / DEOK (1.58%) / River 138 kV corridor PEPCO (0.02%) AEP (91.92%) / DEOK (3.60%) / Add 345/138 transformer at APS (2.19%) / ATSI (1.14%) / b2021 Sporn, Kanawah River & DL (1.08%) / PEPCO (0.04%) / Muskingum River stations BGE (0.03%) Replace Kanawah 138 kV b2021.1 breaker 'L' AEP (100%) Replace Muskingum 138 kV b2021.2 breaker 'HG' AEP (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup>East Coast Power, L.L.C.

Required Transmission Enhancements		Annual Revenue Requirement Responsible Customer(s	
b2021.3	Replace Muskingum 138 kV breaker 'HJ'		AEP (100%)
b2021.4	Replace Muskingum 138 kV breaker 'HE'		AEP (100%)
b2021.5	Replace Muskingum 138 kV breaker 'HD'		AEP (100%)
b2021.6	Replace Muskingum 138 kV breaker 'HF'		AEP (100%)
b2021.7	Replace Muskingum 138 kV breaker 'HC'		AEP (100%)
b2021.8	Replace Sporn 138 kV breaker 'D1'		AEP (100%)
b2021.9	Replace Sporn 138 kV breaker 'D2'		AEP (100%)
b2021.10	Replace Sporn 138 kV breaker 'F1'		AEP (100%)
b2021.11	Replace Sporn 138 kV breaker 'F2'		AEP (100%)
b2021.12	Replace Sporn 138 kV breaker 'G'		AEP (100%)
b2021.13	Replace Sporn 138 kV breaker 'G2'		AEP (100%)
b2021.14	Replace Sporn 138 kV breaker 'N1'		AEP (100%)
b2021.15	Replace Kanawah 138 kV breaker 'M'		AEP (100%)
b2022	Terminate Tristate - Kyge Creek 345 kV line at Spor		AEP (97.99%) / DEOK (2.01%)
b2027	Perform a sag study of the Tidd - Collier 345 kV line		AEP (100%)

Required	Transmission Enhancements	Annual Revenue Requiremen	t Responsible Customer(s)
	Perform a sag study on East		
b2028	Lima - North Woodcock 138		
	kV line to improve the rating		AEP (100%)
	Perform a sag study on		
b2029	Bluebell - Canton Central 138		
	kV line to improve the rating		AEP (100%)
b2030	Install 345 kV circuit		
02030	breakers at West Bellaire		AEP (100%)
	Sag study on Tilton - W.		
b2031	Bellaire section 1 (795		
	ACSR), about 12 miles		AEP (100%)
b2032	Rebuild 138 kV Elliot tap -		ATSI (73.02%) / Dayton
02032	Poston line		(19.39%) / DL (7.59%)
	Perform a sag study of the		
b2033	Brues - W. Bellaire 138 kV		
	line		AEP (100%)
	Adjust tap settings for		
b2046	Muskingum River		1. T.D. (1.0.0.())
	transformers		AEP (100%)
b2047	Replace relay at Greenlawn		1. T.D. (1.0.0.())
	1		AEP (100%)
1.20.40	Replace both 345/138 kV		
b2048	transformers with one bigger		A ED (00 400() / D (7.510()
	transformer		AEP (92.49%) / Dayton (7.51%)
b2049	Replace relay		A FIR (1000())
	1 2		AEP (100%)
b2050	Perform sag study		1. T.D. (1.0.0.())
			AEP (100%)
1.2051	Install 3 138 kV breakers and		
b2051	a circuit switcher at Dorton		A ED (1000/)
	station		AEP (100%)
1.20.52	D 1		AEP (67.17%) / ATSI (27.37%) /
b2052	Replace transformer		Dayton (3.73%) / PENELEC
	D C 1 CC		(1.73%)
b2054	Perform a sag study of Sporn		AED (1000/)
	- Rutland 138 kV line		AEP (100%)

Required	Transmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
	Replace George Washington		
b2069	138 kV breaker 'A' with 63		
	kA rated breaker		AEP (100%)
	Replace Harrison 138 kV		
b2070	breaker '6C' with 63 kA rated	1	
	breaker		AEP (100%)
	Replace Lincoln 138 kV		
b2071	breaker 'L' with 63 kA rated		
	breaker		AEP (100%)
	Replace Natrum 138 kV		
b2072	breaker 'I' with 63 kA rated		
	breaker		AEP (100%)
	Replace Darrah 138 kV		
b2073	breaker 'B' with 63 kA rated		
	breaker		AEP (100%)
	Replace Wyoming 138 kV		
b2074	breaker 'G' with 80 kA rated		
	breaker		AEP (100%)
	Replace Wyoming 138 kV		
b2075	breaker 'G1' with 80 kA rated	1	
	breaker		AEP (100%)
	Replace Wyoming 138 kV		
b2076	breaker 'G2' with 80 kA rated	1	
	breaker		AEP (100%)
	Replace Wyoming 138 kV		
b2077	breaker 'H' with 80 kA rated		
	breaker		AEP (100%)
	Replace Wyoming 138 kV		
b2078	breaker 'H1' with 80 kA rated	1	
	breaker		AEP (100%)
	Replace Wyoming 138 kV		
b2079	breaker 'H2' with 80kA rated		
	breaker		AEP (100%)
	Replace Wyoming 138 kV		
b2080	breaker 'J' with 80 kA rated		
	breaker		AEP (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace Wyoming 138 kV breaker 'J1' with 80 kA rated b2081 breaker AEP (100%) Replace Wyoming 138 kV b2082 breaker 'J2' with 80 kA rated breaker AEP (100%) Replace Natrum 138 kV b2083 breaker 'K' with 63 kA rated breaker AEP (100%) Replace Tanner Creek 345 b2084 kV breaker 'P' with 63 kA rated breaker AEP (100%) Replace Tanner Creek 345 b2085 kV breaker 'P2' with 63 kA rated breaker AEP (100%) Replace Tanner Creek 345 b2086 kV breaker 'Q1' with 63 kA rated breaker AEP (100%) Replace South Bend 138 kV b2087 breaker 'T' with 63 kA rated breaker AEP (100%) Replace Tidd 138 kV breaker b2088 'L' with 63 kA rated breaker AEP (100%) Replace Tidd 138 kV breaker b2089 'M2' with 63 kA rated breaker AEP (100%) Replace McKinley 138 kV b2090 breaker 'A' with 40 kA rated breaker AEP (100%) Replace West Lima 138 kV b2091 breaker 'M' with 63 kA rated breaker AEP (100%) Replace George Washington 138 kV breaker 'B' with 63 b2092 kA rated breaker AEP (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace Turner 138 kV breaker 'W' with 63 kA rated b2093 breaker AEP (100%) Build a new 138 kV line from Falling Branch to Merrimac b2135 and add a 138/69 kV transformer at Merrimac Station AEP (100%) Add a fourth circuit breaker to the station being built for the U4-038 project b2160 (Conelley), rebuild U4-038 -Grant Tap line as double circuit tower line AEP (100%) Rebuild approximately 20 miles of the Allen - S073 double circuit 138 kV line (with one circuit from Allen b2161 Tillman - Timber Switch -S073 and the other circuit from Allen - T-131 - S073) utilizing 1033 ACSR AEP (100%) Perform a sag study to improve the emergency rating b2162 of the Belpre - Degussa 138 kV line AEP (100%) Replace breaker and wavetrap b2163 at Jay 138 kV station AEP (100%)

#### **SCHEDULE 12 – APPENDIX**

#### (20) Virginia Electric and Power Company

required		nual Revenue Requirement — Responsible Customer(s)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd (13.46%)
		/ Dayton (2.12%) / DEOK
		(3.37%) / DL (1.76%) / DPL
		(2.55%) / Dominion (12.97%) /
		EKPC (1.81%) / JCPL (3.92%) /
b0217	Upgrade Mt. Storm -	ME (1.95%) / NEPTUNE*
00217	Doubs 500 kV	(0.24%) / OVEC (0.07%) / PECO
		(5.39%) / PENELEC (1.84%) /
		PEPCO (3.71%) / PPL (4.78%) /
		PSEG (6.40%) / RE (0.27%)
		DFAX Allocation:
		APS (20.37%) / BGE (12.89%) /
		Dominion (53.52%) / PEPCO
		(13.22%)
		Load-Ratio Share Allocation:
		Loau-Ratio Share Anocation.
		AEC (1.67%) / AEP (13.94%) /
		AEC (1.67%) / AEP (13.94%) /
		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) /
		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK
	Install 150 MVAR	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL
b0222	Install 150 MVAR capacitor at Loudoun 500	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0222		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0222	capacitor at Loudoun 500	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0222	capacitor at Loudoun 500	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0222	capacitor at Loudoun 500	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0222	capacitor at Loudoun 500	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0222	capacitor at Loudoun 500	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0222	capacitor at Loudoun 500	AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*\*</sup> The Annual Revenue Requirement for all Virginia Electric and Power Company projects in this Section 20 shall be as specified in Attachment 7 to Appendix A of Attachment H-16A and under the procedures detailed in Attachment H-16B.

required 1	Taristilission Emilancements	Aimuai Revenue Requireme	The Responsible Customer(s)
b0223	Install 150 MVAR capacitor at Asburn 230 kV		Dominion (100%)
b0224	Install 150 MVAR capacitor at Dranesville 230 kV		Dominion (100%)
b0225	Install 33 MVAR capacitor at Possum Pt. 115 kV		Dominion (100%)
b0226	Install 500/230 kV transformer at Clifton and Clifton 500 kV 150 MVAR capacitor	As specified in Attachment 7 to Appendix A of Attachment H-16A and under the procedures detailed in Attachment H-16B	APS (3.69%) / BGE (3.54%) / Dominion (85.73%) / PEPCO (7.04%)
b0227	Install 500/230 kV transformer at Bristers; build new 230 kV Bristers-Gainsville circuit, upgrade two Loudoun- Brambleton circuits		AEC (0.71%) / APS (3.36%) / BGE (10.93%) / DPL (1.66%) / Dominion (67.38%) / ME (0.89%) / PECO (2.33%) / PEPCO (12.20%) / PPL (0.54%)
b0227.1	Loudoun Sub – upgrade 6-230 kV breakers		Dominion (100%)

Required Transmission Edinancements		Annual Revenue Requirement Responsible Customer(s)	
		Load-Ratio Share Allocation:	
		AEC (1.67%) / AEP (13.94%) /	
		APS (5.64%) / ATSI (8.02%) /	
		BGE (4.12%) / ComEd (13.46%)	
		/ Dayton (2.12%) / DEOK	
		(3.37%) / DL (1.76%) / DPL	
	Install 500 kV breakers &	(2.55%) / Dominion (12.97%) /	
b0231	500 kV bus work at	EKPC (1.81%) / JCPL (3.92%) /	
	Suffolk	ME (1.95%) / NEPTUNE*	
		(0.24%) / OVEC (0.07%) / PECC	
		(5.39%) / PENELEC (1.84%) /	
		PEPCO (3.71%) / PPL (4.78%) /	
		PSEG (6.40%) / RE (0.27%)	
		DFAX Allocation:	
		Dominion (100%)	
	Install 500/230 kV		
	Transformer, 230 kV		
	breakers, & 230 kV bus		
b0231.2	work at Suffolk	Dominion (100%)	
	Install 150 MVAR		
b0232	capacitor at Lynnhaven		
	230 kV	Dominion (100%)	
	Install 150 MVAR		
b0233	capacitor at Landstown		
	230 kV	Dominion (100%)	
	Install 150 MVAR		
b0234	capacitor at Greenwich		
	230 kV	Dominion (100%)	
	Install 150 MVAR		
b0235	capacitor at Fentress 230		
	kV	Dominion (100%)	

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required T	ransmission Enhancements	Annual Revenue Require	ement Responsible Customer(s)
	Reconductor Endless		
b0307	Caverns – Mt. Jackson		
	115 kV		Dominion (100%)
	Replace L breaker and		
b0308	switches at Endless		
	Caverns 115 kV		Dominion (100%)
b0309	Install SPS at Earleys 115		
00309	kV		Dominion (100%)
	Reconductor Club House		
b0310	<ul> <li>South Hill and Chase</li> </ul>		
	City – South Hill 115 kV		Dominion (100%)
b0311	Reconductor Idylwood to		
00311	Arlington 230 kV		Dominion (100%)
b0312	Reconductor Gallows to		
00312	Ox 230 kV		Dominion (100%)
	Install a 2 <sup>nd</sup> Everetts		
b0325	230/115 kV transformer		T (1000()
			Dominion (100%)
1.000.6	Uprate/resag Remington-		
b0326	Brandywine-Culppr 115		T (1000()
	kV		Dominion (100%)
	Build 2 <sup>nd</sup> Harrisonburg –		
b0327	Valley 230 kV		APS (19.79%) / Dominion
	valley 250 KV		(76.18%) / PEPCO (4.03%)
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd (13.46%)
			/ Dayton (2.12%) / DEOK
			(3.37%) / DL (1.76%) / DPL
			(2.55%) / Dominion (12.97%) /
	Build new Meadow Brook		EKPC (1.81%) / JCPL (3.92%) /
b0328.1	– Loudoun 500 kV circuit		ME (1.95%) / NEPTUNE*
	(30 of 50 miles)		(0.24%) / OVEC (0.07%) / PECO
			(5.39%) / PENELEC (1.84%) /
			PEPCO (3.71%) / PPL (4.78%) /
			PSEG (6.40%) / RE (0.27%)
			DEAV AB 4
			DFAX Allocation:
			BGE (7.44%) / Dominion
			(80.66%) / (11.90%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required 1	ransmission Enhancements Ani	
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd (13.46%)
		/ Dayton (2.12%) / DEOK
		(3.37%) / DL (1.76%) / DPL
		(2.55%) / Dominion (12.97%) /
	Upgrade Mt. Storm 500	EKPC (1.81%) / JCPL (3.92%) /
b0328.3	kV substation	ME (1.95%) / NEPTUNE*
	K v Substation	(0.24%) / OVEC (0.07%) / PECO
		(5.39%) / PENELEC (1.84%) /
		PEPCO (3.71%) / PPL (4.78%) /
		PSEG (6.40%) / RE (0.27%)
		DFAX Allocation:
		APS (33.17%) / Dominion
		(51.31%) / PEPCO (15.52%)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
	Upgrade Loudoun 500 kV	BGE (4.12%) / ComEd (13.46%)
		/ Dayton (2.12%) / DEOK
		(3.37%) / DL (1.76%) / DPL
		(2.55%) / Dominion (12.97%) /
1.0220.4		EKPC (1.81%) / JCPL (3.92%) /
b0328.4	substation	ME (1.95%) / NEPTUNE*
		(0.24%) / OVEC (0.07%) / PECO
		(5.39%) / PENELEC (1.84%) /
		PEPCO (3.71%) / PPL (4.78%) /
		PSEG (6.40%) / RE (0.27%)
		DFAX Allocation:
		BGE (7.44%) / Dominion
		(80.66%) / (11.90%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s)

Load-Ratio Share Allocation

Load-Ratio Share Allocation	١.
1 - 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 +	
AEC (1.67%) / AEP (13.94%)	
APS (5.64%) / ATSI (8.02%)	
BGE (4.12%) / ComEd (13.46	<b>%</b> )
/ Dayton (2.12%) / DEOK	
Build Carson – Suffolk (3.37%) / DL (1.76%) / DPI	
500 kV, install 2 <sup>nd</sup> Suffolk (2.55%) / Dominion (12.97%)	
b0329   500/230 kV transformer &   ERPC (1.81%) / JCPL (3.92%)	) /
build Suffolk – Fentress ME (1.95%) / NEPTUNE*	
230 kV circuit (0.24%) / OVEC (0.07%) / PE	
(5.39%) / PENELEC (1.84%)	
PEPCO (3.71%) / PPL (4.78%)	
PSEG (6.40%) / RE (0.27%)	
DFAX Allocation:	
Dominion (100%)	
Replace Thole Street 115	
00329.1   1-x/1	
Dollinion (10070)	
b0329.2 Replace Chesapeake 115	
b0329.2 kV breaker 'T242' Dominion (100%)	
Replace Chesapeake 115	
00329.3	
Dollinion (10070)	
b0329.4 Replace Chesapeake 115	
b0329.4 kV breaker '16422' Dominion (100%)	
Install 2 <sup>nd</sup> Suffolk 500/230	
b0329.5 kV transformer & build	
Suffolk – Thrasher 230	
kV circuit Dominion (100%)††	
Install Crewe 115 kV	
b0330 breaker and shift load	
from line 158 to 98 Dominion (100%)	
Upgrade/resag Shell Bank	
b0331 – Whealton 115 kV (Line	
165) Dominion (100%)	

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>††</sup>Cost allocations associated with below 500 kV elements of the project

Required	Transmission Emiancements An	muai Revenue Requirement	Responsible Cusionier(s)
b0332	Uprate/resag Chesapeake – Cradock 115 kV		Dominion (100%)
b0333	Replace wave trap on Elmont – Replace (Line #231)		Dominion (100%)
b0334	Uprate/resag Iron Bridge- Walmsley-Southwest 230 kV		Dominion (100%)
b0335	Build Chase City – Clarksville 115 kV		Dominion (100%)
b0336	Reconductor one span of Chesapeake – Dozier 115 kV close to Dozier substation		Dominion (100%)
b0337	Build Lexington 230 kV ring bus		Dominion (100%)
b0338	Replace Gordonsville 230/115 kV transformer for larger one		Dominion (100%)
b0339	Install Breaker at Dooms 230 kV Sub		Dominion (100%)
b0340	Reconductor one span Peninsula – Magruder 115 kV close to Magruder substation		Dominion (100%)
b0341	Install a breaker at Northern Neck 115 kV		Dominion (100%)
b0342	Replace Trowbridge 230/115 kV transformer		Dominion (100%)
b0403	2 <sup>nd</sup> Dooms 500/230 kV transformer addition		APS (3.35%) / BGE (4.22%) / DPL (1.10%) / Dominion (83.94%) / PEPCO (7.39%)

Required 1	ransmission Enhancements Annual	Revenue Requirement	Responsible Customer(s)
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) / APS
			(5.64%) / ATSI (8.02%) / BGE
			(4.12%) / ComEd (13.46%) / Dayton
			(2.12%) / DEOK (3.37%) / DL
			(1.76%) / DPL (2.55%) / Dominion
			(12.97%) / EKPC (1.81%) / JCPL
	Retension Pruntytown – Mt.		(3.92%) / ME (1.95%) / NEPTUNE*
b0412	Storm 500 kV to a 3502		(0.24%) / OVEC (0.07%) / PECO
	MVA rating		(5.39%) / PENELEC (1.84%) /
			PEPCO (3.71%) / PPL (4.78%) /
			PSEG (6.40%) / RE (0.27%)
			DFAX Allocation:
			APS (30.24%) / ATSI (0.01%) / BGE
			(21.24%) / DEOK (10.51%) / PEPCO
			(38.00%)
	Install 150 MVAR		
b0450	Capacitor at Fredricksburg		
	230 kV		Dominion (100%)
b0451	Install 25 MVAR Capacitor		
00101	at Somerset 115 kV		Dominion (100%)
	Install 150 MVAR		
b0452	Capacitor at Northwest 230		
	kV		Dominion (100%)
	Convert Remingtion –		APS (0.31%) / BGE (3.01%) / DPL
b0453.1	Sowego 115 kV to 230 kV		(0.04%) / Dominion (92.75%) / ME
			(0.03%) / PEPCO (3.86%)
104500	Add Sowego – Gainsville		APS (0.31%) / BGE (3.01%) / DPL
b0453.2	230 kV		(0.04%) / Dominion (92.75%) / ME
			(0.03%) / PEPCO (3.86%)
1.0452.2	Add Sowego 230/115 kV		APS (0.31%) / BGE (3.01%) / DPL
b0453.3	transformer		(0.04%) / Dominion (92.75%) / ME
	D 1 4 2 4 1 C		(0.03%) / PEPCO (3.86%)
1.0454	Reconductor 2.4 miles of		
b0454	Newport News –		D :: (1000/)
	Chuckatuck 230 kV		Dominion (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

required 1	ransmission Emiancements. Affiliar Revenue Requirement	Responsible Cusiomer(s)
b0455	Add 2 <sup>nd</sup> Endless Caverns	APS (32.70%) / BGE (7.01%) / DPL (1.80%) / Dominion (50.82%) /
00155	230/115 kV transformer	PEPCO (7.67%)
	Reconductor 9.4 miles of	APS (33.69%) / BGE (12.18%) /
b0456	Edinburg – Mt. Jackson 115	Dominion (40.08%) / PEPCO
	kV	(14.05%)
b0457	Replace both wave traps on Dooms – Lexington 500 kV	Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) / APS
		(5.64%) / ATSI (8.02%) / BGE
		(4.12%) / ComEd (13.46%) / Dayton
		(2.12%) / DEOK (3.37%) / DL
		(1.76%) / DPL (2.55%) / Dominion
		(12.97%) / EKPC (1.81%) / JCPL
		(3.92%) / ME (1.95%) / NEPTUNE*
		(0.24%) / OVEC (0.07%) / PECO
		(5.39%) / PENELEC (1.84%) /
		PEPCO (3.71%) / PPL (4.78%) /
		PSEG (6.40%) / RE (0.27%)
		DFAX Allocation:
		BGE (10.84%) / Dominion (70.07%) /
		EKPC (4.82%) / PEPCO (14.27%)
b0467.2		AEC (1.75%) / APS (19.70%) / BGE
	Reconductor the Dickerson	(22.13%) / DPL (3.70%) / JCPL
	– Pleasant View 230 kV	(0.71%) / ME (2.48%) / NEPTUNE*
	circuit	(0.06%) / PECO (5.54%) / PEPCO
		(41.86%) / PPL (2.07%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Load-Ratio Share Allocati	
	on:
AEC (1.67%) / AEP (13.94%)	/ APS
(5.64%) / ATSI (8.02%) / BGE	(4.12%)
/ ComEd (13.46%) / Dayton (2	.12%)/
DEOK (3.37%) / DL (1.76%)	/ DPL
(2.55%) / Dominion (12.97%) /	EKPC
(1.81%) / JCPL (3.92%) / ME (1.81%)	.95%)/
NEPTUNE* (0.24%) / OVEC (	0.07%)
Replace Mount Storm 500 / PECO (5.39%) / PENELEC (1	.84%)/
b0492.6 kV breaker 55072 PEPCO (3.71%) / PPL (4.78%)	
(6.40%) / RE (0.27%)	
DFAX Allocation:	
AEC (5.01%) / AEP (4.39%)	/ APS
(9.26%) / BGE (4.43%) / DL (0	.02%)/
DPL (6.91%) / Dominion (10.	32%)/
JCPL (11.64%) / ME (2.949)	<b>%</b> ) /
NEPTUNE* (1.12%) / PECO (1	4.51%)
/ PEPCO (6.11%) / PPL (6.39	9%) /
PSEG (15.86%) / RE (0.59	%)
Load-Ratio Share Allocati	on:
AEC (1.67%) / AEP (13.94%)	/ APS
(5.64%) / ATSI (8.02%) / BGE	(4.12%)
/ ComEd (13.46%) / Dayton (2	.12%) /
DEOK (3.37%) / DL (1.76%)	/ DPL
(2.55%) / Dominion (12.97%)	EKPC
(1.81%) / JCPL (3.92%) / ME (1.81%)	.95%)/
NEPTUNE* (0.24%) / OVEC (	
Replace Mount Storm 500 / PECO (5.39%) / PENELEC (1	.84%) /
b0492.7   kV breaker 55172   PEPCO (3.71%) / PPL (4.78%)	/ PSEG
(6.40%) / RE (0.27%)	
DFAX Allocation:	
AEC (5.01%) / AEP (4.39%)	APS
(9.26%) / BGE (4.43%) / DL (0	
DPL (6.91%) / Dominion (10.	,
JCPL (11.64%) / ME (2.949)	
NEPTUNE* (1.12%) / PECO (1	/
/ PEPCO (6.11%) / PPL (6.39	/
PSEG (15.86%) / RE (0.59	

<sup>\*</sup> Neptune Regional Transmission System, LLC

Load-Ratio Share Allocation:   AEC (1.67%) / AEP (13.94%) / APS     (5.64%) / ATSI (8.02%) / BGE (4.12%)     / ComEd (13.46%) / Dayton (2.12%) /   DEOK (3.37%) / DL (1.76%) / DPL     (2.55%) / Dominion (12.97%) / EKPC     (1.81%) / JCPL (3.92%) / ME (1.95%) /   NEPTUNE* (0.24%) / OVEC (0.07%)     NEPTUNE* (0.24%) / OVEC (0.07%)     PECO (5.39%) / PENELEC (1.84%) /   PEPCO (3.71%) / PPL (4.78%) / PSEG     (6.40%) / RE (0.27%)     DFAX Allocation:
(5.64%) / ATSI (8.02%) / BGE (4.12%)   / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%)   / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)
ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)
DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)
Color   Colo
(1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)
Replace Mount Storm 500 kV breaker H1172- 2
Replace Mount Storm   / PECO (5.39%) / PENELEC (1.84%) /   PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)
b0492.8   500 kV breaker H1172- 2   PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)
60492.8 2 (6.40%) / RE (0.27%)
(6.40%) / RE (0.27%)
DFAX Allocation:
AEC (5.01%) / AEP (4.39%) / APS
(9.26%) / BGE (4.43%) / DL (0.02%) /
DPL (6.91%) / Dominion (10.82%) /
JCPL (11.64%) / ME (2.94%) /
NEPTUNE* (1.12%) / PECO (14.51%)
/ PEPCO (6.11%) / PPL (6.39%) /
PSEG (15.86%) / RE (0.59%)
Load-Ratio Share Allocation:
AEC (1.67%) / AEP (13.94%) / APS
(5.64%) / ATSI (8.02%) / BGE (4.12%)
/ ComEd (13.46%) / Dayton (2.12%) /
DEOK (3.37%) / DL (1.76%) / DPL
(2.55%) / Dominion (12.97%) / EKPC
(1.81%) / JCPL (3.92%) / ME (1.95%) /
NEPTUNE* (0.24%) / OVEC (0.07%)
Replace Mount Storm / PECO (5.39%) / PENELEC (1.84%) /
b0492.9   500 kV breaker   PEPCO (3.71%) / PPL (4.78%) / PSEG
G2T550 (6.40%) / RE (0.27%)
DFAX Allocation:
AEC (5.01%) / AEP (4.39%) / APS
(9.26%) / BGE (4.43%) / DL (0.02%) /
DPL (6.91%) / Dominion (10.82%) /
JCPL (11.64%) / ME (2.94%) /
NEPTUNE* (1.12%) / PECO (14.51%)
/ PEPCO (6.11%) / PPL (6.39%) /
PSEG (15.86%) / RE (0.59%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Ira	Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s)				
		Load-Ratio Share Allocation:			
		AEC (1.67%) / AEP (13.94%) / APS			
		(5.64%) / ATSI (8.02%) / BGE (4.12%)			
		/ ComEd (13.46%) / Dayton (2.12%) /			
		DEOK (3.37%) / DL (1.76%) / DPL			
		(2.55%) / Dominion (12.97%) / EKPC			
		(1.81%) / JCPL (3.92%) / ME (1.95%) /			
		NEPTUNE* (0.24%) / OVEC (0.07%) /			
	Danlaga Maunt Starm	PECO (5.39%) / PENELEC (1.84%) /			
1.0402 10	Replace Mount Storm	PEPCO (3.71%) / PPL (4.78%) / PSÉG			
b0492.10	500 kV breaker G2T554	(6.40%) / RE (0.27%)			
		DFAX Allocation:			
		AEC (5.01%) / AEP (4.39%) / APS			
		(9.26%) / BGE (4.43%) / DL (0.02%) /			
		DPL (6.91%) / Dominion (10.82%) /			
		JCPL (11.64%) / ME (2.94%) /			
		NEPTUNE* (1.12%) / PECO (14.51%) /			
		PEPCO (6.11%) / PPL (6.39%) / PSEG			
		(15.86%) / RE (0.59%)			
		Load-Ratio Share Allocation:			
		AEC (1.67%) / AEP (13.94%) / APS			
		(5.64%) / ATSI (8.02%) / BGE (4.12%)			
		/ ComEd (13.46%) / Dayton (2.12%) /			
		DEOK (3.37%) / DL (1.76%) / DPL			
	Replace Mount Storm	(2.55%) / Dominion (12.97%) / EKPC			
		(1.81%)/JCPL (3.92%)/ME (1.95%)/			
		NEPTUNE* (0.24%) / OVEC (0.07%) /			
		PECO (5.39%) / PENELEC (1.84%) /			
1.0402 11	500 kV breaker	PEPCO (3.71%) / PPL (4.78%) / PSÉG			
b0492.11	G1T551	(6.40%) / RE (0.27%)			
		DFAX Allocation:			
		AEC (5.01%) / AEP (4.39%) / APS			
		(9.26%) / BGE (4.43%) / DL (0.02%) /			
		DPL (6.91%) / Dominion (10.82%) /			
		JCPL (11.64%) / ME (2.94%) /			
		NEPTUNE* (1.12%) / PECO (14.51%) / PERCO (6.11%) / PRICO (6.20%) / PECO			
		PEPCO (6.11%) / PPL (6.39%) / PSEG			
		(15.86%) / RE (0.59%)			

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required 11	ansmission Ennancements Ann	uai Revenue Requirer	1
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) / APS
			(5.64%) / ATSI (8.02%) / BGE
			(4.12%) / ComEd (13.46%) / Dayton
			(2.12%) / DEOK (3.37%) / DL
			(1.76%) / DPL (2.55%) / Dominion
			(12.97%) / EKPC (1.81%) / JCPL
	Upgrade nameplate rating		(3.92%) / ME (1.95%) / NEPTUNE*
	of Mount Storm 500 kV		(0.24%) / OVEC (0.07%) / PECO
	breakers 55472, 57272,		(5.39%) / PENELEC (1.84%) /
b0492.12	SX172, G3TSX1,		PEPCO (3.71%) / PPL (4.78%) /
00472.12	G1TH11, G3T572, and		PSEG (6.40%) / RE (0.27%)
	SX22		DFAX Allocation:
			AEC (5.01%) / AEP (4.39%) / APS
			(9.26%) / BGE (4.43%) / DL (0.02%)
			/ DPL (6.91%) / Dominion (10.82%) /
			JCPL (11.64%) / ME (2.94%) /
			NEPTUNE* (1.12%) / PECO
			(14.51%) / PEPCO (6.11%) / PPL
			(6.39%) / PSEG (15.86%) / RE
			(0.59%)
			AEC (1.67%) / AEP (13.94%) / APS
			(5.64%) / ATSI (8.02%) / BGE
	MAPP Project – install		(4.12%) / ComEd (13.46%) / Dayton
	new 500 kV transmission		(2.12%) / DEOK (3.37%) / DL
	from Possum Point to		(1.76%) / DPL (2.55%) / Dominion
b0512	Calvert Cliffs and install		(12.97%) / EKPC (1.81%) / JCPL
00312	a DC line from Calvert		(3.92%) / ME (1.95%) / NEPTUNE*
	Cliffs to Vienna and a DC		(0.24%) / OVEC (0.07%) / PECO
	line from Calvert Cliffs to		(5.39%) / PENELEC (1.84%) /
	Indian River		PEPCO (3.71%) / PPL (4.78%) /
			PSEG (6.40%) / RE (0.27%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

required 11		nnual Revenue Requirement Responsible Customer(s)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) / APS
		(5.64%) / ATSI (8.02%) / BGE
		(4.12%) / ComEd (13.46%) / Dayton
		(2.12%) / DEOK (3.37%) / DL
		(1.76%) / DPL (2.55%) / Dominion
		(12.97%) / EKPC (1.81%) / JCPL
		(3.92%) / ME (1.95%) / NEPTUNE*
	Advance n0716 (Ox -	(0.24%) / OVEC (0.07%) / PECO
	Replace 230 kV	(5.39%) / PENELEC (1.84%) /
b0512.5	breaker L242)	PEPCO (3.71%) / PPL (4.78%) /
	breaker E242)	PSEG (6.40%) / RE (0.27%)
		DFAX Allocation:
		AEC (3.94%) / APS (0.33%) / BGE
		(34.54%) / DPL (14.69%) / Dominion
		(0.30%) / JCPL (9.43%) / ME
		(2.16%) / NEPTUNE* (0.90%) /
		PECO (10.52%) / PEPCO (2.44%) /
		PPL (5.50%) / PSEG (14.71%) / RE
		(0.54%)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) / APS
		(5.64%) / ATSI (8.02%) / BGE
		(4.12%) / ComEd (13.46%) / Dayton
		(0.400() /DDOTT (0.000() /DT
		(2.12%) / DEOK (3.37%) / DL
		(1.76%) / DPL (2.55%) / Dominion
		(1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL
		(1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE*
	Advance n0717	(1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO
	Advance n0717	(1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE*
b0512.6	(Possum Point -	(1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO
b0512.6	(Possum Point - Replace 230 kV	(1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) /
b0512.6	(Possum Point -	(1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)
b0512.6	(Possum Point - Replace 230 kV	(1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)
b0512.6	(Possum Point - Replace 230 kV	(1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) DFAX Allocation: AEC (3.94%) / APS (0.33%) / BGE
b0512.6	(Possum Point - Replace 230 kV	(1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) DFAX Allocation: AEC (3.94%) / APS (0.33%) / BGE (34.54%) / DPL (14.69%) / Dominion
b0512.6	(Possum Point - Replace 230 kV	(1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) DFAX Allocation: AEC (3.94%) / APS (0.33%) / BGE (34.54%) / DPL (14.69%) / Dominion (0.30%) / JCPL (9.43%) / ME
b0512.6	(Possum Point - Replace 230 kV	(1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) DFAX Allocation: AEC (3.94%) / APS (0.33%) / BGE (34.54%) / DPL (14.69%) / Dominion (0.30%) / JCPL (9.43%) / ME (2.16%) / NEPTUNE* (0.90%) /
b0512.6	(Possum Point - Replace 230 kV	(1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) DFAX Allocation: AEC (3.94%) / APS (0.33%) / BGE (34.54%) / DPL (14.69%) / Dominion (0.30%) / JCPL (9.43%) / ME (2.16%) / NEPTUNE* (0.90%) / PECO (10.52%) / PEPCO (2.44%) /
b0512.6	(Possum Point - Replace 230 kV	(1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) DFAX Allocation: AEC (3.94%) / APS (0.33%) / BGE (34.54%) / DPL (14.69%) / Dominion (0.30%) / JCPL (9.43%) / ME (2.16%) / NEPTUNE* (0.90%) /

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Install dual primary protection schemes on Gosport lines 62 and 51 at b0583 the remote terminals Dominion (100%) (Chesapeake on the 62 line and Reeves Ave on the 51 line) Install a second 500/115 b0756 kV autotransformer at Dominion (100%) Chancellor 500 kV **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / Install two 500 kV EKPC (1.81%) / JCPL (3.92%) / b0756.1 breakers at Chancellor 500 ME (1.95%) / NEPTUNE\* kV (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)**DFAX Allocation:** Dominion (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required	Transmission Enhancements Ann	uai Kevenue Kequitement	Responsible Customer(s)
	Reconductor one mile of		
b0757	Chesapeake – Reeves		
	Avenue 115 kV line		Dominion (100%)
b0758	Install a second		
	Fredericksburg 230/115		
	kV autotransformer		Dominion (100%)
	Build 115 kV line from		
	Kitty Hawk to Colington		
b0760	115 kV (Colington on the		
00/00	existing line and Nag's		
	Head and Light House DP		
	on new line)		Dominion (100%)
	Install a second 230/115		
b0761	kV transformer at Possum		
	Point		Dominion (100%)
	Build a new Elko station		
b0762	and transfer load from		
00/02	Turner and Providence		
	Forge stations		Dominion (100%)
	Rebuild 17.5 miles of the		
b0763	line for a new summer		
	rating of 262 MVA		Dominion (100%)
	Increase the rating on 2.56		
	miles of the line between		
b0764	Greenwich and Thompson		
	Corner; new rating to be		
	257 MVA		Dominion (100%)
	Add a second Bull Run		
b0765	230/115 kV		
	autotransformer		Dominion (100%)
	Increase the rating of the		
1.0766	line between Loudoun and		
b0766	Cedar Grove to at least		
	150 MVA		Dominion (100%)
	Extend the line from Old		
b0767	Church – Chickahominy		
	230 kV		Dominion (100%)

Required 1	ransmission Enhancements Ann	iuai Revenue Requirement	Responsible Customer(s)
b0768	Loop line #251 Idylwood  – Arlington into the GIS sub		Dominion (100%)
b0769	Re-tension 15 miles of the line for a new summer rating of 216 MVA		Dominion (100%)
b0770	Add a second 230/115 kV autotransformer at Lanexa		Dominion (100%)
b0770.1	Replace Lanexa 115 kV breaker '8532'		Dominion (100%)
b0770.2	Replace Lanexa 115 kV breaker '9232'		Dominion (100%)
b0771	Build a parallel Chickahominy – Lanexa 230 kV line		Dominion (100%)
b0772	Install a second Elmont 230/115 kV autotransformer		Dominion (100%)
b0772.1	Replace Elmont 115 kV breaker '7392'		Dominion (100%)
b0774	Install a 33 MVAR capacitor at Bremo 115 kV		Dominion (100%)
b0775	Reconductor the Greenwich – Virginia Beach line to bring it up to a summer rating of 261 MVA; Reconductor the Greenwich – Amphibious Base line to bring it up to 291 MVA		Dominion (100%)

Required i	ransmission Enhancements Ani	nuai Revenue Requirement	t Responsible Customer(s)
b0776	Re-build Trowbridge – Winfall 115 kV		Dominion (100%)
b0777	Terminate the Thelma – Carolina 230 kV circuit into Lakeview 230 kV		Dominion (100%)
b0778	Install 29.7 MVAR capacitor at Lebanon 115 kV		Dominion (100%)
b0779	Build a new 230 kV line from Yorktown to Hayes but operate at 115 kV initially		Dominion (100%)
b0780	Reconductor Chesapeake  – Yadkin 115 kV line		Dominion (100%)
b0781	Reconductor and replace terminal equipment on line 17 and replace the wave trap on line 88		Dominion (100%)
b0782	Install a new 115 kV capacitor at Dupont Waynesboro substation		Dominion (100%)
b0784	Replace wave traps on North Anna to Ladysmith 500 kV		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b0785	Rebuild the Chase City – Crewe 115 kV line		(5.79%) Dominion (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required	Transmission Enhancements An	nual Revenue Requirement	Responsible Customer(s)
4.0=0.5	Reconductor the Moran		
b0786	DP – Crewe 115 kV		
	segment		Dominion (100%)
	Upgrade the Chase City –		
b0787	Twitty's Creek 115 kV		
	segment		Dominion (100%)
	Reconductor the line from		
b0788	Farmville – Pamplin 115		
	kV		Dominion (100%)
	Close switch 145T183 to		
	network the lines. Rebuild		
b0793	the section of the line #145		
	between Possum Point –		
	Minnieville DP 115 kV		Dominion (100%)
b0815	Replace Elmont 230 kV		
00813	breaker '22192'		Dominion (100%)
1.001.6	Replace Elmont 230 kV		,
b0816	breaker '21692'		Dominion (100%)
	Replace Elmont 230 kV		
b0817	breaker '200992'		Dominion (100%)
	Replace Elmont 230 kV		Dominion (10070)
b0818	breaker '2009T2032'		Dominion (100%)
	01Carc1 200712032		Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd (13.46%)
			/ Dayton (2.12%) / DEOK
			(3.37%) / DL (1.76%) / DPL
			(2.55%) / Dominion (12.97%) /
	At Mt. Storm, replace the		
b0837	existing MOD on the 500		EKPC (1.81%) / JCPL (3.92%) /
00037	kV side of the transformer		ME (1.95%) / NEPTUNE*
	with a circuit breaker		(0.24%) / OVEC (0.07%) /
			PECO (5.39%) / PENELEC
			(1.84%) / PEPCO (3.71%) / PPL
			(4.78%) / PSEG (6.40%) / RE
			(0.27%)
			DFAX Allocation:
			Dominion (100%)
			Dominion (10070)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Kequirea	Transmission Enhancements Annual Reve	nue Requirement Responsible Customer(s)
b0888	Replace Loudoun 230 kV Cap breaker 'SC352'	Dominion (100%)
b0892	Replace Chesapeake 115 kV breaker SX522	Dominion (100%)
b0893	Replace Chesapeake 115 kV breaker T202	Dominion (100%)
b0894	Replace Possum Point 115 kV breaker SX-32	Dominion (100%)
b0895	Replace Possum Point 115 kV breaker L92-1	Dominion (100%)
b0896	Replace Possum Point 115 kV breaker L92-2	Dominion (100%)
b0897	Replace Suffolk 115 kV breaker T202	Dominion (100%)
b0898	Replace Peninsula 115 kV breaker SC202	Dominion (100%)
b0921	Reconductor Brambleton - Cochran Mill 230 kV line with 201 Yukon conductor	Dominion (100%)
b0923	Install 50-100 MVAR variable reactor banks at Carson 230 kV	Dominion (100%)
b0924	Install 50-100 MVAR variable reactor banks at Dooms 230 kV	Dominion (100%)
b0925	Install 50-100 MVAR variable reactor banks at Garrisonville 230 kV	Dominion (100%)
b0926	Install 50-100 MVAR variable reactor banks at Hamilton 230 kV	Dominion (100%)
b0927	Install 50-100 MVAR variable reactor banks at Yadkin 230 kV	Dominion (100%)

kequirea i	ransmission Ennancements And	iuai Revenue Requirement	Responsible Customer(s)
	Install 50-100 MVAR		
	variable reactor banks at		
	Carolina, Dooms,		
b0928	Everetts, Idylwood, N.		
	Alexandria, N. Anna,		
	Suffolk and Valley 230		
	kV substations		Dominion (100%)
b1056	Build a 2nd Shawboro –		
01030	Elizabeth City 230 kV line		Dominion (100%)
	Add a third 230/115 kV		
b1058	transformer at Suffolk		
	substation		Dominion (100%)
	Replace Suffolk 115 kV		
b1058.1	breaker 'T122' with a 40		
	kA breaker		Dominion (100%)
	Convert Suffolk 115 kV		
	straight bus to a ring bus		
b1058.2	for the three 230/115 kV		
	transformers and three 115		
	kV lines		Dominion (100%)
	Rebuild the existing 115		
	kV corridor between		
b1071	Landstown - Va Beach		
010/1	Substation for a double		
	circuit arrangement (230		
	kV & 115 kV)		Dominion (100%)
	Replace existing North		
b1076	Anna 500-230 kV		
210,0	transformer with larger		
	unit		Dominion (100%)
4 4 4 4 4 4	Replace Cannon Branch		
b1087	230-115 kV with larger		<b>-</b>
	transformer		Dominion (100%)

Required	Transmission Ennancements An	nuai Revenue Requirement	Responsible Customer(s)
	Build new Radnor Heights		
	Sub, add new underground		
b1088	circuit from Ballston -		
	Radnor Heights, Tap the		
01000	Glebe - Davis line and		
	create circuits from Davis		
	- Radnor Heights and		
	Glebe - Radnor Heights		Dominion (100%)
	Install 2nd Burke to		
b1089	Sideburn 230 kV		
	underground cable		Dominion (100%)
	Install a 150 MVAR 230		
b1090	kV capacitor and one 230		
	kV breaker at Northwest		Dominion (100%)
	Reconductor Chase City		
b1095	115 kV bus and add a new		
	tie breaker		Dominion (100%)
	Construct 10 mile double		
b1096	ckt. 230 kV tower line		
01030	from Loudoun to		
	Middleburg		Dominion (100%)
h1102	Replace Bremo 115 kV		
b1102	breaker '9122'		Dominion (100%)
1 4 4 0 7	Replace Bremo 115 kV		
b1103	breaker '822'		Dominion (100%)
	Build a 4-6 mile long 230		2011111011 (10070)
	kV line from Hopewell to		
b1172	Bull Hill (Ft Lee) and		
	install a 230-115 kV Tx		Dominion (100%)
ı	1 1111 11 11 11 11 11 11 11 11 11 11 11	·	20111111011 (100/0)

Required 1	ransmission Enhancements Ann	iuai Revenue Requirement	Responsible Customer(s)
			<b>Load-Ratio Share Allocation:</b>
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd (13.46%)
			/ Dayton (2.12%) / DEOK
			(3.37%) / DL (1.76%) / DPL
	Build new Brambleton		(2.55%) / Dominion (12.97%) /
	500 kV three breaker ring		EKPC (1.81%) / JCPL (3.92%) /
b1188	bus connected to the		ME (1.95%) / NEPTUNE*
	Loudoun to Pleasant View		(0.24%) / OVEC (0.07%) /
	500 kV line		PECO (5.39%) / PENELEC
			(1.84%) / PEPCO (3.71%) / PPL
			(4.78%) / PSEG (6.40%) / RE
			(0.27%)
		_	
			DFAX Allocation:
			Dominion (100%)
	Replace Loudoun 230 kV		
b1188.1	breaker '200852' with a		
	63 kA breaker		Dominion (100%)
	Replace Loudoun 230 kV		
b1188.2	breaker '2008T2094' with		
	a 63 kA breaker		Dominion (100%)
	Replace Loudoun 230 kV		
b1188.3	breaker '204552' with a		
	63 kA breaker		Dominion (100%)
	Replace Loudoun 230 kV		
b1188.4	breaker '209452' with a		
	63 kA breaker		Dominion (100%)
	Replace Loudoun 230 kV		
b1188.5	breaker 'WT2045' with a		
	63 kA breaker		Dominion (100%)
	Install one 500/230 kV		AEC (0.22%) / BGE (7.90%) /
b1188.6	transformer and two 230		DPL (0.59%) / Dominion
0.86110	kV breakers at		(75.58%) / ME (0.22%) / PECO
	Brambleton		(0.73%) / PEPCO (14.76%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required	Transmission Enhancements Annual Revenue Requirement	Responsible Customer(s)
b1224	Install 2nd Clover 500/230 kV transformer and a 150 MVAr capacitor	BGE (7.56%) / DPL (1.03%) / Dominion (78.21%) / ME (0.77%) / PECO (1.39%) / PEPCO (11.04%)
b1225	Replace Yorktown 115 kV breaker 'L982-1'	Dominion (100%)
b1226	Replace Yorktown 115 kV breaker 'L982-2'	Dominion (100%)
b1279	Line #69 Uprate – Increase rating on Locks – Purdy 115 kV to serve additional load at the Reams delivery point	Dominion (100%)
b1306	Reconfigure 115 kV bus at Endless Caverns substation such that the existing two 230/115 kV transformers at Endless Caverns operate in	Dominion (100%)
b1307	Install a 2nd 230/115 kV transformer at Northern Neck Substation	Dominion (100%)
b1308	Improve LSE's power factor factor in zone to .973 PF, adjust LTC's at Gordonsville and Remington, move existing shunt capacitor banks	Dominion (100%)
b1309	Install a 230 kV line from Lakeside to Northwest utilizing the idle line and 60 line ROW's and reconductor the existing 221 line between Elmont and Northwest	Dominion (100%)

required	Transmission Emianechicus Am	iuai Nevenue Nequilement	responsible cusionici(s)
	Install a 115 kV breaker at Broadnax substation on the		
b1310	South Hill side of		
	Broadnax		Dominion (100%)
	Install a 230 kV 3000 amp		
b1311	breaker at Cranes Corner		
01311	substation to sectionalize		
	the 2104 line into two lines		Dominion (100%)
	Loop the 2054 line in and		
	out of Hollymeade and		
b1312	place a 230 kV breaker at		
01312	Hollymeade. This creates		
	two lines: Charlottesville -		
	Hollymeade		Dominion (100%)
	Resag wire to 125C from		
	Chesterfield – Shockoe		
b1313	and replace line switch		
01313	1799 with 1200 amp		
	switch. The new rating		
	would be 231 MVA		Dominion (100%)
	Rebuild the 6.8 mile line		
b1314	#100 from Chesterfield to		
01314	Harrowgate 115 kV for a		
	minimum 300 MBA rating		Dominion (100%)

Required	Transmission Enhancements An	nual Revenue Requirement	Responsible Customer(s)
	Convert line #64		
	Trowbridge to Winfall to		
b1315	230 kV and install a 230		
	kV capacitor bank at		
	Winfall		Dominion (100%)
	Rebuild 10.7 miles of 115		
b1316	kV line #80, Battleboro –		
	Heartsease DP		Dominion (100%)
	LSE load power factor on		
	the #47 line will need to		
b1317	meet MOA requirements		
01317	of .973 in 2015 to further		
	resolve this issue through		
	at least 2019		Dominion (100%)
	Install a 115 kV bus tie		
b1318	breaker at Acca substation		
01318	between the Line #60 and		
	Line #95 breakers		Dominion (100%)
	Resag line #222 to 150 C		
	and upgrade any		
b1319	associated equipment to a		
01319	2000A rating to achieve a		
	706 MVA summer line		
	rating		Dominion (100%)
	Install a 230 kV, 150		
b1320	MVAR capacitor bank at		
	Southwest substation		Dominion (100%)
	Build a new 230 kV line		
	North Anna – Oak Green		
b1321	and install a 224 MVA		
	230/115 kV transformer at		BGE (0.85%) / Dominion
	Oak Green		(97.96%) / PEPCO (1.19%)
	Rebuild the 39 Line		
b1322	(Dooms – Sherwood) and		
01322	the 91 Line (Sherwood –		
	Bremo)		Dominion (100%)
	Install a 224 MVA		
	230/115 kV transformer at		
b1323	Staunton. Rebuild the 115		
	kV line #43 section		
	Staunton - Verona		Dominion (100%)

Required	I ransmission Enhancements Ann	iuai Revenue Requirement	Responsible Customer(s)
	Install a 115 kV capacitor		
b1324	bank at Oak Ridge. Install		
	a capacitor bank at New		
01321	Bohemia. Upgrade		
	230/34.5 kV transformer		
	#3 at Kings Fork		Dominion (100%)
	Rebuild 15 miles of line		
b1325	#2020 Winfall – Elizabeth		
01323	City with a minimum 900		
	MVA rating		Dominion (100%)
	Install a third 168 MVA		
	230/115 kV transformer at		
b1326	Kitty Hawk with a		
01320	normally open 230 kV		
	breaker and a low side 115		
	kV breaker		Dominion (100%)
	Rebuild the 20 mile		
b1327	section of line #22		
01327	between Kerr Dam –		
	Eatons Ferry substations		Dominion (100%)
	Uprate the 3.63 mile line		
	section between Possum		
b1328	and Dumfries substations,		AEC (0.66%) / APS (3.59%) /
	replace the 1600 amp		DPL (0.91%) / Dominion
	wave trap at Possum Point		(92.94%) / PECO (1.90%)
	Install line-tie breakers at		
b1329	Sterling Park substation		
	and BECO substation		Dominion (100%)
	Install a five breaker ring		
	bus at the expanded Dulles		
b1330	substation to accommodate		
01330	the existing Dulles		
	Arrangement and support		
	the Metrorail		Dominion (100%)
	Build a 230 kV line from		
b1331	Shawboro to Aydlett tap		
01331	and connect Aydlett to the		
	new line		Dominion (100%)
h1222	Build Cannon Branch to		
b1332	Nokesville 230 kV line		Dominion (100%)

Required T	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b1333	Advance n1728 (Replace Possum Point 230 kV breaker H9T237 with an 80 kA breaker)		Dominion (100%)
b1334	Advance n1748 (Replace Ox 230 kV breaker 22042 with a 63 kA breaker)		Dominion (100%)
b1335	Advance n1749 (Replace Ox 230 kV breaker 220T2603 with a 63 kA breaker)		Dominion (100%)
b1336	Advance n1750 (Replace Ox 230 kV breaker 24842 with a 63 kA breaker)		Dominion (100%)
b1337	Advance n1751 (Replace Ox 230 kV breaker 248T2013 with a 63 kA		Dominion (1009/)
b1503.1	breaker) Loop Line #2095 in and out of Waxpool approximately 1.5 miles		Dominion (100%)  Dominion (100%)
b1503.2	Construct a new 230 kV line from Brambleton to BECO Substation of approximately 11 miles with approximately 10 miles utilizing the vacant side of existing Line #2095 structures		Dominion (100%)
b1503.3	Install a one 230 kV breaker, Future 230 kV ring-bus at Waxpool Substation		Dominion (100%)
b1503.4	The new Brambleton - BECO line will feed Shellhorn Substation load and Greenway TX's #2&3 load		Dominion (100%)
	ivau		

Required 1	ransmission Ennancements Ani	nual Revenue Requirement	Responsible Customer(s)
	At Gainesville Substation,		
b1506.1	create two 115 kV		
	straight-buses with a		
	normally open tie-breaker		Dominion (100%)
	Upgrade Line 124 (radial		
	from Loudoun) to a		
	minimum continuous		
b1506.2	rating of 500 MVA and		
	network it into the 115 kV		
	bus feeding NOVEC's DP		
	at Gainesville		Dominion (100%)
	Install two additional 230		
	kV breakers in the ring at		
	Gainesville (may require		
b1506.3	substation expansion) to		
	accommodate conversion		
	of NOVEC's Gainesville		
	to Wheeler line		Dominion (100%)
	Convert NOVEC's		
	Gainesville-Wheeler line		
	from 115 kV to 230 kV		
b1506.4	(will require Gainsville		
01300.4	DP Upgrade replacement		
	of three transformers total		
	at Atlantic and Wheeler		
	Substations)		Dominion (100%)

Required 1	ransmission Enhancements Anr	iuai Revenue Requirement	Responsible Customer(s)
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd (13.46%)
			/ Dayton (2.12%) / DEOK
			(3.37%) / DL (1.76%) / DPL
			(2.55%) / Dominion (12.97%) /
			EKPC (1.81%) / JCPL (3.92%) /
1.1505	Rebuild Mt Storm –		ME (1.95%) / NEPTUNE*
b1507	Doubs 500 kV		(0.24%) / OVEC (0.07%) /
			PECO (5.39%) / PENELEC
			(1.84%) / PEPCO (3.71%) / PPL
			(4.78%) / PSEG (6.40%) / RE
			(0.27%)
			DFAX Allocation:
			APS (20.37%) / BGE (12.89%) /
			Dominion (53.52%) / PEPCO
			(13.22%)
	Mt Storm - Doubs 500 kV		
b1507.1	transmission line rebuild		APS (20.37%) / BGE (12.89%) /
01307.1	in both West Virginia and		Dominion (53.52%) / PEPCO
	Virginia		(13.22%)
	Build a 2nd 230 kV Line		
b1508.1	Harrisonburg to Endless		APS (37.05%) / Dominion
	Caverns		(62.95%)
b1508.2	Install a 3rd 230-115 kV		APS (37.05%) / Dominion
01300.2	Tx at Endless Caverns		(62.95%)
	Upgrade a 115 kV shunt		
b1508.3	capacitor banks at Merck		APS (37.05%) / Dominion
	and Edinburg		(62.95%)
	Advance n1752 (Replace		
b1536	OX 230 breaker 24342		D (1000)
	with an (63 kA breaker)		Dominion (100%)
	Advance n1753 (Replace		
b1537	OX 230 breaker		
	243T2097 with an 63 kA		D :: (1000/)
	breaker)		Dominion (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

required.	Transmission Enhancements An	nual Revenue Requirement Responsible Customer(s)
b1538	Replace Loudoun 230 kV breaker '29552'	Dominion (100%)
b1571	Replace Acca 115 kV breaker '6072' with 40 kA	Dominion (100%)
b1647	Upgrade the name plate rating at Morrisville 500 kV breaker 'H1T573' with 50 kA breaker	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b1648	Upgrade name plate rating at Morrisville 500 kV breaker 'H2T545' with 50 kA breaker	Dominion (100%)  Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
		DFAX Allocation: Dominion (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

required	Transmission Enhancements An	muai Revenue Requirement Responsible Customer(s)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd (13.46%)
		/ Dayton (2.12%) / DEOK
		(3.37%) / DL (1.76%) / DPL
		(2.55%) / Dominion (12.97%) /
	Replace Morrisville 500	EKPC (1.81%) / JCPL (3.92%) /
b1649	kV breaker 'H1T580' with	ME (1.95%) / NEPTUNE*
	50 kA breaker	(0.24%) / OVEC (0.07%) /
		PECO (5.39%) / PENELEC
		(1.84%) / PEPCO (3.71%) / PPL
		(4.78%) / PSEG (6.40%) / RE
		(0.27%)
		DFAX Allocation:
		Drax Anocation: Dominion (100%)
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd (13.46%)
		/ Dayton (2.12%) / DEOK
		(3.37%) / DL (1.76%) / DPL
		(2.55%) / Dominion (12.97%) /
	Replace Morrisville 500	EKPC (1.81%) / JCPL (3.92%) /
b1650	kV breaker 'H2T569' with	ME (1.95%) / NEPTUNE*
	50 kA breaker	(0.24%) / OVEC (0.07%) /
		PECO (5.39%) / PENELEC
		(1.84%) / PEPCO (3.71%) / PPL
		(4.78%) / PSEG (6.40%) / RE
		(0.27%)
		(3.2773)
		DFAX Allocation:
		Dominion (100%)
	Replace Loudoun 230 kV	
b1651	breaker '295T2030' with	
	63 kA breaker	Dominion (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required	Transmission Enhancements An	nuai Kevenue Kequirement	Responsible Customer(s)
	Replace Ox 230 kV		
b1652	breaker '209742' with 63		
	kA breaker		Dominion (100%)
	Replace Clifton 230 kV		
b1653	breaker '26582' with 63		
	kA breaker		Dominion (100%)
	Replace Clifton 230 kV		
b1654	breaker '26682' with 63		
	kA breaker		Dominion (100%)
	Replace Clifton 230 kV		
b1655	breaker '205182' with 63		
	kA breaker		Dominion (100%)
	Replace Clifton 230 kV		
b1656	breaker '265T266' with 63		
	kA breaker		Dominion (100%)
	Replace Clifton 230 kV		<u> </u>
b1657	breaker '2051T2063' with		
	63 kA breaker		Dominion (100%)
			<b>Load-Ratio Share Allocation:</b>
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd (13.46%)
			/ Dayton (2.12%) / DEOK
			(3.37%) / DL (1.76%) / DPL
			(2.55%) / Dominion (12.97%) /
	Rebuild		EKPC (1.81%) / JCPL (3.92%) /
b1694	Loudoun - Brambleton		ME (1.95%) / NEPTUNE*
	500 kV		(0.24%) / OVEC (0.07%) / PECO
			(5.39%) / PENELEC (1.84%) /
			PEPCO (3.71%) / PPL (4.78%) /
			PSEG (6.40%) / RE (0.27%)
		_	DFAX Allocation:
			BGE (13.48%) / Dominion
			(73.11%) / PEPCO (13.41%)
			AEC (0.46%) / APS (4.18%) /
	Install a breaker and a half		BGE (2.02%) / DPL (0.80%) /
	scheme with a minimum		Dominion (88.45%) / JCPL
b1696	of eight 230 kV breakers		(0.64%) / ME (0.50%) /
	for five existing lines at		NEPTUNE* (0.06%) / PECO
	Idylwood 230 kV		(1.55%) / PEPCO (1.34%)
			(1.33/0) / FEFCO (1.3470)

<sup>\*</sup> Neptune Regional Transmission System, LLC

required 1	Tarismission Emancements Am	1 1
		AEC (1.35%) / APS (15.65%) /
	Build a 2nd	BGE (10.53%) / DPL (2.59%) /
	Clark - Idylwood 230 kV	Dominion (46.97%) / JCPL
b1697	line and install 230 kV	(2.36%) / ME (1.91%) /
	gas-hybrid breakers at	NEPTUNE* (0.23%) / PECO
	Clark	(4.48%) / PEPCO (11.23%) /
		PSEG (2.59%) / RE (0.11%)
	Install a 2nd 500/220 IsV	APS (4.21%) / BGE (13.28%) /
b1698	Install a 2nd 500/230 kV transformer at Brambleton	DPL (1.09%) / Dominion
	transformer at Brambleton	(59.38%) / PEPCO (22.04%)
		Load-Ratio Share Allocation:
	Install a 500 kV breaker at Brambleton	AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd (13.46%)
		/ Dayton (2.12%) / DEOK
		(3.37%) / DL (1.76%) / DPL
		(2.55%) / Dominion (12.97%) /
		EKPC (1.81%) / JCPL (3.92%) /
b1698.1		ME (1.95%) / NEPTUNE*
		(0.24%) / OVEC (0.07%) /
		PECO (5.39%) / PENELEC
		(1.84%) / PEPCO (3.71%) / PPL
		(4.78%) / PSEG (6.40%) / RE
		(0.27%)
		DFAX Allocation:
		Dominion (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

required 1	Taristilission Enhancements Amitua	ii ixevenue ixequirement	responsible customer(s)
b1698.6	Replace Brambleton 230		
01096.0	kV breaker '2094T2095'		Dominion (100%)
	Reconfigure Line #203 to		
	feed Edwards Ferry sub		
b1699	radial from Pleasant View		
01099	230 kV and install new		
	breaker bay at Pleasant		
	View Sub		Dominion (100%)
	Install a 230/115 kV		
	transformer at the new		
b1700	Liberty substation to		
	relieve Gainesville		
	Transformer #3		Dominion (100%)
	Reconductor line #2104		APS (8.66%) / BGE (10.95%) /
b1701	(Fredericksburg - Cranes		Dominion (63.30%) / PEPCO
	Corner 230 kV)		(17.09%)
b1724	Install a 2nd 138/115 kV		
01/24	transformer at Edinburg		Dominion (100%)
	Replace the 115/34.5 kV		
b1728	transformer #1 at Hickory		
01/28	with a 230/34.5 kV		
	transformer		Dominion (100%)
	Add 4 breaker ring bus at		
	Burton 115 kV substation		
	and construct a 115 kV		
b1729	line approximately 3.5		
	miles from Oakwood 115		
	kV substation to Burton		
	115 kV substation		Dominion (100%)

Required	I ransmission Enhancements Ani	nual Revenue Requirement	Responsible Customer(s)
b1730	Install a 230/115 kV		
	transformer at a new		
	Liberty substation		Dominion (100%)
	Uprate or rebuild Four		
	Rivers – Kings Dominion		
b1731	115 kV line or Install		
01/31	capacitors or convert load		
	from 115 kV system to		
	230 kV system		Dominion (100%)
	Split Wharton 115 kV		
	capacitor bank into two		
	smaller units and add		
	additional reactive support		
b1790	in area by correcting		
	power factor at Pantego		
	115 kV DP and FivePoints		
	115 kV DP to minimum of		
	0.973		Dominion (100%)
	Wreck and rebuild 2.1		
b1791	mile section of Line #11		APS (5.83%) / BGE (6.25%) /
01/71	section between		Dominion (78.38%) / PEPCO
	Gordonsville and Somerset		(9.54%)
	Rebuild line #33 Halifax		
b1792	to Chase City, 26 miles.		
01/72	Install 230 kV 4 breaker		
	ring bus		Dominion (100%)
	Wreck and rebuild		
	remaining section of Line		
b1793	#22, 19.5 miles and		
	replace two pole H frame		
	construction built in 1930		Dominion (100%)
	Split 230 kV Line #2056		
	(Hornertown - Rocky		
	Mount) and double tap line		
b1794	to Battleboro Substation.		
01/94	Expand station, install a		
	230 kV 3 breaker ring bus		
	and install a 230/115 kV		
	transformer		Dominion (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Reconductor segment of Line #54 (Carolina to b1795 Woodland 115 kV) to a minimum of 300 MVA Dominion (100%) Install 115 kV 25 MVAR b1796 capacitor bank at Kitty **Hawk Substation** Dominion (100%) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE\* Wreck and rebuild 7 miles (0.24%) / OVEC (0.07%) / PECO of the Dominion owned b1797 (5.39%) / PENELEC (1.84%) / section of Cloverdale -PEPCO (3.71%) / PPL (4.78%) / Lexington 500 kV PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** AEP (1.27%) / APS (24.46%) / ATSI (0.69%) / BGE (31.13%) / Dayton (0.27%) / DEOK (0.66%) / Dominion (1.92%) / EKPC (0.38%) / PEPCO (39.22%) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion Build a 450 MVAR SVC (12.97%) / EKPC (1.81%) / JCPL and 300 MVAR switched (3.92%) / ME (1.95%) / NEPTUNE\* b1798 shunt at Loudoun 500 kV (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** BGE (7.44%) / Dominion (80.66%) /

(11.90%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / Build 150 MVAR ME (1.95%) / NEPTUNE\* b1799 Switched Shunt at (0.24%) / OVEC (0.07%) / PECO Pleasant View 500 kV (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** APS (4.69%) / DPL (1.08%) / Dominion (90.77%) / ME (1.15%) / PEPCO (2.31%) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / Install a 250 MVAR EKPC (1.81%) / JCPL (3.92%) / b1805 SVC at the existing Mt. ME (1.95%) / NEPTUNE\* Storm 500 kV substation (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** APS (49.03%) / BGE (17.87%) / PEPCO (33.10%) Replace Brambleton 230 b1809 kV Breaker '22702' Dominion (100%) Replace Brambleton 230 b1810 kV Breaker '227T2094' Dominion (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required I	ransmission Enhancements A	nnual Revenue Requiremen	t Responsible Customer(s)
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd (13.46%)
			/ Dayton (2.12%) / DEOK
			(3.37%) / DL (1.76%) / DPL
	Surry to Skiffes Creek		(2.55%) / Dominion (12.97%) /
b1905.1	500 kV Line (7 miles		EKPC (1.81%) / JCPL (3.92%) /
01703.1	overhead)		ME (1.95%) / NEPTUNE*
	overnead)		(0.24%) / OVEC (0.07%) / PECO
			(5.39%) / PENELEC (1.84%) /
			PEPCO (3.71%) / PPL (4.78%) /
			PSEG (6.40%) / RE (0.27%)
			DFAX Allocation:
			Dominion (100%)
	Surry 500 kV Station Work		Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd (13.46%)
			/ Dayton (2.12%) / DEOK
			(3.37%) / DL (1.76%) / DPL
			(2.55%) / Dominion (12.97%) /
b1905.2			EKPC (1.81%) / JCPL (3.92%) /
			ME (1.95%) / NEPTUNE*
			(0.24%) / OVEC (0.07%) / PECO
			(5.39%) / PENELEC (1.84%) /
			PEPCO (3.71%) / PPL (4.78%) /
			PSEG (6.40%) / RE (0.27%)
			DFAX Allocation:
			Dominion (100%)
	Skiffes Creek 500-230		,
b1905.3	kV Tx and Switching		Dominion (99.84%) / PEPCO
	Station		(0.16%)
4 4 0 0 7	New Skiffes Creek -		Dominion (99.84%) / PEPCO
b1905.4	Whealton 230 kV line		(0.16%)
	Whealton 230 kV		Dominion (99.84%) / PEPCO
b1905.5	breakers		(0.16%)
Ļ	212411010		(0.10/0)

<sup>\*</sup> Neptune Regional Transmission System, LLC

required 1	ransmission enhancements A	initial Revenue Requirement Responsible Customer(s)
b1905.6	Yorktown 230 kV work	Dominion (99.84%) / PEPCO (0.16%)
b1905.7	Lanexa 115 kV work	Dominion (99.84%) / PEPCO (0.16%)
b1905.8	Surry 230 kV work	Dominion (99.84%) / PEPCO (0.16%)
b1905.9	Kings Mill, Peninmen, Toano, Waller, Warwick	Dominion (99.84%) / PEPCO (0.16%)
b1906.1	At Yadkin 500 kV, install six 500 kV breakers	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
b1906.2	Install a 2nd 230/115 kV TX at Yadkin	Dominion (100%)
b1906.3	Install a 2nd 230/115 kV TX at Chesapeake	Dominion (100%)
b1906.4	Uprate Yadkin – Chesapeake 115 kV	Dominion (100%)
b1906.5	Install a third 500/230 kV TX at Yadkin	Dominion (100%)
b1907	Install a 3rd 500/230 kV TX at Clover	APS (5.83%) / BGE (4.74%) / Dominion (81.79%) / PEPCO (7.64%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

required	Transmission Emancements Anne	ai Revenue Requirement Responsible Customer(s)
b1908	Rebuild Lexington – Dooms 500 kV	Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)
		DFAX Allocation: BGE (10.84%) / Dominion (70.07%) / EKPC (4.82%) / PEPCO (14.27%)
b1909	Uprate Bremo – Midlothian 230 kV to its maximum operating temperature	APS (6.31%) / BGE (3.81%) / Dominion (81. 90%) / PEPCO (7.98%)
b1910	Build a Suffolk – Yadkin 230 kV line (14 miles) and install 4 breakers	Dominion (100%)
b1911	Add a second Valley 500/230 kV TX	APS (14.85%) / BGE (3.10%) / Dominion (74.12%) / PEPCO (7.93%)
b1912	Install a 500 MVAR SVC at Landstown 230 kV	DEOK (0.46%) / Dominion (99.54%)
b2053	Rebuild 28 mile line	AEP (100%)
b2125	Install four additional 230 kV 100 MVAR variable shunt reactor banks at Clifton, Gallows Road, Garrisonville, and Virginia Hills substations	Dominion (100%)
b2126	Install two additional 230 kV 100 MVAR variable shunt reactor banks at Churchland and Shawboro substations	Dominion (100%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

Required	Transmission Enhancements An	nual Revenue Requirement	Responsible Customer(s)
	Add a motor to an existing		
b2181	switch at Prince George to		
	allow for Sectionalizing		
	scheme for line #2124 and		
	allow for Brickhouse DP		
	to be re-energized from the		
	115 kV source		Dominion (100%)
	Install 230 kV 4-breaker		
	ring at Enterprise 230 kV		
b2182	to isolate load from		
	transmission system when		
	substation initially built		Dominion (100%)
	Add a motor to an existing		
b2183	switch at Keene Mill to		
02183	allow for a sectionalizing		
	scheme		Dominion (100%)
	Install a 230 kV breaker at		
	Tarboro to split line #229.		
b2184	Each will feed an		
02184	autotransformer at		
	Tarboro. Install switches		
	on each autotransformer		Dominion (100%)
	Uprate Line #69 segment		
	Reams DP to Purdy (19		
b2185	miles) from 41 MVA to		
02103	162 MVA by replacing 5		
	structures and re-sagging		
	the line from 50C to 75C		Dominion (100%)
	Install a 2nd 230-115 kV		
	transformer at Earleys		
	connected to the existing		
b2186	115 kV and 230 kV ring		
	busses. Add a 115 kV		
	breaker and 230 kV		
	breaker to the ring busses		Dominion (100%)
	Install 4 - 230 kV breakers		
b2187	at Shellhorn 230 kV to		
	isolate load		Dominion (100%)

#### SCHEDULE 12 – APPENDIX A

#### (2) Baltimore Gas and Electric Company

Required I	ransmission Enhancements Ai	nnual Revenue Requirement	Responsible Customer(s)
	Install a 115 kV tie		
b2219	breaker at Wagner to		
	create a separation from		
	line 110535 and		
	transformer 110-2		BGE (100%)
b2220	Install four 115 kV		
02220	breakers at Chestnut Hill		BGE (100%)
	Install an SPS to trip		
b2221	approximately 19 MW		
02221	load at Green St. and		
	Concord		BGE (100%)
	Install a 230/115 kV		
	transformer at Raphael		
	Rd and construct		
	approximately 3 miles of		
b2307	115 kV line from		
	Raphael Rd. to		
	Joppatowne. Construct a		
	115 kV three breaker		
	ring at Joppatowne		BGE (100%)
	Build approximately 3		
	miles of 115 kV		
	underground line from		
	Bestgate tap to Waugh		
b2308	Chapel. Create two		
	breaker bay at Waugh		
	Chapel to accommodate		
	the new underground		
	circuit		BGE (100%)
	Build a new Camp Small		
b2396	115 kV station and install		
	30 MVAR capacitor		BGE (100%)

## **Baltimore Gas and Electric Company (cont.)**

Required 1	ransmission Enhancements Anni	uai Revenue Requirement	Responsible Customer(s)
	Install a tie breaker at		
b2396.1	Mays Chapel 115 kV		
	substation		BGE (100%)
	Upgrade the Riverside		
	115 kV substation strain		
	bus conductors on		
	circuits 115012 and		
b2567	115011 with double		
	bundled 1272 ACSR to		
	achieve ratings of		
	491/577 MVA SN/SE on		
	both transformer leads		BGE (100%)
	Reconductor Northwest –		
	Northwest #2 115 kV		
b2568	110574 substation tie		
02300	circuit with 2167 ACSR		
	to achieve ratings of		
	400/462 MVA SN/SE		BGE (100%)
	Conastone 230 kV		
	substation tie-in work		(5.150 () ( ) (0.100 () (
	(install a new circuit		AEP (6.46%) / APS (8.74%) /
b2752.6	breaker at Conastone		BGE (19.74%) / ComEd (2.16%)
	230 kV and upgrade any		/ Dayton (0.59%) / DEOK
	required terminal		(1.02%) / DL (0.01%) /
	equipment to terminate		Dominion (39.95%) / EKPC
	the new circuit)		(0.45%) / PEPCO (20.88%)
	Reconductor/Rebuild the		AEP (6.46%) / APS (8.74%) /
	two Conastone –		BGE (19.74%) / ComEd (2.16%)
b2752.7	Northwest 230 kV lines		/ Dayton (0.59%) / DEOK
	and upgrade terminal		(1.02%) / DL (0.01%) /
	equipment on both ends		Dominion (39.95%) / EKPC
	1 1		(0.45%) / PEPCO (20.88%)
	Replace the Conastone		
b2752.8	230 kV '2322 B5'		
	breaker with a 63 kA		DCE (1000/)
	breaker		BGE (100%)

## **Baltimore Gas and Electric Company (cont.)**

		T	responsible Edistorner(s)
b2752.9	Replace the Conastone 230 kV '2322 B6' breaker with a 63 kA breaker		BGE (100%)
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd (13.46%)
	Upgrade substation equipment at Conastone 500 kV to increase facility rating to 2826 MVA normal and 3525 MVA emergency		/ Dayton (2.12%) / DEOK
			(3.37%) / DL (1.76%) / DPL
			(2.55%) / Dominion (12.97%) /
			EKPC (1.81%) / JCPL (3.92%) /
			ME (1.95%) / NEPTUNE*
1.07(( 1			(0.24%) / OVEC (0.07%) / PECO
b2766.1			(5.39%) / PENELEC (1.84%) /
			PEPCO (3.71%) / PPL (4.78%) /
			PSEG (6.40%) / RE (0.27%)
			DFAX Allocation:
			AEC (0.52%) / APS (8.38%) /
			ATSI (2.54%) / BGE (17.96%) /
			DPL (2.72%) / JCPL (12.73%) /
			NEPTUNE* (1.39%) / PEPCO
			(26.39%) / PSEG (26.35%) / RE
			(1.02%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

## **Baltimore Gas and Electric Company (cont.)**

Required I	ransmission Enhancements Ai	nnual Revenue Requirement	Responsible Customer(s)
b2816	Re-connect the Crane – Windy Edge 110591 & 110592 115 kV circuits into the Northeast Substation with the addition of a new 115 kV 3-breaker bay		BGE (100%)
b2992.1	Reconductor the Conastone to Graceton 230 kV 2323 & 2324 circuits. Replace 7 disconnect switches at Conastone substation		AEP (2.25%) / APS (2.58%) / BGE (44.61%) / ComEd (0.51%) / Dayton (0.40%) / DEOK (1.39%) / DL (0.14%) / Dominion (27.05%) / EKPC (0.52%) / PENELEC (0.02%) / PEPCO (20.53%)
b2992.2	Add Bundle conductor on the Graceton – Bagley – Raphael Road 2305 & 2313 230 kV circuits		AEP (2.25%) / APS (2.58%) / BGE (44.61%) / ComEd (0.51%) / Dayton (0.40%) / DEOK (1.39%) / DL (0.14%) / Dominion (27.05%) / EKPC (0.52%) / PENELEC (0.02%) / PEPCO (20.53%)
b2992.3	Replacing short segment of substation conductor on the Windy Edge to Glenarm 110512 115 kV circuit		AEP (2.25%) / APS (2.58%) / BGE (44.61%) / ComEd (0.51%) / Dayton (0.40%) / DEOK (1.39%) / DL (0.14%) / Dominion (27.05%) / EKPC (0.52%) / PENELEC (0.02%) / PEPCO (20.53%)
b2992.4	Reconductor the Raphael Road – Northeast 2315 & 2337 230 kV circuits		AEP (2.25%) / APS (2.58%) / BGE (44.61%) / ComEd (0.51%) / Dayton (0.40%) / DEOK (1.39%) / DL (0.14%) / Dominion (27.05%) / EKPC (0.52%) / PENELEC (0.02%) / PEPCO (20.53%)
b3228	Replace two (2) relays at Center substation to increase ratings on the Westport to Center 110552 115 kV circuit		BGE (100%)
b3305	Replace Pumphrey 230/115 kV transformer		BGE (100%)

## SCHEDULE 12 – APPENDIX A

#### **(5)** Mid-Atlantic Interstate Transmission, LLC for the Metropolitan Edison Company Zone

required 11a		Allituat Revenue Requirement	•
			Load-Ratio Share
			Allocation:
			AEC (1.67%) / AEP (13.94%)
			/ APS (5.64%) / ATSI (8.02%)
			/ BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
			DEOK (3.37%) / DL (1.76%) /
	Loop the 2026 (TMI –		DPL (2.55%) / Dominion
b2006.1.1	Hosensack 500 kV) line		(12.97%) / EKPC (1.81%) /
	in to the Lauschtown		JCPL (3.92%) / ME (1.95%) /
			NEPTUNE* (0.24%) / OVEC
			(0.07%) / PECO (5.39%) /
			PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			DFAX Allocation:
			PPL (100%)
	Upgrade relay at South		
b2006.2.1	Reading on the 1072 230		
	V line		PPL (100%)
	Replace the South		
b2006.4	Reading 69 kV '81342'		
02000.4	breaker with 40 kA		
	breaker		ME (100%)
	Replace the South		
b2006.5	Reading 69 kV '82842'		
	breaker with 40 kA		
	breaker		ME (100%)
			APS (8.30%) / BGE (14.70%)
b2452	Install 2nd Hunterstown		/ DEOK (0.48%) / Dominion
02432	230/115 kV transformer		(36.92%) / ME (23.85%) /
			PEPCO (15.75%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

# Mid-Atlantic Interstate Transmission, LLC for the Metropolitan Edison Company Zone (cont.)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) APS (8.30%) / BGE (14.70%) Reconductor / DEOK (0.48%) / Dominion b2452.1 Hunterstown - Oxford (36.92%) / ME (23.85%) / 115 kV line PEPCO (15.75%) Replace the Hunterstown b2452.3 115 kV breaker '96192' with 40 kA ME (100%) Install a 36.6 MVAR 115 b2588 kV capacitor at North Bangor substation ME (100%) Convert Middletown Junction 230 kV b2637 substation to nine bay double breaker configuration. ME (100%) Install a 28.8 MVAR b2644 115 kV capacitor at the Mountain substation ME (100%) AEP (12.91%) / APS (19.04%)/ ATSI (1.24%)/ Lincoln Substation: ComEd (0.35%) / Dayton Upgrade the bus b2688.1 (1.45%) / DEOK (2.30%) / DL conductor and replace (1.11%)/ Dominion (44.85%) / CTs EKPC (0.78%)/ PEPCO (15.85%) / RE (0.12%) Germantown Substation: Replace 138/115 kV transformer with a AEP (12.91%) / APS 135/180/224 MVA bank. (19.04%)/ ATSI (1.24%)/ Replace Lincoln 115 kV ComEd (0.35%) / Dayton b2688.2 breaker, install new 138 (1.45%) / DEOK (2.30%) / DL kV breaker, upgrade bus (1.11%)/ Dominion (44.85%) /

conductor and

adjust/replace CTs

EKPC (0.78%)/ PEPCO

(15.85%) / RE (0.12%)

# Mid-Atlantic Interstate Transmission, LLC for the Metropolitan Edison Company Zone (cont.)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Upgrade terminal AEP (6.46%) / APS (8.74%) / BGE (19.74%) / ComEd equipment at Hunterstown 500 kV on (2.16%) / Dayton (0.59%) / b2743.4 the Conemaugh -DEOK (1.02%) / DL (0.01%) / Hunterstown 500 kV Dominion (39.95%) / EKPC circuit (0.45%) / PEPCO (20.88%) Upgrade terminal AEP (6.46%) / APS (8.74%) / BGE (19.74%) / ComEd equipment and required relay communication at (2.16%) / Dayton (0.59%) / b2752.4 TMI 500 kV: on the DEOK (1.02%) / DL (0.01%) / Beach Bottom - TMI Dominion (39.95%) / EKPC (0.45%) / PEPCO (20.88%) 500 kV circuit Replace relay at West Boyertown 69 kV station b2749 on the West Boyertown – North Boyertown 69 kV circuit ME (100%) Upgrade bus conductor at Gardners 115 kv substation; Upgrade bus b2765 conductor and adjust CT ratios at Carlisle Pike 115 kV ME (100%) Upgrade limiting 115 kV switches on the 115 kV side of the 230/115 kV b2950 Northwood substation and adjust setting on limiting ZR relay ME (100%) Replace bus conductor at b3136 Smith 115 kV substation ME (100%) Rebuild the Hunterstown AEP (16.60%) / APS (8.09%) / - Lincoln 115 kV Line BGE (2.74%) / Dayton No. 962 (approx. 2.6 (2.00%) / DEOK (0.35%) / DL b3145 miles). Upgrade limiting (1.31%) / Dominion (52.77%) terminal equipment at / EKPC (1.54%) / OVEC Hunterstown and Lincoln (0.06%) / PEPCO (14.54%) Install a 120.75 kV 79.4 b3311 MVAR capacitor bank at Yorkana 115 kV ME (100%)

## SCHEDULE 12 – APPENDIX A

## (8) PECO Energy Company

Required T	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
	Replace Waneeta 138 kV		
b2130	breaker '15' with 63 kA		
	rated breaker		PECO (100%)
	Replace Waneeta 138 kV		
b2131	breaker '35' with 63 kA		
	rated breaker		PECO (100%)
	Replace Waneeta 138 kV		
b2132	breaker '875' with 63 kA		
	rated breaker		PECO (100%)
	Replace Waneeta 138 kV		
b2133	breaker '895' with 63 kA		
	rated breaker		PECO (100%)
	Plymouth Meeting 230		
b2134	kV breaker '115' with 63		
	kA rated breaker		PECO (100%)
	Install a second		
b2222	Eddystone 230/138 kV		
	transformer		PECO (100%)
	Replace the Eddystone		
b2222.1	138 kV #205 breaker with		
	63 kA breaker		PECO (100%)
	Increase Rating of		
b2222.2	Eddystone #415 138 kV		
	Breaker		PECO (100%)
b2236	50 MVAR reactor at		
02230	Buckingham 230 kV		PECO (100%)
	Replace Whitpain 230 kV		
b2527	breaker '155' with 80 kA		
	breaker		PECO (100%)
	Replace Whitpain 230 kV		
b2528	breaker '525' with 80 kA		
	breaker		PECO (100%)
b2529	Replace Whitpain 230 kV		
	breaker '175' with 80 kA		
	breaker		PECO (100%)
	Replace terminal		
	equipment inside		
b2549	Chichester substation on		
	the 220-36 (Chichester –		
	Eddystone) 230 kV line		PECO (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Replace terminal equipment inside Nottingham substation on b2550 the 220-05 (Nottingham – Daleville-Bradford) 230 kV line PECO (100%) Replace terminal equipment inside b2551 Llanerch substation on the 130-45 (Eddystone to Llanerch) 138 kV line PECO (100%) Replace the Peach Bottom 500 kV '#225' breaker b2572 with a 63 kA breaker PECO (100%) AEC (3.97%)/ AEP (5.77%)/ APS (4.27%)/ ATSI (6.15%)/ BGE (1.63%)/ ComEd (0.72%)/ Dayton (1.06%)/ Increase ratings of Peach DEOK (1.97%)/ DL (2.25%)/ Bottom 500/230 kV Dominion (0.35%)/ DPL b2694 transformer to 1479 MVA (14.29%)/ ECP\*\* (0.69%)/ normal/1839 MVA EKPC (0.39%)/ HTP\*\*\* (0.96%)/ JCPL (6.84%) MetEd emergency (3.28%)/ NEPTUNE\* (2.14%)/ PECO (16.42%)/ PENELEC (3.94%)/ PPL (8.32%)/ PSEG (14.13%)/ RE (0.44%) AEP (6.46%) / APS (8.74%) / BGE (19.74%) / ComEd Tie in new Furnace Run (2.16%) / Dayton (0.59%) / b2752.2 substation to Peach DEOK (1.02%) / DL (0.01%) / Bottom - TMI 500 kV Dominion (39.95%) / EKPC (0.45%) / PEPCO (20.88%) Upgrade terminal AEP (6.46%) / APS (8.74%) / equipment and required BGE (19.74%) / ComEd relay communication at (2.16%) / Dayton (0.59%) / b2752.3 DEOK (1.02%) / DL (0.01%) / Peach Bottom 500 kV: on Dominion (39.95%) / EKPC the Beach Bottom - TMI 500 kV circuit (0.45%) / PEPCO (20.88%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

<sup>\*\*</sup> East Coast Power, L.L.C.

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

Required T	Fransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
			Load-Ratio Share
			Allocation:
			AEC (1.67%) / AEP
			(13.94%) / APS (5.64%) /
			ATSI (8.02%) / BGE
			(4.12%) / ComEd (13.46%) /
			Dayton (2.12%) / DEOK
			(3.37%) / DL (1.76%) / DPL
			(2.55%) / Dominion
	Upgrade substation		(12.97%) / EKPC (1.81%) /
	equipment at Peach Bottom 500 kV to increase facility rating to 2826 MVA normal and		JCPL (3.92%) / ME (1.95%)
			/ NEPTUNE* (0.24%) /
b2766.2			OVEC (0.07%) / PECO
			(5.39%) / PENELEC
	3525 MVA emergency		(1.84%) / PEPCO (3.71%) /
	3323 WIVI Chiefgeney		PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			DFAX Allocation:
			AEC (0.52%) / APS (8.38%)
			/ ATSI (2.54%) / BGE
			(17.96%) / DPL (2.72%) /
			JCPL (12.73%) / NEPTUNE
			(1.39%) / PEPCO (26.39%)
			/ PSEG (26.35%) / RE
			(1.02%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required T	ransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
b2774	Reconductor the Emilie - Falls 138 kV line, and replace station cable and		DECO (1009/)
	relay		PECO (100%)
b2775	Reconductor the Falls - U.S. Steel 138 kV line		PECO (100%)
b2850	Replace the Waneeta 230 kV "285" with 63 kA		DECO (1000/)
	breaker Chickenter		PECO (100%)
b2852	Replace the Chichester 230 kV "195" with 63 kA breaker		PECO (100%)
b2854	Replace the North Philadelphia 230 kV "CS 775" with 63 kA breaker		PECO (100%)
b2855	Replace the North Philadelphia 230 kV "CS 885" with 63 kA breaker		PECO (100%)
b2856	Replace the Parrish 230 kV "CS 715" with 63 kA breaker		PECO (100%)
b2857	Replace the Parrish 230 kV "CS 825" with 63 kA breaker		PECO (100%)
b2858	Replace the Parrish 230 kV "CS 935" with 63 kA breaker		PECO (100%)
b2859	Replace the Plymouth Meeting 230 kV "215" with 63 kA breaker		PECO (100%)
b2860	Replace the Plymouth Meeting 230 kV "235" with 63 kA breaker		PECO (100%)
b2861	Replace the Plymouth Meeting 230 kV "325" with 63 kA breaker		PECO (100%)
b2862	Replace the Grays Ferry 230 kV "705" with 63 kA breaker		PECO (100%)

Required T	Fransmission Enhancements	Annual Revenue Requirement	Responsible Customer(s)
	Replace the Grays Ferry		
b2863	230 kV "985" with 63 kA		
	breaker		PECO (100%)
	Replace the Grays Ferry		
b2864	230 kV "775" with 63 kA		
	breaker		PECO (100%)
	Replace the China Tap		
b2923	230 kV 'CS 15' breaker		
	with a 63 kA breaker		PECO (100%)
	Replace the Emilie 230		
b2924	kV 'CS 15' breaker with		
	63 kA breaker		PECO (100%)
	Replace the Emilie 230		
b2925	kV 'CS 25' breaker with		
	63 kA breaker		PECO (100%)
	Replace the Chichester		
b2926	230 kV '215' breaker		
	with 63 kA breaker		PECO (100%)
	Replace the Plymouth		
b2927	Meeting 230 kV '125'		
02927	breaker with 63 kA		
	breaker		PECO (100%)
	Replace the 230 kV CB		
	#225 at Linwood		
b2985	Substation (PECO) with a		
02703	double circuit breaker		
	(back to back circuit		
	breakers in one device)		PECO (100%)
	Peach Bottom – Furnace		
b3041	Run 500 kV terminal		
	equipment		PECO (100%)
	Replace the Whitpain 230		
b3120	kV breaker "125" with a		
	63 kA breaker		PECO (100%)
	Move 2 MVA load from		
	the Roxborough to Bala		
b3138	substation. Adjust the tap		
	setting on the Master		
	138/69 kV transformer #2		PECO (100%)
	Upgrade the Richmond 69		
b3146	kV breaker "140" with 40		
	kA breaker		PECO (100%)

#### SCHEDULE 12 – APPENDIX A

(17) American Electric Power Service Corporation on behalf of its affiliate companies: AEP Appalachian Transmission Company, Inc.; AEP Indiana Michigan Transmission Company, Inc.; AEP Kentucky Transmission Company, Inc.; AEP Ohio Transmission Company, Inc.; AEP West Virginia Transmission Company, Inc.; Appalachian Power Company; Indiana Michigan Power Company; Kentucky Power Company; Kingsport Power Company; Ohio Power Company and Wheeling Power Company

Required 11	ansimission chilancements. Annua	i Kevenue Kequiremeni	Responsible Customer(s)
b1570.4	Add a 345 kV breaker at Marysville station and a 0.1 mile 345 kV line extension from Marysville to the new 345/69 kV Dayton transformer		AEP (100%)
b1660.1	Cloverdale: install 6-765 kV breakers, incremental work for 2 additional breakers, reconfigure and relocate miscellaneous facilities, establish 500 kV station and 500 kV tie with 765 kV station		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: BGE (43.47%) / Dayton (0.16%) / DEOK (0.40%) / Dominion (1.05%) / EKPC (0.24%) / PEPCO (54.68%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Tra	ansmission Enhancements Annua	l Revenue Requirement	Responsible Customer(s)
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
			DEOK (3.37%) / DL (1.76%) /
			DPL (2.55%) / Dominion
			(12.97%) / EKPC (1.81%) /
	Reconductor the AEP		JCPL (3.92%) / ME (1.95%) /
			NEPTUNE* (0.24%) / OVEC
b1797.1	portion of the Cloverdale - Lexington 500 kV line with		(0.07%) / PECO (5.39%) /
	2-1780 ACSS		PENELEC (1.84%) / PEPCO
	2-1760 ACSS		(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			DFAX Allocation:
			AEP (1.27%) / APS (24.46%) /
			ATSI (0.69%) / BGE (31.13%) /
			Dayton (0.27%) / DEOK
			(0.66%) / Dominion (1.92%) /
			EKPC (0.38%) / PEPCO
			(39.22%)
b2055	Upgrade relay at Brues		
02033	station		AEP (100%)
	Upgrade terminal		
	equipment at Howard on		
b2122.3	the Howard - Brookside		
	138 kV line to achieve		
	ratings of 252/291 (SN/SE)		AEP (100%)
	Perform a sag study on the		
b2122.4	Howard - Brookside 138		
	kV line		AEP (100%)
b2229	Install a 300 MVAR		
ULLLI	reactor at Dequine 345 kV		AEP (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PEOC (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PEPCO (3.71%) / PENELEC (1.84%) / PEPCO (3.71%) / PEPCO (3.7	required 11	ansmission Ennancements Annua	Revenue Requirement	Responsible Customer(s)
APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)				Load-Ratio Share Allocation:
Replace existing 150				
Replace existing 150   MVAR reactor at Amos 765   kV substation on Amos - N. Proctorville - Hanging Rock with 300 MVAR reactor   PEPCO (3.71%) / PEPCO (3.71				
Replace existing 150 MVAR reactor at Amos 765 kV substation on Amos - N. Proctorville - Hanging Rock with 300 MVAR reactor    DEOK (3.37%) / DL (1.76%) /   DPL (2.55%) / Dominion (12.97%) / EKPC (1.81%) /   JCPL (3.92%) / ME (1.95%) /   NEPTUNE* (0.24%) / OVEC (0.07%) / PENELEC (1.84%) / PEPCO (3.371%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)   DFAX Allocation:   AEP (100%)				
DPL (2.55%) / Dominion				
MVAR reactor at Amos 765   kV substation on Amos - N.   Proctorville - Hanging Rock with 300 MVAR reactor   PENELEC (1.81%) / JCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PECO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)		Penlace existing 150		
b2230   kV substation on Amos - N.   Proctorville - Hanging Rock with 300 MVAR reactor   DCPL (3.92%) / ME (1.95%) / NEPTUNE* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)				
Proctorville - Hanging Rock with 300 MVAR reactor	b2230			
with 300 MVAR reactor  with 300 MVAR reactor  (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%)  DFAX Allocation: AEP (100%)  Install 765 kV reactor breaker at Dumont 765 kV substation on the Dumont - Wilton Center line  Install 765 kV reactor breaker at Marysville 765 kV substation on the Marysville - Maliszewski line  Change transformer tap settings for the Baker 765/345 kV transformer  Loop the North Muskingum - Crooksville 138 kV line into AEP's Philo 138 kV station which lies approximately 0.4 miles	02230			
b2231 Install 765 kV reactor breaker at Dumont 765 kV substation on the Dumont Wilton Center line Install 765 kV reactor breaker at Marysville 765 kV substation on the Marysville - Maliszewski line Change transformer tap settings for the Baker 765/345 kV transformer Loop the North Muskingum - Crooksville 138 kV line into AEP's Philo 138 kV station which lies approximately 0.4 miles		~ ~		` ,
b2231 Install 765 kV reactor breaker at Dumont 765 kV substation on the Dumont - Wilton Center line Install 765 kV reactor breaker at Marysville 765 kV substation on the Marysville - Maliszewski line Change transformer tap settings for the Baker 765/345 kV transformer Loop the North Muskingum - Crooksville 138 kV line into AEP's Philo 138 kV station which lies approximately 0.4 miles		with 500 W VAR reactor		
b2231 Install 765 kV reactor breaker at Dumont 765 kV substation on the Dumont - Wilton Center line Install 765 kV reactor breaker at Marysville 765 kV substation on the Marysville - Maliszewski line Change transformer tap settings for the Baker 765/345 kV transformer Loop the North Muskingum - Crooksville 138 kV line into AEP's Philo 138 kV station which lies approximately 0.4 miles				` /
b2231  Install 765 kV reactor breaker at Dumont 765 kV substation on the Dumont - Wilton Center line  Install 765 kV reactor breaker at Marysville 765 kV substation on the Marysville - Maliszewski line  Change transformer tap settings for the Baker 765/345 kV transformer  Loop the North Muskingum - Crooksville 138 kV line into AEP's Philo 138 kV station which lies approximately 0.4 miles				
b2231 Install 765 kV reactor breaker at Dumont 765 kV substation on the Dumont - Wilton Center line  Install 765 kV reactor breaker at Marysville 765 kV substation on the Marysville - Maliszewski line  Change transformer tap settings for the Baker 765/345 kV transformer  Loop the North Muskingum - Crooksville 138 kV line into AEP's Philo 138 kV station which lies approximately 0.4 miles				
Install 765 kV reactor breaker at Dumont 765 kV substation on the Dumont - Wilton Center line  Install 765 kV reactor breaker at Marysville 765 kV substation on the Marysville - Maliszewski line  Change transformer tap settings for the Baker 765/345 kV transformer  Loop the North Muskingum - Crooksville 138 kV line into AEP's Philo 138 kV station which lies approximately 0.4 miles				
breaker at Dumont 765 kV substation on the Dumont - Wilton Center line  Install 765 kV reactor breaker at Marysville 765 kV substation on the Marysville - Maliszewski line  Change transformer tap settings for the Baker 765/345 kV transformer  Loop the North Muskingum - Crooksville 138 kV line into AEP's Philo 138 kV station which lies approximately 0.4 miles				AEP (100%)
substation on the Dumont - Wilton Center line  Install 765 kV reactor breaker at Marysville 765 kV substation on the Marysville - Maliszewski line  Change transformer tap settings for the Baker 765/345 kV transformer  Loop the North Muskingum - Crooksville 138 kV line into AEP's Philo 138 kV station which lies approximately 0.4 miles				
substation on the Dumont - Wilton Center line  Install 765 kV reactor breaker at Marysville 765 kV substation on the Marysville - Maliszewski line  Change transformer tap settings for the Baker 765/345 kV transformer  Loop the North Muskingum - Crooksville 138 kV line into AEP's Philo 138 kV station which lies approximately 0.4 miles	h2231	breaker at Dumont 765 kV		
Install 765 kV reactor breaker at Marysville 765 kV substation on the Marysville - Maliszewski line  Change transformer tap settings for the Baker 765/345 kV transformer  Loop the North Muskingum - Crooksville 138 kV line into AEP's Philo 138 kV station which lies approximately 0.4 miles	02231	substation on the Dumont -		
breaker at Marysville 765 kV substation on the Marysville - Maliszewski line  Change transformer tap settings for the Baker 765/345 kV transformer  Loop the North Muskingum - Crooksville 138 kV line into AEP's Philo 138 kV station which lies approximately 0.4 miles				AEP (100%)
b2232 kV substation on the Marysville - Maliszewski line AEP (100%)  Change transformer tap settings for the Baker 765/345 kV transformer  Loop the North Muskingum - Crooksville 138 kV line into AEP's Philo 138 kV station which lies approximately 0.4 miles				
Marysville - Maliszewski line  Change transformer tap settings for the Baker 765/345 kV transformer  Loop the North Muskingum - Crooksville 138 kV line into AEP's Philo 138 kV station which lies approximately 0.4 miles		_		
line  Change transformer tap settings for the Baker 765/345 kV transformer  Loop the North Muskingum - Crooksville 138 kV line into AEP's Philo 138 kV station which lies approximately 0.4 miles	b2232			
Change transformer tap settings for the Baker 765/345 kV transformer  Loop the North Muskingum - Crooksville 138 kV line into AEP's Philo 138 kV station which lies approximately 0.4 miles				
b2233 settings for the Baker 765/345 kV transformer  Loop the North Muskingum - Crooksville 138 kV line into AEP's Philo 138 kV station which lies approximately 0.4 miles				AEP (100%)
b2252  Toop the North Muskingum - Crooksville 138 kV line into AEP's Philo 138 kV station which lies approximately 0.4 miles				
b2252 Loop the North Muskingum - Crooksville 138 kV line into AEP's Philo 138 kV station which lies approximately 0.4 miles	b2233	settings for the Baker		
b2252 - Crooksville 138 kV line into AEP's Philo 138 kV station which lies approximately 0.4 miles		765/345 kV transformer		AEP (100%)
b2252 into AEP's Philo 138 kV station which lies approximately 0.4 miles		1 1		
station which lies approximately 0.4 miles		- Crooksville 138 kV line		
approximately 0.4 miles	h2252	into AEP's Philo 138 kV		
	02232	station which lies		
from the line (1000/)		approximately 0.4 miles		
Trom the line AEP (100%)		from the line		AEP (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Install an 86.4 MVAR capacitor bank at Gorsuch 138 kV station in Ohio Rebuild approximately 4.9 miles of Corner - Degussa 138 kV line in Ohio AEP (100%)  Rebuild approximately 2.8 miles of Maliszewski - Polaris 138 kV line in Ohio Upgrade approximately 36 miles of 138 kV through path facilities between Harrison 138 kV station and Ross 138 kV station in Ohio AEP (100%)  Rebuild the Pokagon - Corey 69 kV line as a double circuit 138 kV line with one side at 69 kV and the other side as an express circuit between Pokagon and Corey stations  Rebuild 1.41 miles of #2 CU 46 kV line between Tams Mountain - Slab Fork to 138 kV standards. The line will be strung with 1033 ACSR Install a new 138/69 kV substation to provide	required 11	ansimission Emianecinents Amuai N	evenue requirement	Responsible Cusionici(s)
138 kV station in Ohio  Rebuild approximately 4.9 miles of Corner - Degussa 138 kV line in Ohio  Rebuild approximately 2.8 miles of Maliszewski - Polaris 138 kV line in Ohio  Upgrade approximately 36 miles of 138 kV station and Ross 138 kV station and Ross 138 kV station in Ohio  Rebuild the Pokagon - Corey 69 kV line as a double circuit 138 kV line with one side at 69 kV and the other side as an express circuit between Pokagon and Corey stations  Rebuild 1.41 miles of #2 CU 46 kV line between Tams Mountain - Slab Fork to 138 kV standards. The line will be strung with 1033 ACSR Install a new 138/69 kV transformer at George Washington 138/69 kV		Install an 86.4 MVAR		
Rebuild approximately 4.9 miles of Corner - Degussa 138 kV line in Ohio  Rebuild approximately 2.8 miles of Maliszewski - Polaris 138 kV line in Ohio  Upgrade approximately 36 miles of 138 kV through path facilities between Harrison 138 kV station and Ross 138 kV station in Ohio  Rebuild the Pokagon - Corey 69 kV line as a double circuit 138 kV line with one side at 69 kV and the other side as an express circuit between Pokagon and Corey stations  Rebuild 1.41 miles of #2 CU 46 kV line between Tams Mountain - Slab Fork to 138 kV standards. The line will be strung with 1033 ACSR  Install a new 138/69 kV transformer at George Washington 138/69 kV	b2253	capacitor bank at Gorsuch		
b2254 miles of Corner - Degussa 138 kV line in Ohio Rebuild approximately 2.8 miles of Maliszewski - Polaris 138 kV line in Ohio Upgrade approximately 36 miles of 138 kV through path facilities between Harrison 138 kV station and Ross 138 kV station in Ohio Rebuild the Pokagon - Corey 69 kV line as a double circuit 138 kV line with one side at 69 kV and the other side as an express circuit between Pokagon and Corey stations Rebuild 1.41 miles of #2 CU 46 kV line between Tams Mountain - Slab Fork to 138 kV standards. The line will be strung with 1033 ACSR Install a new 138/69 kV transformer at George Washington 138/69 kV		138 kV station in Ohio		AEP (100%)
138 kV line in Ohio   AEP (100%)		Rebuild approximately 4.9		
Rebuild approximately 2.8 miles of Maliszewski - Polaris 138 kV line in Ohio  Upgrade approximately 36 miles of 138 kV through path facilities between Harrison 138 kV station and Ross 138 kV station in Ohio  Rebuild the Pokagon - Corey 69 kV line as a double circuit 138 kV line with one side at 69 kV and the other side as an express circuit between Pokagon and Corey stations  Rebuild 1.41 miles of #2 CU 46 kV line between  Tams Mountain - Slab Fork to 138 kV standards. The line will be strung with 1033 ACSR  Install a new 138/69 kV transformer at George Washington 138/69 kV	b2254	miles of Corner - Degussa		
b2255 miles of Maliszewski - Polaris 138 kV line in Ohio  Upgrade approximately 36 miles of 138 kV through path facilities between Harrison 138 kV station and Ross 138 kV station in Ohio  Rebuild the Pokagon - Corey 69 kV line as a double circuit 138 kV line with one side at 69 kV and the other side as an express circuit between Pokagon and Corey stations  Rebuild 1.41 miles of #2 CU 46 kV line between Tams Mountain - Slab Fork to 138 kV standards. The line will be strung with 1033 ACSR  Install a new 138/69 kV transformer at George Washington 138/69 kV		138 kV line in Ohio		AEP (100%)
b2255 miles of Maliszewski - Polaris 138 kV line in Ohio  Upgrade approximately 36 miles of 138 kV through path facilities between Harrison 138 kV station and Ross 138 kV station in Ohio  Rebuild the Pokagon - Corey 69 kV line as a double circuit 138 kV line with one side at 69 kV and the other side as an express circuit between Pokagon and Corey stations  Rebuild 1.41 miles of #2 CU 46 kV line between Tams Mountain - Slab Fork to 138 kV standards. The line will be strung with 1033 ACSR  Install a new 138/69 kV transformer at George Washington 138/69 kV		Rebuild approximately 2.8		
Upgrade approximately 36 miles of 138 kV through path facilities between Harrison 138 kV station and Ross 138 kV station in Ohio  Rebuild the Pokagon - Corey 69 kV line as a double circuit 138 kV ine with one side at 69 kV and the other side as an express circuit between Pokagon and Corey stations  Rebuild 1.41 miles of #2 CU 46 kV line between Tams Mountain - Slab Fork to 138 kV standards. The line will be strung with 1033 ACSR  Install a new 138/69 kV transformer at George Washington 138/69 kV	b2255			
miles of 138 kV through path facilities between Harrison 138 kV station and Ross 138 kV station in Ohio  Rebuild the Pokagon - Corey 69 kV line as a double circuit 138 kV line with one side at 69 kV and the other side as an express circuit between Pokagon and Corey stations  Rebuild 1.41 miles of #2 CU 46 kV line between Tams Mountain - Slab Fork to 138 kV standards. The line will be strung with 1033 ACSR  Install a new 138/69 kV transformer at George Washington 138/69 kV		Polaris 138 kV line in Ohio		AEP (100%)
b2256 path facilities between Harrison 138 kV station and Ross 138 kV station in Ohio  Rebuild the Pokagon - Corey 69 kV line as a double circuit 138 kV line with one side at 69 kV and the other side as an express circuit between Pokagon and Corey stations  Rebuild 1.41 miles of #2 CU 46 kV line between Tams Mountain - Slab Fork to 138 kV standards. The line will be strung with 1033 ACSR  Install a new 138/69 kV transformer at George Washington 138/69 kV		Upgrade approximately 36		
Harrison 138 kV station and Ross 138 kV station in Ohio  Rebuild the Pokagon - Corey 69 kV line as a double circuit 138 kV line with one side at 69 kV and the other side as an express circuit between Pokagon and Corey stations  Rebuild 1.41 miles of #2 CU 46 kV line between Tams Mountain - Slab Fork to 138 kV standards. The line will be strung with 1033 ACSR  Install a new 138/69 kV transformer at George Washington 138/69 kV		miles of 138 kV through		
Ross 138 kV station in Ohio  Rebuild the Pokagon - Corey 69 kV line as a double circuit 138 kV line with one side at 69 kV and the other side as an express circuit between Pokagon and Corey stations  Rebuild 1.41 miles of #2 CU 46 kV line between  Tams Mountain - Slab Fork to 138 kV standards. The line will be strung with 1033 ACSR  Install a new 138/69 kV transformer at George Washington 138/69 kV	b2256	path facilities between		
Rebuild the Pokagon - Corey 69 kV line as a double circuit 138 kV line with one side at 69 kV and the other side as an express circuit between Pokagon and Corey stations  Rebuild 1.41 miles of #2 CU 46 kV line between Tams Mountain - Slab Fork to 138 kV standards. The line will be strung with 1033 ACSR  Install a new 138/69 kV transformer at George Washington 138/69 kV		Harrison 138 kV station and		
Corey 69 kV line as a double circuit 138 kV line with one side at 69 kV and the other side as an express circuit between Pokagon and Corey stations  Rebuild 1.41 miles of #2 CU 46 kV line between Tams Mountain - Slab Fork to 138 kV standards. The line will be strung with 1033 ACSR Install a new 138/69 kV transformer at George Washington 138/69 kV		Ross 138 kV station in Ohio		AEP (100%)
double circuit 138 kV line with one side at 69 kV and the other side as an express circuit between Pokagon and Corey stations  Rebuild 1.41 miles of #2 CU 46 kV line between Tams Mountain - Slab Fork to 138 kV standards. The line will be strung with 1033 ACSR  AEP (100%)  AEP (100%)  AEP (100%)		Rebuild the Pokagon -		
b2257 with one side at 69 kV and the other side as an express circuit between Pokagon and Corey stations  Rebuild 1.41 miles of #2 CU 46 kV line between Tams Mountain - Slab Fork to 138 kV standards. The line will be strung with 1033 ACSR  Install a new 138/69 kV transformer at George Washington 138/69 kV		Corey 69 kV line as a		
the other side as an express circuit between Pokagon and Corey stations  Rebuild 1.41 miles of #2 CU 46 kV line between Tams Mountain - Slab Fork to 138 kV standards. The line will be strung with 1033 ACSR  Install a new 138/69 kV transformer at George Washington 138/69 kV		double circuit 138 kV line		
circuit between Pokagon and Corey stations  Rebuild 1.41 miles of #2 CU 46 kV line between Tams Mountain - Slab Fork to 138 kV standards. The line will be strung with 1033 ACSR  Install a new 138/69 kV transformer at George Washington 138/69 kV	b2257	with one side at 69 kV and		
and Corey stations  Rebuild 1.41 miles of #2 CU 46 kV line between Tams Mountain - Slab Fork to 138 kV standards. The line will be strung with 1033 ACSR  Install a new 138/69 kV transformer at George Washington 138/69 kV		the other side as an express		
Rebuild 1.41 miles of #2 CU 46 kV line between Tams Mountain - Slab Fork to 138 kV standards. The line will be strung with 1033 ACSR Install a new 138/69 kV transformer at George Washington 138/69 kV		circuit between Pokagon		
b2258  CU 46 kV line between  Tams Mountain - Slab Fork to 138 kV standards. The line will be strung with 1033 ACSR  Install a new 138/69 kV transformer at George Washington 138/69 kV		and Corey stations		AEP (100%)
b2258 Tams Mountain - Slab Fork to 138 kV standards. The line will be strung with 1033 ACSR AEP (100%)  Install a new 138/69 kV transformer at George Washington 138/69 kV		Rebuild 1.41 miles of #2		
to 138 kV standards. The line will be strung with 1033 ACSR  Install a new 138/69 kV transformer at George Washington 138/69 kV		CU 46 kV line between		
to 138 kV standards. The line will be strung with 1033 ACSR  Install a new 138/69 kV transformer at George Washington 138/69 kV	1,2250	Tams Mountain - Slab Fork		
1033 ACSR Install a new 138/69 kV transformer at George Washington 138/69 kV	02238	to 138 kV standards. The		
Install a new 138/69 kV transformer at George Washington 138/69 kV		line will be strung with		
transformer at George Washington 138/69 kV		1033 ACSR		AEP (100%)
Washington 138/69 kV		Install a new 138/69 kV		
		transformer at George		
substation to provide	h2250	Washington 138/69 kV		
	02239	substation to provide		
support to the 69 kV system		support to the 69 kV system		
in the area AEP (100%)		in the area		AEP (100%)

	Rebuild 4.7 miles of	
	Muskingum River - Wolf	
1,2206	Creek 138 kV line and	
b2286	remove the 138/138 kV	
	transformer at Wolf Creek	
	Station	AEP (100%)
	Loop in the Meadow Lake -	
b2287	Olive 345 kV circuit into	
	Reynolds 765/345 kV	
	station	AEP (100%)

raganou II	ansmission Emancements Amua	requirement	Responsible Cusiomer(s)
	Establish a new 138/12 kV		
b2344.1	station, transfer and		
	consolidate load from its		
02344.1	Nicholsville and Marcellus		
	34.5 kV stations at this new		
	station		AEP (100%)
	Tap the Hydramatic –		
	Valley 138 kV circuit (~		
b2344.2	structure 415), build a new		
	138 kV line (~3.75 miles) to		
	this new station		AEP (100%)
	From this station, construct		
b2344.3	a new 138 kV line (~1.95		
02344.3	miles) to REA's Marcellus		
	station		AEP (100%)
	From REA's Marcellus		
	station construct new 138		
b2344.4	kV line (~2.35 miles) to a		
02344.4	tap point on Valley –		
	Hydramatic 138 kV ckt		
	(~structure 434)		AEP (100%)
	Retire sections of the 138		
b2344.5	kV line in between structure		
	415 and 434 (~ 2.65 miles)		AEP (100%)
	Retire AEP's Marcellus		
	34.5/12 kV and Nicholsville		
b2344.6	34.5/12 kV stations and also		
	the Marcellus – Valley 34.5		
	kV line		AEP (100%)
b2345.1	Construct a new 69 kV line		
	from Hartford to Keeler (~8		
	miles)		AEP (100%)
	Rebuild the 34.5 kV lines		
b2345.2	between Keeler - Sister		
02343.2	Lakes and Glenwood tap		
	switch to 69 kV (~12 miles)		AEP (100%)

required 11	ansimission Emianecinents Amida Ne	overiue requirement	Responsible Cusionici(s)
	Implement in - out at Keeler		
b2345.3	and Sister Lakes 34.5 kV		
	stations		AEP (100%)
	Retire Glenwood tap switch		
	and construct a new		
b2345.4	Rothadew station. These		
	new lines will continue to		
	operate at 34.5 kV		AEP (100%)
	Perform a sag study for		, ,
	Howard - North Bellville -		
b2346	Millwood 138 kV line		
	including terminal		
	equipment upgrades		AEP (100%)
	Replace the North Delphos		, ,
	600A switch. Rebuild		
	approximately 18.7 miles of		
b2347	138 kV line North Delphos		
	- S073. Reconductor the		
	line and replace the existing		
	tower structures		AEP (100%)
	Construct a new 138 kV		1121 (10073)
	line from Richlands Station		
b2348	to intersect with the Hales		
02310	Branch - Grassy Creek 138		
	kV circuit		AEP (100%)
	Change the existing CT		1111 (10070)
	ratios of the existing		
b2374	equipment along Bearskin -		
02374	Smith Mountain 138 kV		
	circuit		AEP (100%)
	Change the existing CT		ALI (10070)
	ratios of the existing		
b2375	equipment along East		
023/3	Danville-Banister 138 kV		
			AED (1000/)
	circuit		AEP (100%)

ansinission Emiancements. Annual Revenue Requirement	Responsible Cusionier(s)
Replace the Turner 138 kV breaker 'D'	AEP (100%)
Replace the North Newark 138 kV breaker 'P'	AEP (100%)
Replace the Sporn 345 kV breaker 'DD'	AEP (100%)
Replace the Sporn 345 kV breaker 'DD2'	AEP (100%)
Replace the Muskingum 345 kV breaker 'SE'	AEP (100%)
Replace the East Lima 138 kV breaker 'E1'	AEP (100%)
Replace the Delco 138 kV breaker 'R'	AEP (100%)
Replace the Sporn 345 kV breaker 'AA2'	AEP (100%)
Replace the Sporn 345 kV breaker 'CC'	AEP (100%)
Replace the Sporn 345 kV breaker 'CC2'	AEP (100%)
Replace the Astor 138 kV breaker '102'	AEP (100%)
Replace the Muskingum 345 kV breaker 'SH'	AEP (100%)
Replace the Muskingum 345 kV breaker 'SI'	AEP (100%)
Replace the Hyatt 138 kV breaker '105N'	AEP (100%)
Replace the Muskingum 345 kV breaker 'SG'	AEP (100%)
Replace the Hyatt 138 kV breaker '101C'	AEP (100%)
Replace the Hyatt 138 kV breaker '104N'	AEP (100%)
Replace the Hyatt 138 kV breaker '104S'	AEP (100%)
	Replace the Turner 138 kV breaker 'D' Replace the North Newark 138 kV breaker 'P' Replace the Sporn 345 kV breaker 'DD' Replace the Sporn 345 kV breaker 'DD2' Replace the Muskingum 345 kV breaker 'SE' Replace the East Lima 138 kV breaker 'E1' Replace the Delco 138 kV breaker 'R' Replace the Sporn 345 kV breaker 'AA2' Replace the Sporn 345 kV breaker 'CC' Replace the Sporn 345 kV breaker 'CC2' Replace the Astor 138 kV breaker '102' Replace the Muskingum 345 kV breaker 'SH' Replace the Hyatt 138 kV breaker '105N' Replace the Hyatt 138 kV breaker '101C' Replace the Hyatt 138 kV breaker '104N' Replace the Hyatt 138 kV

Required 11	ansmission Ennancements Annua	i Kevenue Kequirement	Responsible Customer(s)
b2394	Replace the Sporn 345 kV breaker 'CC1'		AEP (100%)
b2409	Install two 56.4 MVAR capacitor banks at the Melmore 138 kV station in Ohio		AEP (100%)
b2410	Convert Hogan Mullin 34.5 kV line to 138 kV, establish 138 kV line between Jones Creek and Strawton, rebuild existing Mullin Elwood 34.5 kV and terminate line into Strawton station, retire Mullin station		AEP (100%)
b2411	Rebuild the 3/0 ACSR portion of the Hadley - Kroemer Tap 69 kV line utilizing 795 ACSR conductor		AEP (100%)
b2423	Install a 300 MVAR shunt reactor at AEP's Wyoming 765 kV station		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required 1r	ansmission Enhancements Annua	Revenue Requirement	Responsible Customer(s)
	Willow - Eureka 138 kV		
b2444	line: Reconductor 0.26 mile		
	of 4/0 CU with 336 ACSS		AEP (100%)
	Complete a sag study of		
b2445	Tidd - Mahans Lake 138 kV		
	line		AEP (100%)
	Rebuild the 7-mile 345 kV		
b2449	line between Meadow Lake		
02449	and Reynolds 345 kV		
	stations		AEP (100%)
	Add two 138 kV circuit		
b2462	breakers at Fremont station		
02402	to fix tower contingency		
	'408_2'		AEP (100%)
	Construct a new 138/69 kV		
	Yager station by tapping 2-		
b2501	138 kV FE circuits		
	(Nottingham-Cloverdale,		
	Nottingham-Harmon)		AEP (100%)
	Build a new 138 kV line		
b2501.2	from new Yager station to		
	Azalea station		AEP (100%)
	Close the 138 kV loop back		
b2501.3	into Yager 138 kV by		
	converting part of local 69		
	kV facilities to 138 kV		AEP (100%)
	Build 2 new 69 kV exits to		
	reinforce 69 kV facilities		
b2501.4	and upgrade conductor		
02301.4	between Irish Run 69 kV		
	Switch and Bowerstown 69		
	kV Switch		AEP (100%)

switching station Nottingham tapping 6-138 kV FE circuits (Holloway- Brookside, Holloway- Brookside, Holloway- Harmon #1 and #2, Holloway-Reeds, Holloway-Cloverdale). Exit a 138 kV circuit from new station to Freebyrd station  Convert Freebyrd 69 kV to 138 kV  Rebuild/convert Freebyrd- South Cadiz 69 kV circuit to 138 kV  Digrade South Cadiz to 138 kV breaker and a half  Replace the Sporn 138 kV  Besting the south of	required 11	ansmission Emancements Amuai	revenue requirement	Responsible Cusiomer(s)
Nottingham tapping 6-138 kV FE circuits (Holloway-Brookside, Holloway-Brookside, Holloway-Brookside, Holloway-Reeds, Holloway-Reeds, Holloway-New Stacy, Holloway-Cloverdale). Exit a 138 kV circuit from new station to Freebyrd station  b2502.2 Convert Freebyrd 69 kV to 138 kV South Cadiz 69 kV circuit to 138 kV AEP (100%)  Bebuild/convert Freebyrd-South Cadiz 69 kV circuit to 138 kV AEP (100%)  Upgrade South Cadiz to 138 kV AEP (100%)  Beplace the Sporn 138 kV breaker and a half AEP (100%)  Replace the Sporn 138 kV breaker 'G1' with 80 kA breaker 'G1' with 80 kA breaker 'D1' with 80 kA breaker 'D2' with 80 kA breaker 'AEP (100%)  Replace the Sporn 138 kV breaker 'O1' with 80 kA breaker 'D2' with 80 kA breaker 'AEP (100%)  Replace the Sporn 138 kV breaker 'Y2' with 80 kA breaker 'Y3' with		Construct new 138 kV		
kV FE circuits (Holloway-Brookside, Holloway-Brookside, Holloway-Brookside, Holloway-Brookside, Holloway-Reeds, Holloway-New Stacy, Holloway-Cloverdale). Exit a 138 kV circuit from new station to Freebyrd station  b2502.2 Convert Freebyrd solve to 138 kV AEP (100%)  Rebuild/convert Freebyrd-South Cadiz 69 kV circuit to 138 kV AEP (100%)  b2502.4 Upgrade South Cadiz to 138 kV breaker and a half AEP (100%)  Replace the Sporn 138 kV breaker 'G1' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O' with 80 kA breaker  Replace the Sporn 138 kV breaker 'P2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'P2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'Y2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'Y2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'Y2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'Y2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'Y2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'Y2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'Y2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'Y2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'Y2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'Y2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'Y2' with 80 kA breaker  Replace the Sporn 138 kV		_		
Brookside, Holloway- Harmon #1 and #2, Holloway-Reeds, Holloway-Cloverdale). Exit a 138 kV circuit from new station to Freebyrd station  b2502.2 Convert Freebyrd 69 kV to 138 kV  Rebuild/convert Freebyrd- b2502.3 South Cadiz 69 kV circuit to 138 kV  AEP (100%)  b2502.4 Upgrade South Cadiz to 138 kV breaker and a half  Replace the Sporn 138 kV  b2530 breaker 'G1' with 80 kA breaker  Replace the Sporn 138 kV  b2531 breaker 'D' with 80 kA breaker  Replace the Sporn 138 kV  b2532 Replace the Sporn 138 kV breaker 'O1' with 80 kA breaker  Replace the Sporn 138 kV breaker 'Yo with 80 kA breaker  Replace the Sporn 138 kV breaker 'Yo with 80 kA breaker  Replace the Sporn 138 kV breaker 'Yo with 80 kA breaker  Replace the Sporn 138 kV breaker 'Yo with 80 kA breaker  Replace the Sporn 138 kV breaker 'Yo with 80 kA breaker  Replace the Sporn 138 kV breaker 'Yo with 80 kA breaker  Replace the Sporn 138 kV breaker 'Yo with 80 kA breaker  Replace the Sporn 138 kV breaker 'Yo with 80 kA breaker  Replace the Sporn 138 kV breaker 'Yo with 80 kA breaker  Replace the Sporn 138 kV breaker 'Yo with 80 kA breaker  Replace the Sporn 138 kV breaker 'Yo with 80 kA breaker  Replace the Sporn 138 kV breaker 'Yo with 80 kA breaker  Replace the Sporn 138 kV breaker 'Yo with 80 kA breaker  Replace the Sporn 138 kV breaker 'Yo with 80 kA breaker  Replace the Sporn 138 kV				
b2502.1 Harmon #1 and #2, Holloway-Reeds, Holloway-New Stacy, Holloway-Cloverdale). Exit a 138 kV circuit from new station to Freebyrd station  b2502.2 Convert Freebyrd 69 kV to 138 kV Rebuild/convert Freebyrd- South Cadiz 69 kV circuit to 138 kV AEP (100%)  b2502.4 Upgrade South Cadiz to 138 kV breaker and a half AEP (100%)  Replace the Sporn 138 kV breaker 'G1' with 80 kA breaker  Replace the Sporn 138 kV breaker 'D' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O1' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'D' with 80 kA breaker  Replace the Sporn 138 kV breaker 'D' with 80 kA breaker  Replace the Sporn 138 kV breaker 'D' with 80 kA breaker  Replace the Sporn 138 kV breaker 'D' with 80 kA breaker  Replace the Sporn 138 kV breaker 'P2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'P2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'P2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'P2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'P2' with 80 kA breaker  Replace the Sporn 138 kV		` ` '		
Holloway-Reeds, Holloway-New Stacy, Holloway-Cloverdale). Exit a 138 kV circuit from new station to Freebyrd station  b2502.2  Convert Freebyrd 69 kV to 138 kV  Rebuild/convert Freebyrd- b2502.3  South Cadiz 69 kV circuit to 138 kV  AEP (100%)  b2502.4  Upgrade South Cadiz to 138 kV breaker and a half  Replace the Sporn 138 kV  breaker 'G1' with 80 kA breaker  Replace the Sporn 138 kV  breaker 'D' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O1' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O1' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'Y2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'Y2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'Y2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'Y2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'Y2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'Y2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'Y2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'Y2' with 80 kA breaker  Replace the Sporn 138 kV		1		
Holloway-New Stacy, Holloway-Cloverdale). Exit a 138 kV circuit from new station to Freebyrd station  Convert Freebyrd 69 kV to 138 kV  Rebuild/convert Freebyrd- b2502.3 South Cadiz 69 kV circuit to 138 kV  AEP (100%)  b2502.4 Upgrade South Cadiz to 138 kV breaker and a half  Replace the Sporn 138 kV  breaker 'G1' with 80 kA breaker  Replace the Sporn 138 kV  breaker 'D' with 80 kA breaker  AEP (100%)  Replace the Sporn 138 kV breaker 'O1' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O1' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O1' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O1' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O1' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O1' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O1' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O1' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O1' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O1' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O3' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O3' with 80 kA breaker  Replace the Sporn 138 kV	b2502.1	,		
Holloway-Cloverdale). Exit a 138 kV circuit from new station to Freebyrd station  b2502.2 Convert Freebyrd 69 kV to 138 kV Rebuild/convert Freebyrd- South Cadiz 69 kV circuit to 138 kV AEP (100%)  b2502.4 Upgrade South Cadiz to 138 kV breaker and a half AEP (100%)  Replace the Sporn 138 kV breaker 'G1' with 80 kA breaker  Replace the Sporn 138 kV breaker 'D' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O' with 80 kA breaker  Replace the Sporn 138 kV breaker 'P2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O' with 80 kA breaker				
a 138 kV circuit from new station to Freebyrd station  b2502.2 Convert Freebyrd 69 kV to 138 kV AEP (100%)  Rebuild/convert Freebyrd- South Cadiz 69 kV circuit to 138 kV AEP (100%)  b2502.4 Upgrade South Cadiz to 138 kV breaker and a half AEP (100%)  Replace the Sporn 138 kV breaker 'G1' with 80 kA breaker AEP (100%)  Replace the Sporn 138 kV breaker 'D' with 80 kA breaker AEP (100%)  Replace the Sporn 138 kV breaker 'O1' with 80 kA breaker AEP (100%)  Replace the Sporn 138 kV breaker 'O1' with 80 kA breaker AEP (100%)  Replace the Sporn 138 kV breaker 'Y2' with 80 kA breaker AEP (100%)  Replace the Sporn 138 kV breaker 'P2' with 80 kA breaker AEP (100%)  Replace the Sporn 138 kV breaker 'Y2' with 80 kA breaker AEP (100%)  Replace the Sporn 138 kV breaker 'Y2' with 80 kA breaker AEP (100%)  Replace the Sporn 138 kV breaker 'Y2' with 80 kA breaker AEP (100%)  Replace the Sporn 138 kV breaker 'Y2' with 80 kA breaker AEP (100%)  Replace the Sporn 138 kV breaker 'Y2' with 80 kA breaker AEP (100%)		3		
Station to Freebyrd station		· · · · · · · · · · · · · · · · · · ·		
b2502.2 Convert Freebyrd 69 kV to 138 kV  Rebuild/convert Freebyrd- b2502.3 South Cadiz 69 kV circuit to 138 kV  AEP (100%)  b2502.4 Upgrade South Cadiz to 138 kV breaker and a half  Replace the Sporn 138 kV  b2530 Replace the Sporn 138 kV  breaker 'G1' with 80 kA breaker  Replace the Sporn 138 kV  b2531 Replace the Sporn 138 kV  breaker 'D' with 80 kA breaker  Replace the Sporn 138 kV  breaker 'O1' with 80 kA breaker  Replace the Sporn 138 kV  breaker 'O1' with 80 kA breaker  Replace the Sporn 138 kV  breaker 'O1' with 80 kA breaker  Replace the Sporn 138 kV  breaker 'U' with 80 kA breaker  Replace the Sporn 138 kV  breaker 'U' with 80 kA breaker  Replace the Sporn 138 kV  B2534 Replace the Sporn 138 kV				
B2502.2   138 kV		station to Freebyrd station		AEP (100%)
Rebuild/convert Freebyrd- South Cadiz 69 kV circuit to 138 kV  b2502.4 Upgrade South Cadiz to 138 kV breaker and a half  Replace the Sporn 138 kV  b2530 Breaker 'G1' with 80 kA breaker  Replace the Sporn 138 kV  b2531 Replace the Sporn 138 kV  b2532 Breaker 'O' with 80 kA breaker  Replace the Sporn 138 kV  b2532 Breaker 'O' with 80 kA breaker  Replace the Sporn 138 kV  b2533 Breaker 'O' with 80 kA breaker  Replace the Sporn 138 kV  b2534 Breaker 'P2' with 80 kA breaker  Replace the Sporn 138 kV  b2534 Breaker 'P2' with 80 kA breaker  Replace the Sporn 138 kV  B2534 Breaker 'P2' with 80 kA breaker  Replace the Sporn 138 kV  B2534 Replace the Sporn 138 kV	h2502.2	Convert Freebyrd 69 kV to		
b2502.3 South Cadiz 69 kV circuit to 138 kV  b2502.4 Upgrade South Cadiz to 138 kV breaker and a half  Replace the Sporn 138 kV  b2530 breaker 'G1' with 80 kA  breaker AEP (100%)  Replace the Sporn 138 kV  b2531 breaker 'D' with 80 kA  breaker AEP (100%)  Replace the Sporn 138 kV  b2532 breaker 'O1' with 80 kA  breaker AEP (100%)  Replace the Sporn 138 kV  b2533 breaker 'O1' with 80 kA  breaker AEP (100%)  Replace the Sporn 138 kV  b2533 breaker 'P2' with 80 kA  breaker AEP (100%)  Replace the Sporn 138 kV  breaker 'Y2' with 80 kA  breaker AEP (100%)  Replace the Sporn 138 kV  breaker 'Y2' with 80 kA  breaker AEP (100%)  Replace the Sporn 138 kV  breaker 'Y2' with 80 kA  breaker AEP (100%)	02302.2	138 kV		AEP (100%)
to 138 kV  Degrade South Cadiz to 138 kV breaker and a half  Replace the Sporn 138 kV breaker (G1) with 80 kA breaker  Replace the Sporn 138 kV breaker (D) with 80 kA breaker  Replace the Sporn 138 kV breaker (O1) with 80 kA breaker  Replace the Sporn 138 kV breaker (O1) with 80 kA breaker  Replace the Sporn 138 kV breaker (O1) with 80 kA breaker  Replace the Sporn 138 kV breaker (O2) with 80 kA breaker  Replace the Sporn 138 kV breaker (O3) with 80 kA breaker  Replace the Sporn 138 kV breaker (O3) with 80 kA breaker  Replace the Sporn 138 kV breaker (O3) with 80 kA breaker  Replace the Sporn 138 kV breaker (O3) with 80 kA breaker  Replace the Sporn 138 kV breaker (O3) with 80 kA breaker  Replace the Sporn 138 kV breaker (O3) with 80 kA breaker  Replace the Sporn 138 kV breaker (O3) with 80 kA breaker  Replace the Sporn 138 kV breaker (O3) with 80 kA breaker  Replace the Sporn 138 kV breaker (O3) with 80 kA breaker  Replace the Sporn 138 kV breaker (O3) with 80 kA breaker  Replace the Sporn 138 kV breaker (O3) with 80 kA breaker		Rebuild/convert Freebyrd-		
b2502.4 Upgrade South Cadiz to 138 kV breaker and a half  Replace the Sporn 138 kV breaker 'G1' with 80 kA breaker  Replace the Sporn 138 kV breaker 'D' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O1' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O1' with 80 kA breaker  Replace the Sporn 138 kV breaker 'O1' with 80 kA breaker  Replace the Sporn 138 kV breaker 'P2' with 80 kA breaker  Replace the Sporn 138 kV breaker 'U' with 80 kA breaker  Replace the Sporn 138 kV breaker 'U' with 80 kA breaker  Replace the Sporn 138 kV breaker 'U' with 80 kA breaker  Replace the Sporn 138 kV breaker 'U' with 80 kA breaker  Replace the Sporn 138 kV breaker 'U' with 80 kA breaker  Replace the Sporn 138 kV	b2502.3	South Cadiz 69 kV circuit		
Replace the Sporn 138 kV				AEP (100%)
Replace the Sporn 138 kV breaker 'G1' with 80 kA breaker  Replace the Sporn 138 kV breaker 'D' with 80 kA breaker  Replace the Sporn 138 kV breaker 'P2' with 80 kA breaker  Replace the Sporn 138 kV	h2502.4	Upgrade South Cadiz to 138		
b2530 breaker 'G1' with 80 kA breaker  Replace the Sporn 138 kV b2531 breaker 'D' with 80 kA breaker  Replace the Sporn 138 kV b2532 breaker 'O1' with 80 kA breaker  Replace the Sporn 138 kV b2533 breaker 'P2' with 80 kA breaker  Replace the Sporn 138 kV b2534 breaker 'U' with 80 kA breaker  Replace the Sporn 138 kV b2534 Breaker 'U' with 80 kA breaker  Replace the Sporn 138 kV b2534 Breaker 'U' with 80 kA breaker  Replace the Sporn 138 kV	02302.4	kV breaker and a half		AEP (100%)
breaker  Replace the Sporn 138 kV breaker 'D' with 80 kA breaker  Replace the Sporn 138 kV b2532 breaker 'O1' with 80 kA breaker  Replace the Sporn 138 kV b2533 breaker 'P2' with 80 kA breaker  Replace the Sporn 138 kV b2534 breaker  Replace the Sporn 138 kV				
Replace the Sporn 138 kV breaker 'D' with 80 kA breaker  Replace the Sporn 138 kV b2532 breaker 'O1' with 80 kA breaker  Replace the Sporn 138 kV b2533 breaker 'P2' with 80 kA breaker  Replace the Sporn 138 kV b2534 breaker 'U' with 80 kA breaker  Replace the Sporn 138 kV b2534 breaker 'U' with 80 kA breaker  Replace the Sporn 138 kV b2534 breaker 'U' with 80 kA breaker  Replace the Sporn 138 kV	b2530			
b2531 breaker 'D' with 80 kA breaker  Replace the Sporn 138 kV b2532 breaker 'O1' with 80 kA breaker  Replace the Sporn 138 kV b2533 breaker 'P2' with 80 kA breaker  Replace the Sporn 138 kV b2534 breaker 'U' with 80 kA breaker  Replace the Sporn 138 kV b2534 breaker 'U' with 80 kA breaker  Replace the Sporn 138 kV b2534 breaker 'U' with 80 kA breaker  Replace the Sporn 138 kV				AEP (100%)
breaker  Replace the Sporn 138 kV breaker 'O1' with 80 kA breaker  Replace the Sporn 138 kV b2533 breaker 'P2' with 80 kA breaker  Replace the Sporn 138 kV b2534 breaker 'U' with 80 kA breaker  Replace the Sporn 138 kV b2534 breaker 'U' with 80 kA breaker  Replace the Sporn 138 kV breaker  Replace the Sporn 138 kV				
Replace the Sporn 138 kV breaker 'O1' with 80 kA breaker Replace the Sporn 138 kV b2533 breaker 'P2' with 80 kA breaker AEP (100%)  Replace the Sporn 138 kV breaker AEP (100%)  Replace the Sporn 138 kV breaker 'U' with 80 kA breaker AEP (100%)  Replace the Sporn 138 kV	b2531			
b2532 breaker 'O1' with 80 kA breaker AEP (100%)  Replace the Sporn 138 kV b2533 breaker 'P2' with 80 kA breaker AEP (100%)  Replace the Sporn 138 kV b2534 breaker 'U' with 80 kA breaker AEP (100%)  Replace the Sporn 138 kV breaker AEP (100%)				AEP (100%)
breaker  Replace the Sporn 138 kV breaker 'P2' with 80 kA breaker  Replace the Sporn 138 kV breaker  Replace the Sporn 138 kV breaker 'U' with 80 kA breaker  Replace the Sporn 138 kV  Replace the Sporn 138 kV				
Replace the Sporn 138 kV breaker 'P2' with 80 kA breaker AEP (100%)  Replace the Sporn 138 kV b2534 breaker 'U' with 80 kA breaker AEP (100%)  Replace the Sporn 138 kV	b2532			
b2533 breaker 'P2' with 80 kA breaker AEP (100%)  Replace the Sporn 138 kV breaker 'U' with 80 kA breaker AEP (100%)  Replace the Sporn 138 kV				AEP (100%)
breaker AEP (100%)  Replace the Sporn 138 kV breaker 'U' with 80 kA breaker AEP (100%)  Replace the Sporn 138 kV				
Replace the Sporn 138 kV breaker 'U' with 80 kA breaker  Replace the Sporn 138 kV  Replace the Sporn 138 kV	b2533	breaker 'P2' with 80 kA		
b2534 breaker 'U' with 80 kA breaker AEP (100%)  Replace the Sporn 138 kV		breaker		AEP (100%)
breaker AEP (100%) Replace the Sporn 138 kV				
Replace the Sporn 138 kV	b2534	breaker 'U' with 80 kA		
		breaker		AEP (100%)
b2535   breaker 'O' with 80 kA				
	b2535	breaker 'O' with 80 kA		
breaker AEP (100%)		breaker		AEP (100%)

Required 11	ansmission emiancements. Annual Reven	de Requirement   Responsible Customer(s)
	Replace the Sporn 138 kV	
b2536	breaker 'O2' with 80 kA	
	breaker	AEP (100%)
	Replace the Robinson Park	
	138 kV breakers A1, A2,	
b2537	B1, B2, C1, C2, D1, D2,	
	E1, E2, and F1 with 63 kA	
	breakers	AEP (100%)
	Reconductor 0.5 miles	
	Tiltonsville – Windsor 138	
b2555	kV and string the vacant	
02333	side of the 4.5 mile section	
	using 556 ACSR in a six	
	wire configuration	AEP (100%)
	Install two 138 kV prop	
	structures to increase the	
b2556	maximum operating	
02330	temperature of the Clinch	
	River- Clinch Field 138 kV	
	line	AEP (100%)
	Temporary operating	
	procedure for delay of	
	upgrade b1464. Open the	
	Corner 138 kV circuit	
	breaker 86 for an overload	
b2581	of the Corner – Washington	
02361	MP 138 kV line. The tower	
	contingency loss of	
	Belmont – Trissler 138 kV	
	and Belmont – Edgelawn	
	138 kV should be added to	
	Operational contingency	AEP (100%)

Required 11	ansmission Ennancements Annual Re	venue Requirement	Responsible Customer(s)
	Construct a new 69 kV line		
	approximately 2.5 miles from		
b2591	Colfax to Drewry's. Construct		
02391	a new Drewry's station and		
	install a new circuit breaker at		
	Colfax station.		AEP (100%)
	Rebuild existing East		
	Coshocton – North Coshocton		
	double circuit line which		
b2592	contains Newcomerstown – N.		
	Coshocton 34.5 kV Circuit		
	and Coshocton – North		
	Coshocton 69 kV circuit		AEP (100%)
	Rebuild existing West Bellaire		
	- Glencoe 69 kV line with 138		
b2593	kV & 69 kV circuits and		
	install 138/69 kV transformer		
	at Glencoe Switch		AEP (100%)
	Rebuild 1.0 mile of Brantley –		
1.2504	Bridge Street 69 kV Line with		
b2594	1033 ACSR overhead		
	conductor		AEP (100%)
	Rebuild 7.82 mile Elkhorn		` ` `
1.2505 1	City – Haysi S.S 69 kV line		
b2595.1	utilizing 1033 ACSR built to		
	138 kV standards		AEP (100%)
	Rebuild 5.18 mile Moss –		, , ,
1.0505.0	Haysi SS 69 kV line utilizing		
b2595.2	1033 ACSR built to 138 kV		
	standards		AEP (100%)
	Move load from the 34.5 kV		, , ,
	bus to the 138 kV bus by		
b2596	installing a new 138/12 kV XF		
	at New Carlisle station in		
	Indiana		AEP (100%)
			`

required 11	ansimission Emianecinchis Amidai Revenue Requirement	Responsible Customer(s)
	Rebuild approximately 1	
	mi. section of Dragoon-	
	Virgil Street 34.5 kV line	
	between Dragoon and	
b2597	Dodge Tap switch and	
	replace Dodge switch	
	MOAB to increase thermal	
	capability of Dragoon-	
	Dodge Tap branch	AEP (100%)
	Rebuild approximately 1	
	mile section of the Kline-	
	Virgil Street 34.5 kV line	
b2598	between Kline and Virgil	
02398	Street tap. Replace MOAB	
	switches at Beiger, risers at	
	Kline, switches and bus at	
	Virgil Street.	AEP (100%)
	Rebuild approximately 0.1	
b2599	miles of 69 kV line between	
	Albion and Albion tap	AEP (100%)
1-2600	Rebuild Fremont – Pound	
b2600	line as 138 kV	AEP (100%)
1.2601	Fremont Station	
b2601	Improvements	AEP (100%)
	Replace MOAB towards	` ,
b2601.1	Beaver Creek with 138 kV	
	breaker	AEP (100%)
	Replace MOAB towards	` ,
b2601.2	Clinch River with 138 kV	
	breaker	AEP (100%)
b2601.3	Replace 138 kV Breaker A	· /
	with new bus-tie breaker	AEP (100%)
	Re-use Breaker A as high	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
b2601.4	side protection on	
	transformer #1	AEP (100%)
•	1	` /

1	distrission Emidicements 7 tinidal Rever	rue requirement responsible eustomer(s)
126017	Install two (2) circuit switchers	
b2601.5	on high side of transformers # 2	A TTP (4000())
	and 3 at Fremont Station	AEP (100%)
b2602.1	Install 138 kV breaker E2 at	
0200211	North Proctorville	AEP (100%)
	Construct 2.5 Miles of 138 kV	
b2602.2	1033 ACSR from East	
02002.2	Huntington to Darrah 138 kV	
	substations	AEP (100%)
	Install breaker on new line exit	
b2602.3	at Darrah towards East	
	Huntington	AEP (100%)
	Install 138 kV breaker on new	
b2602.4	line at East Huntington towards	
	Darrah	AEP (100%)
	Install 138 kV breaker at East	
b2602.5	Huntington towards North	
	Proctorville	AEP (100%)
b2603	Boone Area Improvements	. == ((000)
	-	AEP (100%)
	Purchase approximately a	
b2603.1	200X300 station site near	
3233211	Slaughter Creek 46 kV station	
	(Wilbur Station)	AEP (100%)
1.0.60.0	Install 3 138 kV circuit	
b2603.2	breakers, Cabin Creek to	A TTP (4000())
	Hernshaw 138 kV circuit	AEP (100%)
	Construct 1 mi. of double	
	circuit 138 kV line on Wilbur –	
	Boone 46 kV line with 1590	
b2603.3	ACSS 54/19 conductor @ 482	
	Degree design temp. and 1-159	
	12/7 ACSR and one 86	
	Sq.MM. 0.646" OPGW Static	177 (1999)
	wires	AEP (100%)
b2604	Bellefonte Transformer	
52001	Addition	AEP (100%)

AEP Service Corporation on behalf of its Affiliate Companies (AEP Indiana Michigan Transmission Company, AEP Kentucky Transmission Company, AEP Ohio Transmission Company, AEP West Virginia Transmission Company, Appalachian Power Company, Indiana Michigan Power Company, Kentucky Power Company, Kingsport Power Company, Ohio Power Company and Wheeling Power Company) (cont.)

	evenue requirement	Responsible Customer(s)
between Millbrook Park and		
Franklin Furnace		AEP (100%)
At Millbrook Park station,		
add a new 138/69 kV		
Transformer #2 (90 MVA)		
with 3000 A 40 kA breakers		
on the high and low side.		
Replace the 600 A MOAB		
switch and add a 3000 A		
circuit switcher on the high		
side of Transformer #1		AEP (100%)
Replace Sciotoville 69 kV		
station with a new 138/12 kV		
in-out station (Cottrell) with		
2000 A line MOABs facing		
Millbrook Park and East		
Wheelersburg 138 kV station		AEP (100%)
<u> </u>		
line using 795 ACSR 26/7		
Drake (SE 359 MVA)		AEP (100%)
Install a new 2000 A 3-way		
PoP switch outside of Texas		
Eastern 138 kV substation		
(Sadiq switch)		AEP (100%)
Replace the Wheelersburg 69		
kV station with a new 138/12		
kV in-out station (Sweetgum)		
with a 3000 A 40 kA breaker		
facing Sadiq switch and a		
2000 A 138 kV MOAB		
facing Althea		AEP (100%)
	Remove approximately 11.32 miles of the 69 kV line between Millbrook Park and Franklin Furnace  At Millbrook Park station, add a new 138/69 kV Transformer #2 (90 MVA) with 3000 A 40 kA breakers on the high and low side.  Replace the 600 A MOAB switch and add a 3000 A circuit switcher on the high side of Transformer #1  Replace Sciotoville 69 kV station with a new 138/12 kV in-out station (Cottrell) with 2000 A line MOABs facing Millbrook Park and East Wheelersburg 138 kV station  Tie Cottrell switch into the Millbrook Park – East Wheelersburg 138 kV circuit by constructing 0.50 mile of line using 795 ACSR 26/7  Drake (SE 359 MVA)  Install a new 2000 A 3-way PoP switch outside of Texas Eastern 138 kV substation (Sadiq switch)  Replace the Wheelersburg 69 kV station with a new 138/12 kV in-out station (Sweetgum) with a 3000 A 40 kA breaker facing Sadiq switch and a 2000 A 138 kV MOAB	miles of the 69 kV line between Millbrook Park and Franklin Furnace  At Millbrook Park station, add a new 138/69 kV  Transformer #2 (90 MVA) with 3000 A 40 kA breakers on the high and low side. Replace the 600 A MOAB switch and add a 3000 A circuit switcher on the high side of Transformer #1  Replace Sciotoville 69 kV station with a new 138/12 kV in-out station (Cottrell) with 2000 A line MOABs facing Millbrook Park and East Wheelersburg 138 kV station Tie Cottrell switch into the Millbrook Park – East Wheelersburg 138 kV circuit by constructing 0.50 mile of line using 795 ACSR 26/7 Drake (SE 359 MVA)  Install a new 2000 A 3-way PoP switch outside of Texas Eastern 138 kV substation (Sadiq switch)  Replace the Wheelersburg 69 kV station with a new 138/12 kV in-out station (Sweetgum) with a 3000 A 40 kA breaker facing Sadiq switch and a 2000 A 138 kV MOAB

AEP Service Corporation on behalf of its Affiliate Companies (AEP Indiana Michigan Transmission Company, AEP Kentucky Transmission Company, AEP Ohio Transmission Company, AEP West Virginia Transmission Company, Appalachian Power Company, Indiana Michigan Power Company, Kentucky Power Company, Kingsport Power Company, Ohio Power Company and Wheeling Power Company) (cont.)

Build approximately 1.4 miles of new 138 kV line using 795 ACSR 26/7 Drake (SE 359 MVA) between the new Sadiq switch and the new Sweetgum 138 kV station  b2604.8 Remove the existing 69 kV Hayport Road switch Rebuild approximately 2.3 miles along existing Right- Of-Way from Sweetgum to the Hayport Road switch 69 kV location as 138 kV single circuit and rebuild approximately 2.0 miles from the Hayport Road switch to Althea 69 kV with double circuit 138 kV construction, one side operated at 69 kV to continue service to K.O. Wheelersburg, using 795 ACSR 26/7 Drake (SE 359 MVA)  Build a new station (Althea) with a 138/69 kV, 90 MVA transformer. The 138 kV side will have a single 2000 A 40 kA circuit breaker and the 69 kV side will be a 2000 A 40 kA three breaker ring bus  Remote end work at Hanging Rock, East Wheelersburg and North Haverhill 138 kV AEP (100%)	required 11	ansinission Enhancements Annuar	revenue requirement	Responsible Cusiomer(s)
using 795 ACSR 26/7 Drake (SE 359 MVA) between the new Sadiq switch and the new Sweetgum 138 kV station  Benove the existing 69 kV Hayport Road switch Rebuild approximately 2.3 miles along existing Right- Of-Way from Sweetgum to the Hayport Road switch 69 kV location as 138 kV single circuit and rebuild approximately 2.0 miles from the Hayport Road switch to Althea 69 kV with double circuit 138 kV construction, one side operated at 69 kV to continue service to K.O. Wheelersburg, using 795 ACSR 26/7 Drake (SE 359 MVA)  Build a new station (Althea) with a 138/69 kV, 90 MVA transformer. The 138 kV side will have a single 2000 A 40 kA circuit breaker and the 69 kV side will be a 2000 A 40 kA three breaker ring bus Remote end work at Hanging Rock, East Wheelersburg and North		* * * * * * * * * * * * * * * * * * * *		
b2604.7 Drake (SE 359 MVA) between the new Sadiq switch and the new Sweetgum 138 kV station  b2604.8 Remove the existing 69 kV Hayport Road switch Rebuild approximately 2.3 miles along existing Right- Of-Way from Sweetgum to the Hayport Road switch 69 kV location as 138 kV single circuit and rebuild approximately 2.0 miles from the Hayport Road switch to Althea 69 kV with double circuit 138 kV construction, one side operated at 69 kV to continue service to K.O. Wheelersburg, using 795 ACSR 26/7 Drake (SE 359 MVA)  Build a new station (Althea) with a 138/69 kV, 90 MVA transformer. The 138 kV side will have a single 2000 A 40 kA circuit breaker and the 69 kV side will be a 2000 A 40 kA three breaker ring bus Remote end work at Hanging Rock, East Wheelersburg and North				
between the new Sadiq switch and the new Sweetgum 138 kV station  Beach Remove the existing 69 kV Hayport Road switch  Rebuild approximately 2.3 miles along existing Right- Of-Way from Sweetgum to the Hayport Road switch 69 kV location as 138 kV single circuit and rebuild approximately 2.0 miles from the Hayport Road switch to Althea 69 kV with double circuit 138 kV construction, one side operated at 69 kV to continue service to K.O. Wheelersburg, using 795 ACSR 26/7 Drake (SE 359 MVA)  Build a new station (Althea) with a 138/69 kV, 90 MVA transformer. The 138 kV side will have a single 2000 A 40 kA circuit breaker and the 69 kV side will be a 2000 A 40 kA three breaker ring bus Remote end work at Hanging Rock, East Wheelersburg and North	b2604.7	-		
switch and the new Sweetgum 138 kV station  b2604.8 Remove the existing 69 kV Hayport Road switch  Rebuild approximately 2.3 miles along existing Right- Of-Way from Sweetgum to the Hayport Road switch 69 kV location as 138 kV single circuit and rebuild approximately 2.0 miles from the Hayport Road switch to Althea 69 kV with double circuit 138 kV construction, one side operated at 69 kV to continue service to K.O. Wheelersburg, using 795 ACSR 26/7 Drake (SE 359 MVA)  Build a new station (Althea) with a 138/69 kV, 90 MVA transformer. The 138 kV side will have a single 2000 A 40 kA circuit breaker and the 69 kV side will be a 2000 A 40 kA three breaker ring bus  Remote end work at Hanging Rock, East Wheelersburg and North	0200117	·		
Sweetgum 138 kV station   AEP (100%)		_		
B2604.8 Hayport Road switch  Rebuild approximately 2.3 miles along existing Right-Of-Way from Sweetgum to the Hayport Road switch 69 kV location as 138 kV single circuit and rebuild approximately 2.0 miles from the Hayport Road switch to Althea 69 kV with double circuit 138 kV construction, one side operated at 69 kV to continue service to K.O. Wheelersburg, using 795 ACSR 26/7 Drake (SE 359 MVA)  Build a new station (Althea) with a 138/69 kV, 90 MVA transformer. The 138 kV side will have a single 2000 A 40 kA circuit breaker and the 69 kV side will be a 2000 A 40 kA three breaker ring bus  Benote end work at Hanging Rock, East Wheelersburg and North		Sweetgum 138 kV station		AEP (100%)
Rebuild approximately 2.3 miles along existing Right- Of-Way from Sweetgum to the Hayport Road switch 69 kV location as 138 kV single circuit and rebuild approximately 2.0 miles from the Hayport Road switch to Althea 69 kV with double circuit 138 kV construction, one side operated at 69 kV to continue service to K.O. Wheelersburg, using 795 ACSR 26/7 Drake (SE 359 MVA)  Build a new station (Althea) with a 138/69 kV, 90 MVA transformer. The 138 kV side will have a single 2000 A 40 kA circuit breaker and the 69 kV side will be a 2000 A 40 kA three breaker ring bus  Remote end work at Hanging Rock, East Wheelersburg and North	1-2604.9	Remove the existing 69 kV		
miles along existing Right-Of-Way from Sweetgum to the Hayport Road switch 69 kV location as 138 kV single circuit and rebuild approximately 2.0 miles from the Hayport Road switch to Althea 69 kV with double circuit 138 kV construction, one side operated at 69 kV to continue service to K.O. Wheelersburg, using 795 ACSR 26/7 Drake (SE 359 MVA)  Build a new station (Althea) with a 138/69 kV, 90 MVA transformer. The 138 kV side will have a single 2000 A 40 kA circuit breaker and the 69 kV side will be a 2000 A 40 kA three breaker ring bus  Remote end work at Hanging Rock, East Wheelersburg and North	02004.8	Hayport Road switch		AEP (100%)
Of-Way from Sweetgum to the Hayport Road switch 69 kV location as 138 kV single circuit and rebuild approximately 2.0 miles from the Hayport Road switch to Althea 69 kV with double circuit 138 kV construction, one side operated at 69 kV to continue service to K.O. Wheelersburg, using 795 ACSR 26/7 Drake (SE 359 MVA)  Build a new station (Althea) with a 138/69 kV, 90 MVA transformer. The 138 kV side will have a single 2000 A 40 kA circuit breaker and the 69 kV side will be a 2000 A 40 kA three breaker ring bus  Remote end work at Hanging Rock, East Wheelersburg and North		Rebuild approximately 2.3		
the Hayport Road switch 69 kV location as 138 kV single circuit and rebuild approximately 2.0 miles from the Hayport Road switch to Althea 69 kV with double circuit 138 kV construction, one side operated at 69 kV to continue service to K.O. Wheelersburg, using 795 ACSR 26/7 Drake (SE 359 MVA)  Build a new station (Althea) with a 138/69 kV, 90 MVA transformer. The 138 kV side will have a single 2000 A 40 kA circuit breaker and the 69 kV side will be a 2000 A 40 kA three breaker ring bus  Remote end work at Hanging Rock, East Wheelersburg and North				
kV location as 138 kV single circuit and rebuild approximately 2.0 miles from the Hayport Road switch to Althea 69 kV with double circuit 138 kV construction, one side operated at 69 kV to continue service to K.O. Wheelersburg, using 795 ACSR 26/7 Drake (SE 359 MVA)  Build a new station (Althea) with a 138/69 kV, 90 MVA transformer. The 138 kV side will have a single 2000 A 40 kA circuit breaker and the 69 kV side will be a 2000 A 40 kA three breaker ring bus  Remote end work at Hanging Rock, East Wheelersburg and North		Of-Way from Sweetgum to		
single circuit and rebuild approximately 2.0 miles from the Hayport Road switch to Althea 69 kV with double circuit 138 kV construction, one side operated at 69 kV to continue service to K.O. Wheelersburg, using 795 ACSR 26/7 Drake (SE 359 MVA)  Build a new station (Althea) with a 138/69 kV, 90 MVA transformer. The 138 kV side will have a single 2000 A 40 kA circuit breaker and the 69 kV side will be a 2000 A 40 kA three breaker ring bus  Remote end work at Hanging Rock, East Wheelersburg and North		the Hayport Road switch 69		
approximately 2.0 miles from the Hayport Road switch to Althea 69 kV with double circuit 138 kV construction, one side operated at 69 kV to continue service to K.O. Wheelersburg, using 795 ACSR 26/7 Drake (SE 359 MVA)  Build a new station (Althea) with a 138/69 kV, 90 MVA transformer. The 138 kV side will have a single 2000 A 40 kA circuit breaker and the 69 kV side will be a 2000 A 40 kA three breaker ring bus  Remote end work at Hanging Rock, East Wheelersburg and North		kV location as 138 kV		
from the Hayport Road switch to Althea 69 kV with double circuit 138 kV construction, one side operated at 69 kV to continue service to K.O. Wheelersburg, using 795 ACSR 26/7 Drake (SE 359 MVA)  Build a new station (Althea) with a 138/69 kV, 90 MVA transformer. The 138 kV side will have a single 2000 A 40 kA circuit breaker and the 69 kV side will be a 2000 A 40 kA three breaker ring bus  Remote end work at Hanging Rock, East Wheelersburg and North		single circuit and rebuild		
switch to Althea 69 kV with double circuit 138 kV construction, one side operated at 69 kV to continue service to K.O. Wheelersburg, using 795 ACSR 26/7 Drake (SE 359 MVA)  Build a new station (Althea) with a 138/69 kV, 90 MVA transformer. The 138 kV side will have a single 2000 A 40 kA circuit breaker and the 69 kV side will be a 2000 A 40 kA three breaker ring bus  Remote end work at Hanging Rock, East Wheelersburg and North		approximately 2.0 miles		
switch to Althea 69 kV with double circuit 138 kV construction, one side operated at 69 kV to continue service to K.O. Wheelersburg, using 795 ACSR 26/7 Drake (SE 359 MVA)  Build a new station (Althea) with a 138/69 kV, 90 MVA transformer. The 138 kV side will have a single 2000 A 40 kA circuit breaker and the 69 kV side will be a 2000 A 40 kA three breaker ring bus  Remote end work at Hanging Rock, East Wheelersburg and North	1-2604.0	from the Hayport Road		
construction, one side operated at 69 kV to continue service to K.O. Wheelersburg, using 795 ACSR 26/7 Drake (SE 359 MVA)  Build a new station (Althea) with a 138/69 kV, 90 MVA transformer. The 138 kV side will have a single 2000 A 40 kA circuit breaker and the 69 kV side will be a 2000 A 40 kA three breaker ring bus  Remote end work at Hanging Rock, East Wheelersburg and North	62604.9	switch to Althea 69 kV with		
operated at 69 kV to continue service to K.O. Wheelersburg, using 795 ACSR 26/7 Drake (SE 359 MVA)  Build a new station (Althea) with a 138/69 kV, 90 MVA transformer. The 138 kV side will have a single 2000 A 40 kA circuit breaker and the 69 kV side will be a 2000 A 40 kA three breaker ring bus  Remote end work at Hanging Rock, East Wheelersburg and North		double circuit 138 kV		
operated at 69 kV to continue service to K.O. Wheelersburg, using 795 ACSR 26/7 Drake (SE 359 MVA)  Build a new station (Althea) with a 138/69 kV, 90 MVA transformer. The 138 kV side will have a single 2000 A 40 kA circuit breaker and the 69 kV side will be a 2000 A 40 kA three breaker ring bus  Remote end work at Hanging Rock, East Wheelersburg and North		construction, one side		
continue service to K.O. Wheelersburg, using 795 ACSR 26/7 Drake (SE 359 MVA)  Build a new station (Althea) with a 138/69 kV, 90 MVA transformer. The 138 kV side will have a single 2000 A 40 kA circuit breaker and the 69 kV side will be a 2000 A 40 kA three breaker ring bus  Remote end work at Hanging Rock, East Wheelersburg and North				
ACSR 26/7 Drake (SE 359 MVA)  Build a new station (Althea) with a 138/69 kV, 90 MVA transformer. The 138 kV side will have a single 2000 A 40 kA circuit breaker and the 69 kV side will be a 2000 A 40 kA three breaker ring bus  Remote end work at Hanging Rock, East Wheelersburg and North  AEP (100%)				
ACSR 26/7 Drake (SE 359 MVA)  Build a new station (Althea) with a 138/69 kV, 90 MVA transformer. The 138 kV side will have a single 2000 A 40 kA circuit breaker and the 69 kV side will be a 2000 A 40 kA three breaker ring bus  Remote end work at Hanging Rock, East Wheelersburg and North  AEP (100%)		Wheelersburg, using 795		
b2604.10  MVA)  Build a new station (Althea) with a 138/69 kV, 90 MVA transformer. The 138 kV side will have a single 2000 A 40 kA circuit breaker and the 69 kV side will be a 2000 A 40 kA three breaker ring bus  Remote end work at Hanging Rock, East Wheelersburg and North				
b2604.10  with a 138/69 kV, 90 MVA transformer. The 138 kV side will have a single 2000 A 40 kA circuit breaker and the 69 kV side will be a 2000 A 40 kA three breaker ring bus  Remote end work at Hanging Rock, East Wheelersburg and North		` `		AEP (100%)
b2604.10  transformer. The 138 kV side will have a single 2000 A 40 kA circuit breaker and the 69 kV side will be a 2000 A 40 kA three breaker ring bus  Remote end work at Hanging Rock, East Wheelersburg and North		Build a new station (Althea)		
b2604.10 side will have a single 2000 A 40 kA circuit breaker and the 69 kV side will be a 2000 A 40 kA three breaker ring bus  Remote end work at Hanging Rock, East Wheelersburg and North		with a 138/69 kV, 90 MVA		
b2604.10  A 40 kA circuit breaker and the 69 kV side will be a 2000 A 40 kA three breaker ring bus  BERNOTE BE		transformer. The 138 kV		
b2604.11  A 40 kA circuit breaker and the 69 kV side will be a 2000 A 40 kA three breaker ring bus  Remote end work at Hanging Rock, East Wheelersburg and North	<b>b</b> 2604 10	side will have a single 2000		
2000 A 40 kA three breaker ring bus  Remote end work at Hanging Rock, East Wheelersburg and North  AEP (100%)	02004.10	A 40 kA circuit breaker and		
ring bus  Remote end work at Hanging Rock, East Wheelersburg and North		the 69 kV side will be a		
b2604.11 Remote end work at Hanging Rock, East Wheelersburg and North		2000 A 40 kA three breaker		
b2604.11 Hanging Rock, East Wheelersburg and North		ring bus		AEP (100%)
Wheelersburg and North		Remote end work at		
Wheelersburg and North	1-2604 11	Hanging Rock, East		
Haverhill 138 kV AEP (100%)	62604.11			
		Haverhill 138 kV		AEP (100%)

Rebuild and reconductor Kammer – George Washington 69 kV circuit and George Washington – Moundsville ckt #1, designed for 138 kV. Upgrade limiting equipment at remote ends and at tap stations  Convert Bane – Hammondsville from 23 kV to 69 kV operation  AEP (100%)  AEP (100%)
Washington 69 kV circuit and George Washington – Moundsville ckt #1, designed for 138 kV. Upgrade limiting equipment at remote ends and at tap stations  Convert Bane – b2606 Hammondsville from 23 kV to 69 kV operation  AEP (100%)  AEP (100%)
b2605 George Washington – Moundsville ckt #1, designed for 138 kV. Upgrade limiting equipment at remote ends and at tap stations Convert Bane – b2606 Hammondsville from 23 kV to 69 kV operation AEP (100%)  AEP (100%)
Moundsville ckt #1, designed for 138 kV. Upgrade limiting equipment at remote ends and at tap stations  Convert Bane —  b2606 Hammondsville from 23 kV to 69 kV operation  AEP (100%)  AEP (100%)
Moundsville ckt #1, designed for 138 kV. Upgrade limiting equipment at remote ends and at tap stations  Convert Bane — b2606 Hammondsville from 23 kV to 69 kV operation  AEP (100%)  AEP (100%)
equipment at remote ends and at tap stations  Convert Bane – b2606 Hammondsville from 23 kV to 69 kV operation  AEP (100%)  AEP (100%)
at tap stations  Convert Bane –  b2606 Hammondsville from 23 kV to 69 kV operation  AEP (100%)  AEP (100%)
Convert Bane –  b2606 Hammondsville from 23 kV to 69 kV operation AEP (100%)
b2606 Hammondsville from 23 kV to 69 kV operation AEP (100%)
69 kV operation AEP (100%) b2607 Pine Gap Relay Limit Increase
b2607 Pine Gan Relay Limit Increase
b2607 Pine Gan Relay Limit Increase
b260/ Pine Gap Relay Limit Increase AED (100%)
ALF (10070)
b2608 Richlands Relay Upgrade AEP (100%)
Thorofare – Goff Run –
b2609 Powell Mountain 138 kV
Build AEP (100%)
Rebuild Pay Branch _
b2610   Resulted Fax Branch   Scaraboro as 138 kV   AEP (100%)
ALI (10070)
b2611 Skin Fork Area Improvements
New 138/46 kV station near   AEP (100%)
b2611.1 Skin Fork and other
components AEP (100%)
Construct 3.2 miles of 1033
ACSR double circuit from
b2611.2   new Station to cut into
Sundial-Baileysville 138 kV
line AEP (100%)
Replace metering BCT on
Tanners Creek CB T2 with a
slip over CT with higher
b2634.1 thermal rating in order to
remove 1193 MVA limit on
facility (Miami Fort-Tanners
Creek 345 kV line) AEP (100%)

Required 11	ransmission Ennancements Annua	i Kevenue Kequirement	Responsible Customer(s)
b2643	Replace the Darrah 138 kV breaker 'L' with 40 kA		
	rated breaker		AEP (100%)
b2645	Ohio Central 138 kV Loop		AEP (100%)
b2667	Replace the Muskingum 138 kV bus # 1 and 2		AEP (100%)
b2668	Reconductor Dequine to Meadow Lake 345 kV circuit #1 utilizing dual 954 ACSR 54/7 cardinal conductor		AEP (100%)
b2669	Install a second 345/138 kV transformer at Desoto		AEP (100%)
b2670	Replace switch at Elk Garden 138 kV substation (on the Elk Garden – Lebanon 138 kV circuit)		AEP (100%)
b2671	Replace/upgrade/add terminal equipment at Bradley, Mullensville, Pinnacle Creek, Itmann, and Tams Mountain 138 kV substations. Sag study on Mullens – Wyoming and Mullens – Tams Mt. 138 kV circuits		AEP (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) **Load-Ratio Share Allocation:** AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%) / Dayton (2.12%) / DEOK (3.37%) / DL (1.76%) / DPL (2.55%) / Dominion Install a +/- 450 MVAR (12.97%) / EKPC (1.81%) / b2687.1 SVC at Jacksons Ferry 765 JCPL (3.92%) / ME (1.95%) / kV substation NEPTUNE\* (0.24%) / OVEC (0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) **DFAX Allocation:** AEP (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Tr	ansmission Enhancements Annua	l Revenue Requirement	Responsible Customer(s)
			<b>Load-Ratio Share Allocation:</b>
			AEC (1.67%) / AEP (13.94%) /
			APS (5.64%) / ATSI (8.02%) /
			BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
	Install a 300 MVAR shunt		DEOK (3.37%) / DL (1.76%) /
	line reactor on the		DPL (2.55%) / Dominion
b2687.2	Broadford end of the		(12.97%) / EKPC (1.81%) /
02087.2	Broadford – Jacksons Ferry		JCPL (3.92%) / ME (1.95%) /
	765 kV line		NEPTUNE* (0.24%) / OVEC
	703 KV IIIC		(0.07%) / PECO (5.39%) /
			PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			<b>DFAX Allocation:</b>
			AEP (100%)
	Mitigate violations		
	identified by sag study to		
	operate Fieldale-Thornton-		
b2697.1	Franklin 138 kV overhead		
02077.1	line conductor at its max.		
	operating temperature. 6		
	potential line crossings to		
	be addressed		AEP (100%)
b2697.2	Replace terminal equipment		
	at AEP's Danville and East		
	Danville substations to		
	improve thermal capacity of		
	Danville – East Danville		
	138 kV circuit		AEP (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

STRESSION EMILITIES / MINICAL		responsible editionier(s)
•		
Cloverdale and Jackson's		
Ferry substations to improve		
he thermal capacity of		
Cloverdale – Jackson's Ferry		
765 kV line		AEP (100%)
Construct Herlan station as		
oreaker and a half		
configuration with 9-138 kV		
CB's on 4 strings and with 2-		
28.8 MVAR capacitor banks		AEP (100%)
Construct new 138 kV line		
From Herlan station to Blue		
Racer station. Estimated		
approx. 3.2 miles of 1234		
ACSS/TW Yukon and		
OPGW		AEP (100%)
Install 1-138 kV CB at Blue		
Racer to terminate new		
Herlan circuit		AEP (100%)
Rebuild/upgrade line		
between Glencoe and		
Willow Grove Switch 69 kV		AEP (100%)
Build approximately 11.5		
niles of 34.5 kV line with		
556.5 ACSR 26/7 Dove		
conductor on wood poles		
from Flushing station to		
Smyrna station		AEP (100%)
Replace the South Canton		
138 kV breakers 'K', 'J',		
J1', and 'J2' with 80 kA		
oreakers		AEP (100%)
	Replace relays at AEP's Cloverdale and Jackson's Ferry substations to improve the thermal capacity of Cloverdale – Jackson's Ferry 165 kV line Construct Herlan station as preaker and a half configuration with 9-138 kV CB's on 4 strings and with 2- 18.8 MVAR capacitor banks Construct new 138 kV line from Herlan station to Blue Racer station. Estimated approx. 3.2 miles of 1234 ACSS/TW Yukon and DPGW Install 1-138 kV CB at Blue Racer to terminate new Herlan circuit Rebuild/upgrade line Detween Glencoe and Willow Grove Switch 69 kV Build approximately 11.5 Iniles of 34.5 kV line with 156.5 ACSR 26/7 Dove Conductor on wood poles From Flushing station to Comyrna station Replace the South Canton 38 kV breakers 'K', 'J', J1', and 'J2' with 80 kA	Replace relays at AEP's Cloverdale and Jackson's Gerry substations to improve the thermal capacity of Cloverdale – Jackson's Ferry 165 kV line Construct Herlan station as breaker and a half configuration with 9-138 kV CB's on 4 strings and with 2- 18.8 MVAR capacitor banks Construct new 138 kV line from Herlan station to Blue Racer station. Estimated pprox. 3.2 miles of 1234 ACSS/TW Yukon and DPGW Install 1-138 kV CB at Blue Racer to terminate new Herlan circuit Rebuild/upgrade line between Glencoe and Willow Grove Switch 69 kV Build approximately 11.5 Iniles of 34.5 kV line with 156.5 ACSR 26/7 Dove conductor on wood poles from Flushing station to Smyrna station Replace the South Canton 38 kV breakers 'K', 'J', JI', and 'J2' with 80 kA

required 11	ansimission Emiancements Aminual	revenue requirement	responsible cusionici(s)
b2731	Convert the Sunnyside –		
	East Sparta – Malvern 23 kV		
	sub-transmission network to		
	69 kV. The lines are already		
	built to 69 kV standards		AEP (100%)
	Replace South Canton 138		
b2733	kV breakers 'L' and 'L2'		
	with 80 kA rated breakers		AEP (100%)
	Retire Betsy Layne		
	138/69/43 kV station and		
1.0750.1	replace it with the greenfield		
b2750.1	Stanville station about a half		
	mile north of the existing		
	Betsy Layne station		AEP (100%)
	Relocate the Betsy Layne		
	capacitor bank to the		
b2750.2	Stanville 69 kV bus and		
	increase the size to 14.4		
	MVAR		AEP (100%)
	Replace existing George		
	Washington station 138 kV		
	yard with GIS 138 kV		
1 0752 1	breaker and a half yard in		
b2753.1	existing station footprint.		
	Install 138 kV revenue		
	metering for new IPP		
	connection		AEP (100%)
b2753.2	Replace Dilles Bottom 69/4		
	kV Distribution station as		
	breaker and a half 138 kV		
	yard design including AEP		
	Distribution facilities but		
	initial configuration will		
	constitute a 3 breaker ring		
	bus		AEP (100%)
	1		/ /

b2753.3	Connect two 138 kV 6-wired circuits from "Point A" (currently de-energized and owned by FirstEnergy) in circuit positions previously designated Burger #1 & Burger #2 138 kV. Install interconnection settlement	
	metering on both circuits	AED (1009/)
	exiting Holloway	AEP (100%)
	Build double circuit 138 kV	
	line from Dilles Bottom to "Point A". Tie each new	
	AEP circuit in with a 6-wired	
b2753.6	line at Point A. This will	
02/33.0	create a Dilles Bottom –	
	Holloway 138 kV circuit and	
	a George Washington –	
	Holloway 138 kV circuit	AEP (100%)
	Retire line sections (Dilles	
	Bottom – Bellaire and	
	Moundsville – Dilles Bottom	
	69 kV lines) south of	
b2753.7	FirstEnergy 138 kV line	
02/33./	corridor, near "Point A". Tie	
	George Washington –	
	Moundsville 69 kV circuit to	
	George Washington – West	
	Bellaire 69 kV circuit	AEP (100%)
b2753.8	Rebuild existing 69 kV line	
	as double circuit from	
	George Washington – Dilles	
	Bottom 138 kV. One circuit	
	will cut into Dilles Bottom	
	138 kV initially and the other	
	will go past with future plans	AED (1000/)
	to cut in	AEP (100%)

		 responsible editioner(s)
	Perform a Sag Study of the	
b2760	Saltville – Tazewell 138 kV	
	line to increase the thermal	
	rating of the line	AEP (100%)
b2761.1	Replace the Hazard 161/138	
	kV transformer	AEP (100%)
	Perform a Sag Study of the	
b2761.2	Hazard – Wooten 161 kV line	
02/01.2	to increase the thermal rating	
	of the line	AEP (100%)
	Rebuild the Hazard – Wooton	
b2761.3	161 kV line utilizing 795 26/7	
02/01.3	ACSR conductor (300 MVA	
	rating)	AEP (100%)
	Perform a Sag Study of Nagel	
b2762	– West Kingsport 138 kV line	
02/02	to increase the thermal rating	
	of the line	AEP (100%)
	Reconductor the entire	
b2776	Dequine – Meadow Lake 345	
	kV circuit #2	AEP (100%)
	Reconductor the entire	
b2777	Dequine – Eugene 345 kV	
	circuit #1	EKPC (100%)
	Construct a new 138 kV	
b2779.1	station, Campbell Road,	
62//9.1	tapping into the Grabill –	
	South Hicksville138 kV line	AEP (100%)
	Reconstruct sections of the	
	Butler-N.Hicksville and	
b2779.2	Auburn-Butler 69 kV circuits	
62779.2	as 138 kV double circuit and	
	extend 138 kV from	
	Campbell Road station	AEP (100%)

ansimission Edinaricements 7 minuti 1	te venue requirement	Responsible Cusiomer(s)
Construct a new 345/138 kV		
$\boldsymbol{\mathcal{C}}$		
and 138 kV, respectively		AEP (100%)
Loop 138 kV circuits in-out		
138 kV station resulting in a		
direct circuit to Auburn 138		
kV and an indirect circuit to		
Auburn and Rob Park via		
Dunton Lake, and a circuit to		
Campbell Road; Reconductor		
138 kV line section between		
Dunton Lake – SDI		
Wilmington		AEP (100%)
F 1 A 1 1201371		
Expand Auburn 138 kV bus		AEP (100%)
Construct a 345 kV ring bus		
at Dunton Lake to serve Steel		
Dynamics, Inc. (SDI) load at		
345 kV via two (2) circuits		AEP (100%)
Retire Collingwood 345 kV		
station		AEP (100%)
Reconductor 0.53 miles (14		
spans) of the Kaiser Jct Air		
Force Jct. Sw section of the		
Kaiser - Heath 69 kV		
circuit/line with 336 ACSR to		
match the rest of the circuit		
(73 MVA rating, 78%		
loading)		AEP (100%)
	Construct a new 345/138 kV SDI Wilmington Station which will be sourced from Collingwood 345 kV and serve the SDI load at 345 kV and 138 kV, respectively Loop 138 kV circuits in-out of the new SDI Wilmington 138 kV station resulting in a direct circuit to Auburn 138 kV and an indirect circuit to Auburn and Rob Park via Dunton Lake, and a circuit to Campbell Road; Reconductor 138 kV line section between Dunton Lake – SDI Wilmington  Expand Auburn 138 kV bus  Construct a 345 kV ring bus at Dunton Lake to serve Steel Dynamics, Inc. (SDI) load at 345 kV via two (2) circuits  Retire Collingwood 345 kV station  Reconductor 0.53 miles (14 spans) of the Kaiser Jct Air Force Jct. Sw section of the Kaiser - Heath 69 kV circuit/line with 336 ACSR to match the rest of the circuit (73 MVA rating, 78%	SDI Wilmington Station which will be sourced from Collingwood 345 kV and serve the SDI load at 345 kV and 138 kV, respectively Loop 138 kV circuits in-out of the new SDI Wilmington 138 kV station resulting in a direct circuit to Auburn 138 kV and an indirect circuit to Auburn and Rob Park via Dunton Lake, and a circuit to Campbell Road; Reconductor 138 kV line section between Dunton Lake – SDI Wilmington  Expand Auburn 138 kV bus  Construct a 345 kV ring bus at Dunton Lake to serve Steel Dynamics, Inc. (SDI) load at 345 kV via two (2) circuits  Retire Collingwood 345 kV station  Reconductor 0.53 miles (14 spans) of the Kaiser Jct Air Force Jct. Sw section of the Kaiser - Heath 69 kV circuit/line with 336 ACSR to match the rest of the circuit (73 MVA rating, 78%

required 11	dibiliboloti Elilianeelileile 7 lillaal 1	to volicio i toquin ominom	responsible edistorner(s)
	Install a new 3-way 69 kV		
b2788	line switch to provide service		
	to AEP's Barnesville		
	distribution station. Remove a		
	portion of the #1 copper T-		
	Line from the 69 kV through-		
	path		AEP (100%)
b2789	Rebuild the Brues - Glendale		
	Heights 69 kV line section (5		
	miles) with 795 ACSR (128		
	MVA rating, 43% loading)		AEP (100%)

required 11	ansimission Emianecinents	Annual Revenue Requirem	icht Responsible Cusionici(s)
b2790	Install a 3 MVAR, 34.5 kV		
	cap bank at Caldwell		
	substation		AEP (100%)
b2791	Rebuild Tiffin – Howard, new		
	transformer at Chatfield		AEP (100%)
	Rebuild portions of the East		
	Tiffin - Howard 69 kV line		
	from East Tiffin to West		
b2791.1	Rockaway Switch (0.8 miles)		
	using 795 ACSR Drake		
	conductor (129 MVA rating,		
	50% loading)		AEP (100%)
	Rebuild Tiffin - Howard 69		
	kV line from St. Stephen's		
	Switch to Hinesville (14.7		
b2791.2	miles) using 795 ACSR		
	Drake conductor (90 MVA		
	rating, non-conductor limited,		
	38% loading)		AEP (100%)
	New 138/69 kV transformer		
b2791.3	with 138/69 kV protection at		
	Chatfield		AEP (100%)
b2791.4	New 138/69 kV protection at		
02/91.4	existing Chatfield transformer		AEP (100%)
	Replace the Elliott		
	transformer with a 130 MVA		
b2792	unit, reconductor 0.42 miles		
	of the Elliott – Ohio		
	University 69 kV line with		
	556 ACSR to match the rest		
	of the line conductor (102		
	MVA rating, 73% loading)		
	and rebuild 4 miles of the		
	Clark Street – Strouds R		AEP (100%)

Ttoquirea 11	turisminission Emiliarectricitis 7 milia	ar the venue resquirement responsible easiemer(s)
	Energize the spare Fremont Center	
b2793	138/69 kV 130 MVA transformer	
02773	#3. Reduces overloaded facilities to	
	46% loading	AEP (100%)
	Construct new 138/69/34 kV	
	station and 1-34 kV circuit	
b2794	(designed for 69 kV) from new	
02/94	station to Decliff station,	
	approximately 4 miles, with 556	
	ACSR conductor (51 MVA rating)	AEP (100%)
	Install a 34.5 kV 4.8 MVAR	
b2795	capacitor bank at Killbuck 34.5 kV	
	station	AEP (100%)
	Rebuild the Malvern - Oneida	
1.2707	Switch 69 kV line section with 795	
b2796	ACSR (1.8 miles, 125 MVA rating,	
	55% loading)	AEP (100%)
	Rebuild the Ohio Central -	
	Conesville 69 kV line section (11.8	
	miles) with 795 ACSR conductor	
b2797	(128 MVA rating, 57% loading).	
	Replace the 50 MVA Ohio Central	
	138/69 kV XFMR with a 90 MVA	
	unit	AEP (100%)
	Install a 14.4 MVAR capacitor	
	bank at West Hicksville station.	
b2798	Replace ground switch/MOAB at	
	West Hicksville with a circuit	
	switcher	AEP (100%)
	Rebuild Valley - Almena, Almena -	
	Hartford, Riverside - South Haven	
b2799	69 kV lines. New line exit at	
	Valley Station. New transformers	
	at Almena and Hartford	AEP (100%)

Required 11	ansmission Ennancements	Allitual Revenue Require	ment Responsible Customer(s)
	Rebuild 12 miles of Valley –		
	Almena 69 kV line as a		
	double circuit 138/69 kV line		
b2799.1	using 795 ACSR conductor		
02/99.1	(360 MVA rating) to		
	introduce a new 138 kV		
	source into the 69 kV load		
	pocket around Almena station		AEP (100%)
	Rebuild 3.2 miles of Almena		
b2799.2	to Hartford 69 kV line using		
62/99.2	795 ACSR conductor (90		
	MVA rating)		AEP (100%)
	Rebuild 3.8 miles of		
b2799.3	Riverside – South Haven 69		
02/99.3	kV line using 795 ACSR		
	conductor (90 MVA rating)		AEP (100%)
	At Valley station, add new		
	138 kV line exit with a 3000		
b2799.4	A 40 kA breaker for the new		
02/99.4	138 kV line to Almena and		
	replace CB D with a 3000 A		
	40 kA breaker		AEP (100%)
	At Almena station, install a		
	90 MVA 138/69 kV		
b2799.5	transformer with low side		
02/99.3	3000 A 40 kA breaker and		
	establish a new 138 kV line		
	exit towards Valley		AEP (100%)
	At Hartford station, install a		
	second 90 MVA 138/69 kV		
b2799.6	transformer with a circuit		
	switcher and 3000 A 40 kA		
	low side breaker		AEP (100%)

ansimission Limanecinents	Annual Revenue Requirement	responsible Customer(s)
Replace Delaware 138 kV		
		, ,
breaker		AEP (100%)
Replace West Huntington 138		
kV breaker 'F' with a 40 kA		
breaker		AEP (100%)
Replace Madison 138 kV		
breaker 'V' with a 63 kA		
breaker		AEP (100%)
Replace Sterling 138 kV		
breaker 'G' with a 40 kA		
breaker		AEP (100%)
Replace Morse 138 kV		
breakers '103', '104', '105',		
and '106' with 63 kA		
breakers		AEP (100%)
Replace Clinton 138 kV		
breakers '105' and '107' with		
63 kA breakers		AEP (100%)
Install 300 MVAR reactor at		
Ohio Central 345 kV		
substation		AEP (100%)
	Replace Delaware 138 kV breaker 'P' with a 40 kA breaker Replace West Huntington 138 kV breaker 'F' with a 40 kA breaker Replace Madison 138 kV breaker 'V' with a 63 kA breaker Replace Sterling 138 kV breaker 'G' with a 40 kA breaker Replace Morse 138 kV breakers '103', '104', '105', and '106' with 63 kA breakers Replace Clinton 138 kV breakers '105' and '107' with 63 kA breakers Install 300 MVAR reactor at Ohio Central 345 kV	Replace Delaware 138 kV breaker 'P' with a 40 kA breaker  Replace West Huntington 138 kV breaker 'F' with a 40 kA breaker  Replace Madison 138 kV breaker 'V' with a 63 kA breaker  Replace Sterling 138 kV breaker 'G' with a 40 kA breaker  Replace Morse 138 kV breakers '103', '104', '105', and '106' with 63 kA breakers  Replace Clinton 138 kV breakers '105' and '107' with 63 kA breakers  Install 300 MVAR reactor at Ohio Central 345 kV

ansimission Emiliarections 7 milian Revenue Re	quirement responsible customer(s)
	AEP (100%)
Upgrade the Tanner Creek –	
Miami Fort 345 kV circuit	DFAX Allocation:
(AEP portion)	Dayton (99.99%) / EKPC (0.01%)
Six wire the Kyger Creek –	
Sporn 345 kV circuits #1 and	
#2 and convert them to one	
circuit	AEP (100%)
Reconductor the Maddox	
Creek – East Lima 345 kV	
	DFAX Allocation:
	AEP (79.96%) / Dayton (20.04%)
	11D1 (1919010) 1 Dujton (2010 170)
_	
	AEP (100%)
	1121 (10070)
	AEP (100%)
	71L1 (10070)
	AEP (100%)
	AEI (10070)
· •	
	A ED (100%)
	AEP (100%)
	A ED (1000/)
	AEP (100%)
conductor (90 MVA rating)	AEP (100%)
	(AEP portion) Six wire the Kyger Creek – Sporn 345 kV circuits #1 and #2 and convert them to one

Required 11	ansimission Emiancements	Annual Revenue Require	ment Responsible Customer(s)
	Rebuild ~1.7 miles of the		
	Dunn Hollow – London 46		
b2881	kV line section utilizing 795		
02001	26/7 ACSR conductor (58		
	MVA rating, non-conductor		
	limited)		AEP (100%)
	Rebuild Reusens - Peakland		
b2882	Switch 69 kV line. Replace		
	Peakland Switch		AEP (100%)
	Rebuild the Reusens -		
	Peakland Switch 69 kV line		
b2882.1	(approximately 0.8 miles)		
02002.1	utilizing 795 ACSR		
	conductor (86 MVA rating,		
	non-conductor limited)		AEP (100%)
	Replace existing Peakland S.S		
b2882.2	with new 3 way switch phase		
	over phase structure		AEP (100%)
	Rebuild the Craneco – Pardee		
	– Three Forks – Skin Fork 46		
b2883	kV line section		
02883	(approximately 7.2 miles)		
	utilizing 795 26/7 ACSR		
	conductor (108 MVA rating)		AEP (100%)
	Install a second transformer at		
	Nagel station, comprised of 3		
	single phase 250 MVA		
	500/138 kV transformers.		
b2884	Presently, TVA operates their		
02884	end of the Boone Dam –		
	Holston 138 kV		
	interconnection as normally		
	open preemptively for the loss		
	of the existing Nagel		AEP (100%)
b2885	New delivery point for City		
	of Jackson		AEP (100%)

requires in	CHISTINGSTON EMINGREENITORIS	Tunidad reconded recommental responsible Castoffic (b)
	Install a new Ironman Switch	
	to serve a new delivery point	
b2885.1	requested by the City of	
	Jackson for a load increase	
	request	AEP (100%)
	Install a new 138/69 kV	
	station (Rhodes) to serve as a	
b2885.2	third source to the area to help	
	relieve overloads caused by	
	the customer load increase	AEP (100%)
	Replace Coalton Switch with	
b2885.3	a new three breaker ring bus	
	(Heppner)	AEP (100%)
	Install 90 MVA 138/69 kV	
	transformer, new transformer	
b2886	high and low side 3000 A 40	
02880	kA CBs, and a 138 kV 40 kA	
	bus tie breaker at West End	
	Fostoria	AEP (100%)
	Add 2-138 kV CB's and	
	relocate 2-138 kV circuit exits	
ь2887	to different bays at Morse	
02007	Road. Eliminate 3 terminal	
	line by terminating Genoa -	
	Morse circuit at Morse Road	AEP (100%)
	Retire Poston substation.	
b2888	Install new Lemaster	
	substation	AEP (100%)
b2888.1	Remove and retire the Poston	
32000.1	138 kV station	AEP (100%)
	Install a new greenfield	
b2888.2	station, Lemaster 138 kV	
	Station, in the clear	AEP (100%)

required in		Milital Revenue Requirement	t responsible editioner(s)
	Relocate the Trimble 69 kV AEP Ohio radial delivery point		
b2888.3	to 138 kV, to be served off of		
	the Poston – Strouds Run –		
	Crooksville 138 kV circuit via a		
	new three-way switch. Retire the	;	
	Poston - Trimble 69 kV line		AEP (100%)
b2889	Expand Cliffview station		AED (1000/)
	Cl:CC: C4 4: E 4 11: 1 120		AEP (100%)
	Cliffview Station: Establish 138 kV bus. Install two 138/69 kV		
b2889.1			
02889.1	XFRs (130 MVA), six 138 kV	,	
	CBs (40 kA 3000 A) and four 69	'	AED (100%)
	kV CBs (40 kA 3000 A) Byllesby – Wythe 69 kV: Retire		AEP (100%)
	all 13.77 miles (1/0 CU) of this	,	
b2889.2	circuit (~4 miles currently in		
	national forest)		AEP (100%)
	Galax – Wythe 69 kV: Retire		ALI (10070)
	13.53 miles (1/0 CU section) of		
	line from Lee Highway down to		
	Byllesby. This section is		
b2889.3	currently double circuited with		
02009.5	Byllesby – Wythe 69 kV.		
	Terminate the southern 3/0		
	ACSR section into the newly		
	opened position at Byllesby		AEP (100%)
	Cliffview Line: Tap the existing		(/
	Pipers Gap – Jubal Early 138 kV		
	line section. Construct double		
b2889.4	circuit in/out (~2 miles) to		
9200311	newly established 138 kV bus,		
	utilizing 795 26/7 ACSR		
	conductor		AEP (100%)

Required 1	ransmission Ennancements	Allitual Revenue Requirer	nent Responsible Customer(s)
	Rebuild 23.55 miles of the East		
	Cambridge – Smyrna 34.5 kV		
b2890.1	circuit with 795 ACSR		
	conductor (128 MVA rating)		
	and convert to 69 kV		AEP (100%)
	East Cambridge: Install a 2000		
1.2000.2	A 69 kV 40 kA circuit breaker		
b2890.2	for the East Cambridge –		
	Smyrna 69 kV circuit		AEP (100%)
	Old Washington: Install 69 kV		
b2890.3	2000 A two way phase over		
	phase switch		AEP (100%)
1.2000.4	Install 69 kV 2000 A two way		
b2890.4	phase over phase switch		AEP (100%)
	Rebuild the Midland Switch to		
	East Findlay 34.5 kV line (3.31		
b2891	miles) with 795 ACSR (63		
	MVA rating) to match other		
	conductor in the area		AEP (100%)
	Install new 138/12 kV		
	transformer with high side		
	circuit switcher at Leon and a		
	new 138 kV line exit towards		
b2892	Ripley. Establish 138 kV at the		
	Ripley station with a new 138/6	9	
	kV 130 MVA transformer and		
	move the distribution load to		
	138 kV service		AEP (100%)
	Rebuild approximately 6.7 mile	S	`
	of 69 kV line between Mottville		
	and Pigeon River using 795		
b2936.1	ACSR conductor (129 MVA		
	rating). New construction will b	e	
	designed to 138 kV standards		
	but operated at 69 kV		AEP (100%)

required 11	ansimission Emianecinents	7 Hilliam Neverlae Require	afficili Responsibile Custoffici(s)
	Pigeon River Station: Replace		
	existing MOAB Sw. 'W' with		
	a new 69 kV 3000 A 40 kA		
b2936.2	breaker, and upgrade existing		
	relays towards HMD station.		
	Replace CB H with a 3000 A		
	40 kA breaker		AEP (100%)
	Replace the existing 636		
b2937	ACSR 138 kV bus at		
02937	Fletchers Ridge with a larger		
	954 ACSR conductor		AEP (100%)
	Perform a sag mitigations on		
	the Broadford – Wolf Hills		
b2938	138 kV circuit to allow the		
	line to operate to a higher		
	maximum temperature		AEP (100%)
	Cut George Washington –		
b2958.1	Tidd 138 kV circuit into Sand		
02936.1	Hill and reconfigure Brues &		
	Warton Hill line entrances		AEP (100%)
	Add 2 138 kV 3000 A 40 kA		
b2958.2	breakers, disconnect switches,		
02936.2	and update relaying at Sand		
	Hill station		AEP (100%)
	Upgrade existing 345 kV		
b2968	terminal equipment at Tanner		
	Creek station		AEP (100%)
	Replace terminal equipment		
b2969	on Maddox Creek - East		
	Lima 345 kV circuit		AEP (100%)
	Upgrade terminal equipment		
	at Tanners Creek 345 kV		
b2976	station. Upgrade 345 kV bus		
	and risers at Tanners Creek		
	for the Dearborn circuit		AEP (100%)

rtequirea II	distinssion Emidicentents	THINGAN THE VENICIO TREGAN	ement responsible edistorner(s)
	Replace the Twin Branch 345 kV breaker "JM" with 63 kA		
	breaker and associated		
b2988	substation works including		
	switches, bus leads, control		
	cable and new DICM		AEP (100%)
	Rebuild the Torrey – South		(200.3)
	Gambrinus Switch –		
1 2002	Gambrinus Road 69 kV line		
b2993	section (1.3 miles) with 1033		
	ACSR 'Curlew' conductor		
	and steel poles		AEP (100%)
	Replace South Canton 138 kV		
b3000	breaker 'N' with an 80 kA		
	breaker		AEP (100%)
	Replace South Canton 138 kV		
b3001	breaker 'N1' with an 80 kA		
	breaker		AEP (100%)
	Replace South Canton 138 kV		
b3002	breaker 'N2' with an 80 kA		
	breaker		AEP (100%)
	Rebuild 15.6 miles of		
b3036	Haviland - North Delphos 138		. T.D. (4.000 ()
	kV line		AEP (100%)
b3037	Upgrades at the Natrium		
	substation		AEP (100%)
b3038	Reconductor the Capitol Hill		
	- Coco 138 kV line section		AEP (100%)
b3039	Line swaps at Muskingum		
	138 kV station		AEP (100%)
	Rebuild Ravenswood –		
1.20.40.1	Racine tap 69 kV line section		
b3040.1	(~15 miles) to 69 kV		
	standards, utilizing 795 26/7		A ED (1999)
	ACSR conductor		AEP (100%)

•	Rebuild existing Ripley –	1	•
b3040.2	Ravenswood 69 kV circuit		
	(~9 miles) to 69 kV standards,		
03040.2	utilizing 795 26/7 ACSR		
	conductor		A ED (100%)
			AEP (100%)
	Install new 3-way phase over		
b3040.3	phase switch at Sarah Lane		
	station to replace the retired		. == (1000)
	switch at Cottageville		AEP (100%)
	Install new 138/12 kV 20		
	MVA transformer at Polymer		
b3040.4	station to transfer load from		
03040.4	Mill Run station to help		
	address overload on the 69		
	kV network		AEP (100%)
1-2040 5	Dating Mill Days station		
b3040.5	Retire Mill Run station		AEP (100%)
1.2040.6	Install 28.8 MVAR cap bank		
b3040.6	at South Buffalo station		AEP (100%)
1 20 51 2	Adjust CT tap ratio at		, , ,
b3051.2	Ronceverte 138 kV		AEP (100%)
	Reconductor Kammer –		(200.0)
	George Washington 138 kV		
b3085	line (approx. 0.08 mile).		
03003	Replace the wave trap at		
	Kammer 138 kV		AEP (100%)
	Rebuild New Liberty –		711.7 (10070)
	Findlay 34 kV line Str's 1–37		
b3086.1	(1.5 miles), utilizing 795 26/7		
	ACSR conductor		AED (1000/)
			AEP (100%)
	Rebuild New Liberty – North		
b3086.2	Baltimore 34 kV line Str's 1-		
	11 (0.5 mile), utilizing 795		A ED (1000)
	26/7 ACSR conductor		AEP (100%)

required 11	ansimission Emiancements	Aimaai Revenue Requirem	ieni Responsible Cusiomer(s)
	Rebuild West Melrose –		
b3086.3	Whirlpool 34 kV line Str's		
03080.3	55–80 (1 mile), utilizing 795		
	26/7 ACSR conductor		AEP (100%)
	North Findlay station: Install		
	a 138 kV 3000A 63 kA line		
b3086.4	breaker and low side 34.5 kV		
03080.4	2000A 40kA breaker, high		
	side 138 kV circuit switcher		
	on T1		AEP (100%)
	Ebersole station: Install		
	second 90 MVA 138/69/34		
b3086.5	kV transformer. Install two		
	low side (69 kV) 2000A 40		
	kA breakers for T1 and T2		AEP (100%)
	Construct a new greenfield		
	station to the west (approx.		
	1.5 miles) of the existing		
	Fords Branch Station in the		
	new Kentucky Enterprise		
	Industrial Park. This station		
	will consist of six 3000A 40		
b3087.1	kA 138 kV breakers laid out		
	in a ring arrangement, two 30		
	MVA 138/34.5 kV		
	transformers, and two 30		
	MVA 138/12 kV		
	transformers. The existing		
	Fords Branch Station will be		
	retired		AEP (100%)
	Construct approximately 5		
	miles of new double circuit		
b3087.2	138 kV line in order to loop		
03007.2	the new Kewanee station into		
	the existing Beaver Creek –		
	Cedar Creek 138 kV circuit		AEP (100%)

1100[0011000 11		I minual recording records	Tement Responsible Customer(s)
	Remote end work will be		
b3087.3	required at Cedar Creek		
	Station		AEP (100%)
	Install 28.8 MVAR switching		
b3087.4	shunt at the new Fords		
	Branch substation		AEP (100%)
	Rebuild Lakin – Racine Tap		
b3095	69 kV line section (9.2 miles)		
03093	to 69 kV standards, utilizing		
	795 26/7 ACSR conductor		AEP (100%)
	Install a 138 kV 3000A 40 kA		
	circuit switcher on the high		
b3099	side of the existing 138/34.5		
	kV transformer No.5 at		
	Holston station		AEP (100%)
	Replace the 138 kV MOAB		, , , ,
	switcher "YY" with a new		
b3100	138 kV circuit switcher on the		
	high side of Chemical		
	transformer No.6		AEP (100%)
	Rebuild the 1/0 Cu. conductor		
	sections (approx. 1.5 miles) of		
	the Fort Robinson – Moccasin		
	Gap 69 kV line section		
12101	(approx. 5 miles) utilizing		
b3101	556 ACSR conductor and		
	upgrade existing relay trip		
	limit (WN/WE: 63 MVA, line		
	limited by remaining		
	conductor sections)		AEP (100%)
	Replace existing 50 MVA		
	138/69 kV transformers #1		
b3102	and #2 (both 1957 vintage) at		
	Fremont station with new 130		
	MVA 138/69 kV transformers		AEP (100%)

Required 1	ransmission Ennancements	Aliliual Kevellue Kequ	irement	Responsible Customer(s)
	Install a 138/69 kV			
	transformer at Royerton			
	station. Install a 69 kV bus			
	with one 69 kV breaker			
b3103.1	toward Bosman station.			
03103.1	Rebuild the 138 kV portion			
	into a ring bus configuration			
	built for future breaker and a			
	half with four 138 kV			
	breakers			AEP (100%)
	Rebuild the			
	Bosman/Strawboard station in			
1,2102.2	the clear across the road to			
b3103.2	move it out of the flood plain			
	and bring it up to 69 kV			
	standards			AEP (100%)
	Retire 138 kV breaker L at			
1,2102.2	Delaware station and re-			
b3103.3	purpose 138 kV breaker M			
	for the Jay line			AEP (100%)
	Retire all 34.5 kV equipment			
b3103.4	at Hartford City station. Re-			
03103.4	purpose breaker M for the			
	Bosman line 69 kV exit			AEP (100%)
	Rebuild the 138 kV portion of			
	Jay station as a 6 breaker,			
	breaker and a half station re-			
	using the existing breakers			
1.2102.5	"A", "B", and "G." Rebuild			
b3103.5	the 69 kV portion of this			
	station as a 6 breaker ring bus			
	re-using the 2 existing 69 kV			
	breakers. Install a new 138/69			
	kV transformer			AEP (100%)

required 11	ansimission Emianeements	7 Hilliam Teveriae Requireme	an responsible customer(s)
	Rebuild the 69 kV Hartford		
	City – Armstrong Cork line		
b3103.6	but instead of terminating it		
	into Armstrong Cork,		
	terminate it into Jay station		AEP (100%)
b3103.7	Build a new 69 kV line from		
03103.7	Armstrong Cork – Jay station		AEP (100%)
	Rebuild the 34.5 kV		
	Delaware – Bosman line as		
1.2102.0	the 69 kV Royerton –		
b3103.8	Strawboard line. Retire the		
	line section from Royerton to		
	Delaware stations		AEP (100%)
	Perform a sag study on the		
	Polaris – Westerville 138 kV		
b3104	line (approx. 3.6 miles) to		
03104	increase the summer		
	emergency rating to 310		
	MVA		AEP (100%)
	Rebuild the Delaware – Hyatt		
	138 kV line (approx. 4.3		
b3105	miles) along with replacing		
	conductors at both Hyatt and		
	Delaware substations		AEP (100%)
	Perform a sag study (6.8		
	miles of line) to increase the		
	SE rating to 310 MVA. Note		
b3106	that results from the sag study		
	could cover a wide range of		
	outcomes, from no work		
	required to a complete rebuild		AEP (100%)
	Rebuild 5.2 miles Bethel –		
b3109	Sawmill 138 kV line		
	including ADSS		AEP (100%)

Ttoquirou II		i ministra i te i entre i te qui	rement responsible customer(s)
	Construct a single circuit 138		
	kV line (approx. 3.5 miles)		
	from Amlin to Dublin using		
b3112	1033 ACSR Curlew (296		
	MVA SN), convert Dublin		
	station into a ring		
	configuration, and re-		
	terminating the Britton UG		
	cable to Dublin station		AEP (100%)
	Replace existing Mullens		
	138/46 kV 30 MVA		
	transformer No.4 and		
b3116	associated protective		
03110	equipment with a new 138/46		
	kV 90 MVA transformer and		
	associated protective		
	equipment		AEP (100%)
	Expand existing Chadwick		
	station and install a second		
	138/69 kV transformer at a		
	new 138 kV bus tied into the		
	Bellefonte – Grangston 138		
b3118.1	kV circuit. The 69 kV bus		
03116.1	will be reconfigured into a		
	ring bus arrangement to tie		
	the new transformer into the		
	existing 69 kV via installation		
	of four 3000A 63 kA 69 kV		
	circuit breakers		AEP (100%)
b3118.2	Perform 138 kV remote end		
03118.2	work at Grangston station		AEP (100%)
121102	Perform 138 kV remote end		, ,
b3118.3	work at Bellefonte station		AEP (100%)
	Relocate the Chadwick –		
b3118.4	Leach 69 kV circuit within		
	Chadwick station		AEP (100%)
	1		` /

Terminate the Bellefonte –	
b3118.5 Grangston 138 kV circuit to the	
	P (100%)
Chadwick – Tri-State #2 138	
kV circuit will be reconfigured	
b3118.6 within the station to terminate	
into the newly established 138	
kV bus #2 at Chadwick due to	
construability aspects AEF	P (100%)
Reconductor Chadwick –	
Leach and Chadwick	
England Hill 69 kV lines with	
705 ACSS conductor Perform	
b3118.7 ACSS conductor. Terroring a LiDAR survey and a sag	
study to confirm that the	
reconductored circuits would	
maintain acceptable clearances AEF	P (100%)
Replace the 20 kA 69 kV	,
circuit breaker 'F' at South	
Neal station with a new 3000A	
b3118.8 40 kA 69 kV circuit breaker.	
Replace line risers towards	
Leach station AEF	P (100%)
Rebuild 336 ACSR portion of	,
Leach Miller S S 60 kV line	
b3118.9   Ecacli = Willer 3.3 69 kV line section (approx. 0.3 mile) with	
	P (100%)
Replace 69 kV line risers	,
b3118.10 (towards Chadwick) at Leach	
station	P (100%)
Rebuild the Jay – Pennville 138	
kV line as double circuit	
138/69 kV. Build a new 9.8	
b3119.1   mile single circuit 69 kV line	
from near Pennville station to	
North Portland station AEF	P (100%)

required		Allitual Revenue Requirement	responsible editorrier(s)
b3119.2	Install three (3) 69 kV breakers		
	to create the "U" string and add		
	a low side breaker on the Jay		
	transformer 2		AEP (100%)
	Install two (2) 69 kV breakers at		
b3119.3	North Portland station to		
03119.3	complete the ring and allow for		
	the new line		AEP (100%)
	At Conesville 138 kV station:		
	Remove line leads to generating		
	units, transfer plant AC service		
b3129	to existing station service feeds		
	in Conesville 345/138 kV yard,		
	and separate and reconfigure		
	protection schemes		AEP (100%)
	At East Lima and Haviland 138		,
1 2 1 2 1	kV stations, replace line relays		
b3131	and wavetrap on the East Lima –		
	Haviland 138 kV facility		AEP (100%)
	Rebuild approximately 12.3		, ,
	miles of remaining Lark		
1 2 1 2 1 1	conductor on the double circuit		
b3131.1	line between Haviland and East		
	Lima with 1033 54/7 ACSR		
	conductor		AEP (100%)
	Rebuild 3.11 miles of the		
b3132	LaPorte Junction – New Buffalo		
	69 kV line with 795 ACSR		AEP (100%)
	Rebuild the Garden Creek –		\ - /
b3139	Whetstone 69 kV line (approx. 4		
	miles)		AEP (100%)
	Rebuild the Whetstone – Knox		(/
b3140	Creek 69 kV line (approx. 3.1		
05170	miles)		AEP (100%)
	<i>j</i>		\ /

required in		maar revenue regunemen	it Responsible Cusionici(s)
	Rebuild the Knox Creek – Coal		
b3141	Creek 69 kV line (approx. 2.9		
	miles)		AEP (100%)
	Rebuild the 46 kV Bradley –		
	Scarbro line to 96 kV standards		
	using 795 ACSR to achieve a		
b3148.1	minimum rate of 120 MVA.		
03146.1	Rebuild the new line adjacent to		
	the existing one leaving the old		
	line in service until the work is		
	completed		AEP (100%)
	Bradley remote end station		
b3148.2	work, replace 46 kV bus, install		
	new 12 MVAR capacitor bank		AEP (100%)
	Replace the existing switch at		
b3148.3	Sun substation with a 2-way		
03148.3	SCADA-controlled motor-		
	operated air-breaker switch		AEP (100%)
	Remote end work and		
b3148.4	associated equipment at Scarbro		
	station		AEP (100%)
	Retire Mt. Hope station and		
b3148.5	transfer load to existing Sun		
	station		AEP (100%)
	Rebuild the 2.3 mile Decatur –		
b3149	South Decatur 69 kV line using		
	556 ACSR		AEP (100%)
	Rebuild Ferguson 69/12 kV		
	station in the clear as the 138/12		
	kV Bear station and connect it		
b3150	to an approx. 1 mile double		
03130	circuit 138 kV extension from		
	the Aviation – Ellison Road 138		
	kV line to remove the load from		
	the 69 kV line		AEP (100%)

		initiaat teevenae teequirement	respensiere e saverner(s)
	Rebuild the 30 mile Gateway –		
b3151.1	Wallen 34.5 kV circuit as the		
	27 mile Gateway – Wallen 69		A ED (1000/)
	kV line		AEP (100%)
101510	Retire approx. 3 miles of the		
b3151.2	Columbia – Whitley 34.5 kV		A FID (1000())
	line		AEP (100%)
	At Gateway station, remove all		
101510	34.5 kV equipment and install		
b3151.3	one (1) 69 kV circuit breaker		
	for the new Whitley line		. T. (1000()
	entrance		AEP (100%)
	Rebuild Whitley as a 69 kV		
b3151.4	station with two (2) lines and		. T.T. (1000()
	one (1) bus tie circuit breaker		AEP (100%)
	Replace the Union 34.5 kV		
b3151.5	switch with a 69 kV switch		
	structure		AEP (100%)
	Replace the Eel River 34.5 kV		
b3151.6	switch with a 69 kV switch		
	structure		AEP (100%)
b3151.7	Install a 69 kV Bobay switch at		
03131.7	Woodland station		AEP (100%)
	Replace the Carroll and		
	Churubusco 34.5 kV stations		
	with the 69 kV Snapper station.		
b3151.8	Snapper station will have two		
	(2) line circuit breakers, one (1)		
	bus tie circuit breaker and a		
	14.4 MVAR cap bank		AEP (100%)
b3151.9	Remove 34.5 kV circuit		
03131.7	breaker "AD" at Wallen station		AEP (100%)
	Rebuild the 2.5 miles of the		
b3151.10	Columbia – Gateway 69 kV		
	line		AEP (100%)

1100-100-11		7 Hilliaar Pee veride Peegar	 F(-)
	Rebuild Columbia station in		
	the clear as a 138/69 kV		
	station with two (2) 138/69		
b3151.11	kV transformers and 4-		
03131.11	breaker ring buses on the high		
	and low side. Station will		
	reuse 69 kV breakers "J" &		
	"K" and 138 kV breaker "D"		AEP (100%)
	Rebuild the 13 miles of the		
b3151.12	Columbia – Richland 69 kV		
	line		AEP (100%)
	Rebuild the 0.5 mile Whitley		
b3151.13	– Columbia City No.1 line as		
	69 kV		AEP (100%)
	Rebuild the 0.5 mile Whitley		
b3151.14	– Columbia City No.2 line as		
	69 kV		AEP (100%)
	Rebuild the 0.6 mile double		
	circuit section of the Rob		
b3151.15	Park – South Hicksville / Rob		
	Park – Diebold Road as 69		
	kV		AEP (100%)
	Construct an approx. 2.4		
	miles double circuit 138 kV		
b3160.1	extension using 1033 ACSR		
03100.1	(Aluminum Conductor Steel		
	Reinforced) to connect Lake		
	Head to the 138 kV network		AEP (100%)
	Retire the approx.2.5 miles		
b3160.2	34.5 kV Niles – Simplicity		
	Tap line		AEP (100%)
b3160.3	Retire the approx.4.6 miles		
	Lakehead 69 kV Tap		AEP (100%)

required 11	ansimission Emianecticitis	Aimai Revenue Requii	chiche Responsible Cusionici(s)
	Build new 138/69 kV drop		
	down station to feed		
	Lakehead with a 138 kV		
b3160.4	breaker, 138 kV switcher,		
	138/69 kV transformer and a		
	138 kV Motor-Operated Air		
	Break		AEP (100%)
	Rebuild the approx. 1.2 miles		
	Buchanan South 69 kV		
b3160.5	Radial Tap using 795 ACSR		
	(Aluminum Conductor Steel		
	Reinforced)		AEP (100%)
	Rebuild the approx.8.4 miles		
	69 kV Pletcher – Buchanan		
	Hydro line as the approx. 9		
b3160.6	miles Pletcher – Buchanan		
	South 69 kV line using 795		
	ACSR (Aluminum Conductor		
	Steel Reinforced)		AEP (100%)
	Install a PoP (Point-of-		. ,
	Presence) switch at Buchanan		
b3160.7	South station with 2 line		
	MOABs (Motor-Operated Air		
	Break)		AEP (100%)

Required	Transmission Enhancements	Annual Revenue Requ	urement	Responsible Customer(s)
	Retire approximately 38			
	miles of the 44 mile Clifford			
	<ul> <li>Scottsville 46 kV circuit.</li> </ul>			
	Build new 138 kV "in and			
	out" to two new distribution			
	stations to serve the load			
	formerly served by Phoenix,			
	Shipman, Schuyler (AEP),			
	and Rockfish stations.			
	Construct new 138 kV lines			
b3208	from Joshua Falls – Riverville			
	(approx. 10 miles) and			
	Riverville – Gladstone			
	(approx. 5 miles). Install			
	required station upgrades at			
	Joshua Falls, Riverville and			
	Gladstone stations to			
	accommodate the new 138			
	kV circuits. Rebuild Reusen –			
	Monroe 69 kV (approx. 4			
	miles)			AEP (100%)
	Rebuild the 10.5 mile Berne –			
b3209	South Decatur 69 kV line			
	using 556 ACSR			AEP (100%)
	Replace approx. 0.7 mile			
b3210	Beatty – Galloway 69 kV line			
	with 4000 kcmil XLPE cable			AEP (100%)
h2220	Install 14.4 MVAR capacitor			
b3220	bank at Whitewood 138 kV			AEP (100%)

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b3243	Replace risers at the Bass 34.5 kV station		AEP (100%)
b3244	Rebuild approximately 9 miles of the Robinson Park – Harlan 69 kV line		AEP (100%)
b3248	Install a low side 69 kV circuit breaker at the Albion 138/69 kV transformer #1		AEP (100%)
b3249	Rebuild the Chatfield – Melmore 138 kV line (approximately 10 miles) to 1033 ACSR conductor		AEP (100%)

Required	Tansinission Emiancements	Ailliuai Revellue Requii	ement Responsible Customer(s)
	Install a 3000A 40 kA 138 kV		
	breaker on the high side of		
	138/69 kV transformer #5 at		
b3253	the Millbrook Park station. The		
	transformer and associated bus		
	protection will be upgraded		
	accordingly		AEP (100%)
	Upgrade 795 AAC risers at the		
1,2255	Sand Hill 138 kV station		
b3255	towards Cricket Switch with		
	1272 AAC		AEP (100%)
	Upgrade 500 MCM Cu risers at		
1.2256	Tidd 138 kV station towards		
b3256	Wheeling Steel; replace with		
	1272 AAC conductor		AEP (100%)
	Replace two spans of 336.4		, ,
1,2257	26/7 ACSR on the Twin		
b3257	Branch – AM General #2 34.5		
	kV circuit		AEP (100%)
	Install a 3000A 63 kA 138 kV		, ,
	breaker on the high side of		
	138/69 kV transformer #2 at		
b3258	Wagenhals station. The		
	transformer and associated bus		
	protection will be upgraded		
	accordingly		AEP (100%)
	At West Millersburg station,		
	replace the 138 kV MOAB on		
b3259	the West Millersburg –		
	Wooster 138 kV line with a		
	3000A 40 kA breaker		AEP (100%)
	Upgrade circuit breaker "R1"		
	at Tanners Creek 345 kV.		
b3261	Install Transient Recovery		
	Voltage capacitor to increase		
	the rating from 50 kA to 63 kA		AEP (100%)

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	At West New Philadelphia	
	station, add a high side 138	
1 22 60	kV breaker on the 138/69 kV	
b3269	Transformer #2 along with a	
	138 kV breaker on the line	
	towards Newcomerstown	AEP (100%)
	Install 1.7 miles of 795 ACSR	
	138 kV conductor along the	
	other side of Dragoon Tap	
	138 kV line, which is	
	currently double circuit tower	
	with one position open.	
	Additionally, install a second	
b3270	138/34.5 kV transformer at	
03270	Dragoon, install a high side	
	circuit switcher on the current	
	transformer at the Dragoon	
	Station, and install two (2)	
	138 kV line breakers on the	
	Dragoon – Jackson 138 kV	
	and Dragoon – Twin Branch	
	138 kV lines	AEP (100%)
	Replace Dragoon 34.5 kV	
b3270.1	breakers "B", "C", and "D"	
	with 40 kA breakers	AEP (100%)
	Install a 138 kV circuit	
	breaker at Fremont station on	
b3271	the line towards Fremont	
03271	Center and install a 9.6	
	MVAR 69 kV capacitor bank	
	at Bloom Road station	AEP (100%)
	Install two 138 kV circuit	
b3272	switchers on the high side of	
63272	138/34.5 kV Transformers #1	
	and #2 at Rockhill station	AEP (100%)

	Rebuild and convert the	
	existing 17.6 miles East	
b3273.1	Leipsic – New Liberty 34.5	
	kV circuit to 138 kV using	
	795 ACSR	AEP (100%)
	Convert the existing 34.5	
	kV equipment to 138 kV	
	and expand the existing	
	McComb station to the	
	north and east to allow for	
b3273.2	new equipment to be	
05275.2	installed. Install two (2)	
	new 138 kV box bays to	
	allow for line positions and	
	two (2) new 138/12 kV	
	transformers	AEP (100%)
	Expand the existing East	1111 (10070)
	Leipsic 138 kV station to	
	the north to allow for	
	another 138 kV line exit to	
	be installed. The new line	
	exit will involve installing	
b3273.3	a new 138 kV circuit	
	breaker, disconnect	
	switches and the addition	
	of a new dead end structure	
	along with the extension of	
	the existing 138 kV bus	
	work	AEP (100%)
	Add one (1) 138 kV circuit	, , ,
b3273.4	breaker and disconnect	
	switches in order to add an	
	additional line position at	
	New Liberty 138 kV	
	station. Install line relaying	
	potential devices and retire	
	the 34.5 kV breaker 'F'	AEP (100%)

Required 11	ansinission Emancements	Aimuai Revenue Require	ment Responsible Customer(s)
	Rebuild approximately 8.9 miles of 69 kV line between		
b3274	Newcomerstown and Salt		
032/4	Fork Switch with 556 ACSR		
	conductor		AED (1000/)
			AEP (100%)
1 2275 1	Rebuild the Kammer Station		
b3275.1	- Cresaps Switch 69 kV line,		AFD (1000/)
	approximately 0.5 mile		AEP (100%)
1 2275 2	Rebuild the Cresaps Switch –		
b3275.2	McElroy Station 69 kV,		A FID (1000()
	approximately 0.67 mile		AEP (100%)
	Replace a single span of 4/0		
	ACSR from Moundsville -		
	Natrium structure 93L to		
b3275.3	Carbon Tap switch 69 kV		
05275.5	located between the		
	Colombia Carbon and Conner		
	Run stations. Remainder of		
	the line is 336 ACSR		AEP (100%)
	Rebuild from Colombia		
	Carbon to Columbia Carbon		
	Tap structure 93N 69 kV,		
	approximately 0.72 mile. The		
b3275.4	remainder of the line between		
	Colombia Carbon Tap		
	structure 93N and Natrium		
	station is 336 ACSR and will		
	remain		AEP (100%)
	Replace the Cresaps 69 kV 3-		
b3275.5	Way Phase-Over-Phase		
	switch and structure with a		
	new 1200A 3-Way switch		
	and steel pole		AEP (100%)
	Replace 477 MCM Alum bus		
b3275.6	and risers at McElroy 69 kV		
	station		AEP (100%)

Required Tr	ansmission Enhancements	Annual Revenue Require	ement Responsible Customer(s)
	Replace Natrium 138 kV bus		
	existing between CB-BT1		
	and along the 138 kV Main		
	Bus #1 dropping to CBH1		
b3275.7	from the 500 MCM		
	conductors to a 1272 KCM		
	AAC conductor. Replace the		
	dead end clamp and strain		
	insulators		AEP (100%)
	Rebuild the 2/0 Copper		
	section of the Lancaster –		
	South Lancaster 69 kV line,		
b3276.1	approximately 2.9 miles of		
03270.1	the 3.2 miles total length with		
	556 ACSR conductor. The		
	remaining section has a 336		
	ACSR conductor		AEP (100%)
	Rebuild the 1/0 Copper		
	section of the line between		
b3276.2	Lancaster Junction and		
03270.2	Ralston station 69 kV,		
	approximately 2.3 miles of		
	the 3.1 miles total length		AEP (100%)
	Rebuild the 2/0 Copper		
	portion of the line between		
b3276.3	East Lancaster Tap and		
	Lancaster 69 kV,		
	approximately 0.81 mile		AEP (100%)

Required 11	ansimission emiancements	Allitual Revenue Requi	rement Responsible Customer(s)
b3278.1	Replace H.S. MOAB switches on the high side of the 138/69/34.5 kV transformer T1 with a H.S. circuit switcher at Saltville station		AEP (100%)
b3278.2	Replace existing 138/69/34.5 kV transformer T2 with a new 130 MVA 138/69/13 kV transformer at Meadowview station		AEP (100%)
b3279	Install a new 138 kV, 21.6 MVAR cap bank and circuit switcher at Apple Grove station		AEP (100%)
b3280	Rebuild the existing Cabin Creek – Kelly Creek 46 kV line (to Structure 366-44), approximately 4.4 miles. This section is double circuit with the existing Cabin Creek – London 46 kV line so a double circuit rebuild would be required		AEP (100%)

required 11	ansimission Emiancements	Ailliuai Revenue Requii	ement Responsible Customer(s)
	Install 138 kV circuit		
	switcher on the 138/69 kV		
	Transformer #1 and 138/34.5		
b3281	kV Transformer #2 at Dewey		
03201	138 kV substation. Install 138		
	kV 2000 A 40 kA breaker on		
	Stanville line at Dewey 138		
	kV substation		AEP (100%)
	Install a second 138 kV		
	circuit utilizing 795 ACSR		
	conductor on the open		
	position of the existing		
	double circuit towers from		
	East Huntington – North		
	Proctorville. Remove the		
b3282.1	existing 34.5 kV line from		
	East Huntington – North		
	Chesapeake and rebuild this		
	section to 138 kV served		
	from a new PoP switch off		
	the new East Huntington –		
	North Proctorville 138 kV #2		
	line		AEP (100%)
	Install a 138 kV 40 kA circuit		
b3282.2	breaker at North Proctorville		
	station		AEP (100%)
	Install a 138 kV 40 kA circuit		
b3282.3	breaker at East Huntington		
	station		AEP (100%)
	Convert the existing 34/12 kV		
b3282.4	North Chesapeake to a 138/12		
	kV station		AEP (100%)
	Replace the existing Inez		
	138/69 kV 50 MVA		
b3283	autotransformer with a		
	138/69 kV 90 MVA		
	autotransformer		AEP (100%)

Required Ir	ansmission Enhancements	Annual Revenue Require	ment Responsible Customer(s)
	Rebuild approximately 5.44		
b3284	miles of 69 kV line from		
	Lock Lane to Point Pleasant		AEP (100%)
	Replace the Meigs 69 kV 4/0		
	Cu station riser towards		
	Gavin and rebuild the section		
	of the Meigs – Hemlock 69		
b3285	kV circuit from Meigs to		
03283	approximately Structure #40		
	(about 4 miles) replacing the		
	line conductor 4/0 ACSR		
	with the line conductor size		
	556.5 ACSR		AEP (100%)
	Reconductor the first 3 spans		
	from Merrimac station to		
	Structure 464-3 of 3/0 ACSR		
b3286	conductor utilizing 336		
	ACSR on the existing		
	Merrimac – Midway 69 kV		
	circuit		AEP (100%)
	Upgrade 69 kV risers at		
b3287	Moundsville station towards		
	George Washington		AEP (100%)
	Construct approximately 2.75		
	miles Orinoco – Stone 69 kV		
b3288.1	transmission line in the clear		
	between Orinoco station and		
	Stone station		AEP (100%)
	Construct approximately 3.25		
	miles Orinoco – New Camp		
b3288.2	69 kV transmission line in the		
	clear between Orinoco station		
	and New Camp station		AEP (100%)

Required Ir	ansmission Enhancements	Annual Revenue Require	ement Responsible Customer(s)
	At Stone substation, circuit		
	breaker A to remain in place		
	and be utilized as T1 low side		
	breaker, circuit breaker B to		
b3288.3	remain in place and be		
03200.3	utilized as new Hatfield (via		
	Orinoco and New Camp) 69		
	kV line breaker. Add new 69		
	kV circuit breaker E for		
	Coleman line exit		AEP (100%)
	Reconfigure the New Camp		
	69 kV tap which includes		
	access road		
b3288.4	improvements/installation,		
03200.1	temporary wire and		
	permanent wire work along		
	with dead end structures		
	installation		AEP (100%)
	At New Camp substation,		
	rebuild the 69 kV bus, add 69		
b3288.5	kV MOAB W and replace the		
03200.5	69 kV ground switch Z1 with		
	a 69 kV circuit switcher on		
	the New Camp transformer		AEP (100%)
	Install high-side circuit		
b3289.1	switcher on 138/69/12 kV T5		
	at Roanoke station		AEP (100%)
	Install high-side circuit		
b3289.2	switcher on 138/69/34.5 kV		
	T1 at Huntington Court		
	station		AEP (100%)

Build 9.4 miles of single circuit 69 kV line from Roselms to near East Ottoville 69 kV switch  Rebuild 7.5 miles of double circuit 69 kV line between East Ottoville switch and Kalida station (combining with the new Roselms to Kalida 69 kV circuit)  At Roselms switch, install a new three way 69 kV, 1200 A phase-over-phase switch, with sectionalizing capability  At Kalida 69 kV station, terminate the new line from Roselms switch. Move the CS XT2 from high side of T1 to the high side of T1. Remove existing T2 transformer  B3291  Replace the Russ St. 34.5 kV switch  Replace existing 69 kV capacitor bank at Stuart station with a 17.2 MVAR capacitor bank are such as the such	Required 11	ansimission Emiancements	Ailliuai Revenue Requirei	ment Responsible Customer(s)
Roselms to near East Ottoville 69 kV switch Rebuild 7.5 miles of double circuit 69 kV line between East Ottoville switch and Kalida station (combining with the new Roselms to Kalida 69 kV circuit)  At Roselms switch, install a new three way 69 kV, 1200 A phase-over-phase switch, with sectionalizing capability  At Kalida 69 kV station, terminate the new line from Roselms switch. Move the CS XT2 from high side of T2 to the high side of T1. Remove existing T2 transformer  B3291  B3291  Replace the Russ St. 34.5 kV switch  Replace existing 69 kV capacitor bank at Stuart station with a 17.2 MVAR capacitor bank at Stuart station with a 17.2 MVAR capacitor bank at Stuart Sandusky 69 kV line and 4/0 Cu Risers/Bus conductors on the Forest line at Upper Sandusky 69 kV station  Replace existing 69 kV disconnect switches for circuit breaker "C" at Walnut		Build 9.4 miles of single		
Roselms to near East Ottoville 69 kV switch Rebuild 7.5 miles of double circuit 69 kV line between East Ottoville switch and Kalida station (combining with the new Roselms to Kalida 69 kV circuit)  At Roselms switch, install a new three way 69 kV, 1200 A phase-over-phase switch, with sectionalizing capability  At Kalida 69 kV station, terminate the new line from Roselms switch. Move the CS XT2 from high side of T2 to the high side of T1. Remove existing T2 transformer  B3291  Replace hRuss St. 34.5 kV switch  Replace existing 69 kV capacitor bank at Stuart station with a 17.2 MVAR capacitor bank at Stuart station with a 17.2 MVAR capacitor bank  Replace 2/0 Cu entrance span conductor on the South Upper Sandusky 69 kV line and 4/0 Cu Risers/Bus conductors on the Forest line at Upper Sandusky 69 kV station Replace existing 69 kV disconnect switches for circuit breaker "C" at Walnut	h2200 1	circuit 69 kV line from		
Rebuild 7.5 miles of double circuit 69 kV line between East Ottoville switch and Kalida station (combining with the new Roselms to Kalida 69 kV circuit)  At Roselms switch, install a new three way 69 kV, 1200 A phase-over-phase switch, with sectionalizing capability  At Kalida 69 kV station, terminate the new line from Roselms switch. Move the CS XT2 from high side of T2 to the high side of T1. Remove existing T2 transformer  B3291  Replace the Russ St. 34.5 kV switch  Replace existing 69 kV capacitor bank at Stuart station with a 17.2 MVAR	03290.1	Roselms to near East		
circuit 69 kV line between East Ottoville switch and Kalida station (combining with the new Roselms to Kalida 69 kV circuit)  At Roselms switch, install a new three way 69 kV, 1200 A phase-over-phase switch, with sectionalizing capability  At Kalida 69 kV station, terminate the new line from Roselms switch. Move the CS XT2 from high side of T2 to the high side of T1. Remove existing T2 transformer  B3291  Beplace the Russ St. 34.5 kV switch  Replace existing 69 kV capacitor bank at Stuart station with a 17.2 MVAR capacitor bank at Stuart station with a 17.2 MVAR capacitor bank Replace 2/0 Cu entrance span conductor on the South Upper Sandusky 69 kV line and 4/0 Cu Risers/Bus conductors on the Forest line at Upper Sandusky 69 kV station Replace existing 69 kV disconnect switches for circuit breaker "C" at Walnut		Ottoville 69 kV switch		AEP (100%)
b3290.2 East Ottoville switch and Kalida station (combining with the new Roselms to Kalida 69 kV circuit)  At Roselms switch, install a new three way 69 kV, 1200 A phase-over-phase switch, with sectionalizing capability  At Kalida 69 kV station, terminate the new line from Roselms switch. Move the CS XT2 from high side of T2 to the high side of T1. Remove existing T2 transformer  B3291 Replace the Russ St. 34.5 kV switch  Replace existing 69 kV capacitor bank at Stuart station with a 17.2 MVAR capacitor bank at Stuart station with a 17.2 MVAR capacitor bank at Stuart station with a 17.2 MVAR capacitor bank Replace 2/0 Cu entrance span conductor on the South Upper Sandusky 69 kV line and 4/0 Cu Risers/Bus conductors on the Forest line at Upper Sandusky 69 kV station  Replace existing 69 kV disconnect switches for circuit breaker "C" at Walnut		Rebuild 7.5 miles of double		
Kalida station (combining with the new Roselms to Kalida 69 kV circuit)  At Roselms switch, install a new three way 69 kV, 1200 A phase-over-phase switch, with sectionalizing capability  At Kalida 69 kV station, terminate the new line from Roselms switch. Move the CS XT2 from high side of T2 to the high side of T1. Remove existing T2 transformer  B3291  Replace the Russ St. 34.5 kV switch  Replace existing 69 kV capacitor bank at Stuart station with a 17.2 MVAR capacitor bank at Stuart station with a 17.2 MVAR capacitor on the South Upper Sandusky 69 kV line and 4/0 Cu Risers/Bus conductors on the Forest line at Upper Sandusky 69 kV station  Replace existing 69 kV disconnect switches for circuit breaker "C" at Walnut		circuit 69 kV line between		
kalida station (combining with the new Roselms to Kalida 69 kV circuit)  At Roselms switch, install a new three way 69 kV, 1200 A phase-over-phase switch, with sectionalizing capability  At Kalida 69 kV station, terminate the new line from Roselms switch. Move the CS XT2 from high side of T2 to the high side of T1. Remove existing T2 transformer  Barbace the Russ St. 34.5 kV switch  Replace existing 69 kV capacitor bank at Stuart station with a 17.2 MVAR capacitor bank at Stuart station with a 17.2 MVAR capacitor on the South Upper Sandusky 69 kV line and 4/0 Cu Risers/Bus conductors on the Forest line at Upper Sandusky 69 kV station  Replace existing 69 kV disconnect switches for circuit breaker "C" at Walnut	h2200.2	East Ottoville switch and		
Kalida 69 kV circuit)  At Roselms switch, install a new three way 69 kV, 1200 A phase-over-phase switch, with sectionalizing capability  At Kalida 69 kV station, terminate the new line from Roselms switch. Move the CS XT2 from high side of T2 to the high side of T1. Remove existing T2 transformer  B3291  B3291  Replace the Russ St. 34.5 kV switch  Replace existing 69 kV capacitor bank at Stuart station with a 17.2 MVAR capacitor bank  Replace 2/0 Cu entrance span conductor on the South Upper Sandusky 69 kV line and 4/0 Cu Risers/Bus conductors on the Forest line at Upper Sandusky 69 kV station  Replace existing 69 kV disconnect switches for circuit breaker "C" at Walnut	03290.2	Kalida station (combining		
b3290.3 At Roselms switch, install a new three way 69 kV, 1200 A phase-over-phase switch, with sectionalizing capability  At Kalida 69 kV station, terminate the new line from Roselms switch. Move the CS XT2 from high side of T2 to the high side of T1. Remove existing T2 transformer  B3291 Replace the Russ St. 34.5 kV switch  Replace existing 69 kV capacitor bank at Stuart station with a 17.2 MVAR capacitor bank  Replace 2/0 Cu entrance span conductor on the South Upper Sandusky 69 kV line and 4/0 Cu Risers/Bus conductors on the Forest line at Upper Sandusky 69 kV station  Replace existing 69 kV disconnect switches for circuit breaker "C" at Walnut		with the new Roselms to		
b3290.3 new three way 69 kV, 1200 A phase-over-phase switch, with sectionalizing capability  At Kalida 69 kV station, terminate the new line from Roselms switch. Move the CS XT2 from high side of T2 to the high side of T1. Remove existing T2 transformer  B3291 Replace the Russ St. 34.5 kV switch  AEP (100%)  Replace existing 69 kV capacitor bank at Stuart station with a 17.2 MVAR capacitor bank  Replace 2/0 Cu entrance span conductor on the South Upper Sandusky 69 kV line and 4/0 Cu Risers/Bus conductors on the Forest line at Upper Sandusky 69 kV station  Replace existing 69 kV disconnect switches for circuit breaker "C" at Walnut		Kalida 69 kV circuit)		AEP (100%)
phase-over-phase switch, with sectionalizing capability  At Kalida 69 kV station, terminate the new line from Roselms switch. Move the CS XT2 from high side of T2 to the high side of T1. Remove existing T2 transformer  Beplace the Russ St. 34.5 kV switch  Replace existing 69 kV capacitor bank at Stuart station with a 17.2 MVAR capacitor bank  Replace 2/0 Cu entrance span conductor on the South Upper Sandusky 69 kV line and 4/0 Cu Risers/Bus conductors on the Forest line at Upper Sandusky 69 kV station  Replace existing 69 kV disconnect switches for circuit breaker "C" at Walnut		At Roselms switch, install a		
phase-over-phase switch, with sectionalizing capability  At Kalida 69 kV station, terminate the new line from Roselms switch. Move the CS XT2 from high side of T2 to the high side of T1. Remove existing T2 transformer  AEP (100%)  Barrier AEP (100%)  Replace the Russ St. 34.5 kV switch  Replace existing 69 kV capacitor bank at Stuart station with a 17.2 MVAR capacitor bank  Replace 2/0 Cu entrance span conductor on the South Upper Sandusky 69 kV line and 4/0 Cu Risers/Bus conductors on the Forest line at Upper Sandusky 69 kV station  Replace existing 69 kV disconnect switches for circuit breaker "C" at Walnut	h2200 2	new three way 69 kV, 1200 A		
At Kalida 69 kV station, terminate the new line from Roselms switch. Move the CS XT2 from high side of T2 to the high side of T1. Remove existing T2 transformer  B3291 Replace the Russ St. 34.5 kV switch  Replace existing 69 kV capacitor bank at Stuart station with a 17.2 MVAR capacitor bank at Stuart station with a 17.2 MVAR capacitor on the South Upper Sandusky 69 kV line and 4/0 Cu Risers/Bus conductors on the Forest line at Upper Sandusky 69 kV station  Replace existing 69 kV disconnect switches for circuit breaker "C" at Walnut	03290.3	phase-over-phase switch,		
terminate the new line from Roselms switch. Move the CS XT2 from high side of T2 to the high side of T1. Remove existing T2 transformer  Replace the Russ St. 34.5 kV switch  Replace existing 69 kV capacitor bank at Stuart station with a 17.2 MVAR capacitor bank  Replace 2/0 Cu entrance span conductor on the South Upper Sandusky 69 kV line and 4/0 Cu Risers/Bus conductors on the Forest line at Upper Sandusky 69 kV station  Replace existing 69 kV disconnect switches for circuit breaker "C" at Walnut		with sectionalizing capability		AEP (100%)
b3290.4 Roselms switch. Move the CS XT2 from high side of T2 to the high side of T1. Remove existing T2 transformer  Beplace the Russ St. 34.5 kV switch  Replace existing 69 kV capacitor bank at Stuart station with a 17.2 MVAR capacitor bank  Replace 2/0 Cu entrance span conductor on the South Upper Sandusky 69 kV line and 4/0 Cu Risers/Bus conductors on the Forest line at Upper Sandusky 69 kV station  Replace existing 69 kV disconnect switches for circuit breaker "C" at Walnut		At Kalida 69 kV station,		
b3290.4 XT2 from high side of T2 to the high side of T1. Remove existing T2 transformer  Beplace the Russ St. 34.5 kV switch  Beplace existing 69 kV capacitor bank at Stuart station with a 17.2 MVAR capacitor bank  Replace 2/0 Cu entrance span conductor on the South Upper Sandusky 69 kV line and 4/0 Cu Risers/Bus conductors on the Forest line at Upper Sandusky 69 kV station  Beplace existing 69 kV disconnect switches for circuit breaker "C" at Walnut		terminate the new line from		
the high side of T2 to the high side of T1. Remove existing T2 transformer  Replace the Russ St. 34.5 kV switch  Replace existing 69 kV capacitor bank at Stuart station with a 17.2 MVAR capacitor bank  Replace 2/0 Cu entrance span conductor on the South Upper Sandusky 69 kV line and 4/0 Cu Risers/Bus conductors on the Forest line at Upper Sandusky 69 kV station  Replace existing 69 kV disconnect switches for circuit breaker "C" at Walnut	1 2200 4	Roselms switch. Move the CS		
existing T2 transformer  Balance the Russ St. 34.5 kV switch  Replace existing 69 kV capacitor bank at Stuart station with a 17.2 MVAR capacitor bank  Replace 2/0 Cu entrance span conductor on the South Upper Sandusky 69 kV line and 4/0 Cu Risers/Bus conductors on the Forest line at Upper Sandusky 69 kV station  Replace existing 69 kV disconnect switches for circuit breaker "C" at Walnut  AEP (100%)  AEP (100%)	03290.4	XT2 from high side of T2 to		
b3291 Replace the Russ St. 34.5 kV switch  Replace existing 69 kV capacitor bank at Stuart station with a 17.2 MVAR capacitor bank  Replace 2/0 Cu entrance span conductor on the South Upper Sandusky 69 kV line and 4/0 Cu Risers/Bus conductors on the Forest line at Upper Sandusky 69 kV station  Replace existing 69 kV disconnect switches for circuit breaker "C" at Walnut		the high side of T1. Remove		
switch  Replace existing 69 kV capacitor bank at Stuart station with a 17.2 MVAR capacitor bank  Replace 2/0 Cu entrance span conductor on the South Upper Sandusky 69 kV line and 4/0 Cu Risers/Bus conductors on the Forest line at Upper Sandusky 69 kV station  Replace existing 69 kV disconnect switches for circuit breaker "C" at Walnut		existing T2 transformer		AEP (100%)
Replace existing 69 kV capacitor bank at Stuart station with a 17.2 MVAR capacitor bank  Replace 2/0 Cu entrance span conductor on the South Upper Sandusky 69 kV line and 4/0 Cu Risers/Bus conductors on the Forest line at Upper Sandusky 69 kV station  Replace existing 69 kV disconnect switches for circuit breaker "C" at Walnut	1,2201	Replace the Russ St. 34.5 kV		
b3292 capacitor bank at Stuart station with a 17.2 MVAR capacitor bank  Replace 2/0 Cu entrance span conductor on the South Upper Sandusky 69 kV line and 4/0 Cu Risers/Bus conductors on the Forest line at Upper Sandusky 69 kV station  Replace existing 69 kV disconnect switches for circuit breaker "C" at Walnut	03291	switch		AEP (100%)
b3292 capacitor bank at Stuart station with a 17.2 MVAR capacitor bank  Replace 2/0 Cu entrance span conductor on the South Upper Sandusky 69 kV line and 4/0 Cu Risers/Bus conductors on the Forest line at Upper Sandusky 69 kV station  Replace existing 69 kV disconnect switches for circuit breaker "C" at Walnut		Replace existing 69 kV		` ,
b3293  Station with a 17.2 MVAR capacitor bank  Replace 2/0 Cu entrance span conductor on the South Upper Sandusky 69 kV line and 4/0 Cu Risers/Bus conductors on the Forest line at Upper Sandusky 69 kV station  Replace existing 69 kV disconnect switches for circuit breaker "C" at Walnut  AEP (100%)	1,2202			
Replace 2/0 Cu entrance span conductor on the South Upper Sandusky 69 kV line and 4/0 Cu Risers/Bus conductors on the Forest line at Upper Sandusky 69 kV station  Replace existing 69 kV disconnect switches for circuit breaker "C" at Walnut	63292	station with a 17.2 MVAR		
conductor on the South Upper Sandusky 69 kV line and 4/0 Cu Risers/Bus conductors on the Forest line at Upper Sandusky 69 kV station  Replace existing 69 kV disconnect switches for circuit breaker "C" at Walnut		capacitor bank		AEP (100%)
conductor on the South Upper Sandusky 69 kV line and 4/0 Cu Risers/Bus conductors on the Forest line at Upper Sandusky 69 kV station  Replace existing 69 kV disconnect switches for circuit breaker "C" at Walnut		Replace 2/0 Cu entrance span		, , ,
b3293  Sandusky 69 kV line and 4/0 Cu Risers/Bus conductors on the Forest line at Upper Sandusky 69 kV station  Replace existing 69 kV disconnect switches for circuit breaker "C" at Walnut				
Cu Risers/Bus conductors on the Forest line at Upper Sandusky 69 kV station  Replace existing 69 kV disconnect switches for circuit breaker "C" at Walnut  AEP (100%)	1 2202			
Sandusky 69 kV station  Replace existing 69 kV  disconnect switches for circuit breaker "C" at Walnut  AEP (100%)	63293			
Sandusky 69 kV station  Replace existing 69 kV  disconnect switches for circuit breaker "C" at Walnut  AEP (100%)		the Forest line at Upper		
Replace existing 69 kV disconnect switches for circuit breaker "C" at Walnut				AEP (100%)
b3294 disconnect switches for circuit breaker "C" at Walnut		•		` /
circuit breaker "C" at Walnut	1 2204	1		
	b3294	circuit breaker "C" at Walnut		
				AEP (100%)

required 11	ansimission Emiancements	Ailliaal Revenue Requii	ement Responsible Customer(s)
b3295	Grundy 34.5 kV: Install a		
03273	34.5 kV 9.6 MVAR cap bank		AEP (100%)
	Rebuild the overloaded		
	portion of the Concord –		
b3296	Whitaker 34.5 kV line (1.13		
03290	miles). Rebuild is double		
	circuit and will utilize 795		
	ACSR conductor		AEP (100%)
	Rebuild 4.23 miles of 69 kV		
b3297.1	line between Sawmill and		
03297.1	Lazelle station, using 795		
	ACSR 26/7 conductor		AEP (100%)
	Rebuild 1.94 miles of 69 kV		
b3297.2	line between Westerville and		
03297.2	Genoa stations, using 795		
	ACSR 26/7 conductor		AEP (100%)
	Replace risers and switchers		
	at Lazelle, Westerville, and		
b3297.3	Genoa 69 kV stations.		
	Upgrade associated relaying		
	accordingly		AEP (100%)
	Rebuild 0.8 mile of double		
	circuit 69 kV line between		
b3298	South Toronto and West		
	Toronto. Replace 219 ACSR		
	with 556 ACSR		AEP (100%)
	Replace the 69 kV breaker D		
b3298.1	at South Toronto station with		
	40 kA breaker		AEP (100%)
	Rebuild 0.2 mile of the West		
	End Fostoria - Lumberjack		
	Switch 69 kV line with 556		
b3299	ACSR (Dove) conductors.		
	Replace jumpers on West End		
	Fostoria line at Lumberjack		
	Switch		AEP (100%)

110000000000000000000000000000000000000	D 1 :11 E1	Thirtean Tee venue Teequi	
	Rebuild Fleming station in		
	the clear; Replace 138/69kV		
	Fleming Transformer #1 with		
	138/69 kV 130 MVA		
	transformer with high side		
	138 kV CB; Install a 5		
	breaker 69 kV ring bus on the		
b3307	low side of the transformer,		
	replace 69 kV circuit switcher		
	AA, replace 69/12 kV		
	Transformer #3 with 69/12		
	kV 30 MVA transformer,		
	replace 12 kV CB A and D;		
	Retire existing Fleming		
	substation		AEP (100%)
	Reconductor and rebuild 1		
b3308	span of T-line on the Fort		
03308	Steuben – Sunset Blvd 69 kV		
	branch with 556 ACSR		AEP (100%)
	Rebuild 1.75 miles of the		
	Greenlawn – East Tiffin line		
	section of the Carothers –		
b3309	Greenlawn 69 kV circuit		
03309	containing 133 ACSR		
	conductor with 556 ACSR		
	conductor. Upgrade relaying		
	as required		AEP (100%)
	Rebuild 10.5 miles of the		 
b3310.1	Howard – Willard 69 kV line		
	utilizing 556 ACSR		
	conductor		AEP (100%)
h2210.2	Upgrade relaying at Howard		
b3310.2	69 kV station		AEP (100%)
1 2210 2	Upgrade relaying at Willard		,
b3310.3	69 kV station		AEP (100%)

AEP Service Corporation on behalf of its Affiliate Companies (AEP Indiana Michigan Transmission Company, AEP Kentucky Transmission Company, AEP Ohio Transmission Company, AEP West Virginia Transmission Company, Appalachian Power Company, Indiana Michigan Power Company, Kentucky Power Company, Kingsport Power Company, Ohio Power Company and Wheeling Power Company) (cont.)

Required Tr	ansmission Enhancements	Annual Revenue Require	ement Responsible Customer(s)
	Rebuild approximately 4		
	miles of existing 69 kV line		
	between West Mount Vernon		
	and Mount Vernon stations.		
b3312	Replace the existing 138/69		
	kV transformer at West		
	Mount Vernon with a larger		
	90 MVA unit along with		
	existing 69 kV breaker 'C'		AEP (100%)
	Add 40 kA circuit breakers		
b3313	on the low and high side of		
03313	the East Lima 138/69 kV		
	transformer		AEP (100%)
	Install a new 138/69 kV 130		
b3314.1	MVA transformer and		
03314.1	associated protection at Elliot		
	station		AEP (100%)
	Perform work at Strouds Run		
	station to retire 138/69/13 kV		
b3314.2	33.6 MVA Transformer #1		
	and install a dedicated 138/13		
	KV distribution transformer		AEP (100%)
	Upgrade relaying on Mark		
	Center – South Hicksville 69		
b3315	kV line and replace Mark		
	Center cap bank with a 7.7		
	MVAR unit		AEP (100%)

#### **SCHEDULE 12 – APPENDIX A**

#### (20) Virginia Electric and Power Company

Requirea i	ransmission Ennancements Annual	Revenue Requirement	Responsible Customer(s)
b1698.7	Replace Loudoun 230 kV breaker '203052' with 63 kA rating		Dominion (100%)
b1696.1	Replace the Idylwood 230 kV '25112' breaker with 50 kA breaker		Dominion (100%)
b1696.2	Replace the Idylwood 230 kV '209712' breaker with 50 kA breaker		Dominion (100%)
b1793.1	Remove the Carolina 22 SPS to include relay logic changes, minor control wiring, relay resets and SCADA programming upon completion of project		Dominion (100%)
b2281	Additional Temporary SPS at Bath County		Dominion (100%)
b2350	Reconductor 211 feet of 545.5 ACAR conductor on 59 Line Elmont - Greenwood DP 115 kV to achieve a summer emergency rating of 906 amps or greater		Dominion (100%)
b2358	Install a 230 kV 54 MVAR capacitor bank on the 2016 line at Harmony Village Substation		Dominion (100%)
b2359	Wreck and rebuild approximately 1.3 miles of existing 230 kV line between Cochran Mill - X4-039 Switching Station		Dominion (100%)
b2360	Build a new 39 mile 230 kV transmission line from Dooms - Lexington on existing right-of-way		Dominion (100%)
b2361	Construct 230 kV OH line along existing Line #2035 corridor, approx. 2.4 miles from Idylwood - Dulles Toll Road (DTR) and 2.1 miles on new right-of-way along DTR to new Scott's Run Substation		Dominion (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s)

	evenue Requirement	Responsible Customer(s)
Replace the Brambleton 230 kV breaker '209502' with 63 kA		
breaker		Dominion (100%)
Replace the Brambleton 230 kV breaker '213702' with 63 kA breaker		Dominion (100%)
Replace the Brambleton 230 kV breaker 'H302' with 63 kA breaker		Dominion (100%)
Build a 2nd Loudoun - Brambleton 500 kV line within the existing ROW. The Loudoun - Brambleton 230 kV line will be relocated as an underbuild on the new 500 kV line		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%) / BGE (4.12%) / ComEd (13.46%)
Replace the Beaumeade 230 kV breaker '2079T2116' with 63 kA		Dominion (100%)
Replace the Beaumeade 230 kV breaker '2079T2130' with 63 kA		Dominion (100%)
Replace the Beaumeade 230 kV breaker '208192' with 63 kA		Dominion (100%)
Replace the Beaumeade 230 kV breaker '209592' with 63 kA		Dominion (100%)
Replace the Beaumeade 230 kV breaker '211692' with 63 kA		Dominion (100%)
Replace the Beaumeade 230 kV breaker '227T2130' with 63 kA		Dominion (100%)
	Replace the Brambleton 230 kV breaker '209502' with 63 kA breaker  Replace the Brambleton 230 kV breaker '213702' with 63 kA breaker  Replace the Brambleton 230 kV breaker 'H302' with 63 kA breaker  Build a 2nd Loudoun - Brambleton 230 kV breaker 'H302' with 63 kA breaker  Build a 2nd Loudoun - Brambleton 230 kV breaker 'H302' with 63 kA breaker  Build a 2nd Loudoun - Brambleton 230 kV breaker '2079 T2116' with 63 kA line will be relocated as an underbuild on the new 500 kV line  Replace the Beaumeade 230 kV breaker '2079 T2116' with 63 kA  Replace the Beaumeade 230 kV breaker '2079 T2130' with 63 kA  Replace the Beaumeade 230 kV breaker '208192' with 63 kA  Replace the Beaumeade 230 kV breaker '209592' with 63 kA  Replace the Beaumeade 230 kV breaker '211692' with 63 kA  Replace the Beaumeade 230 kV breaker '211692' with 63 kA	Breaker '209502' with 63 kA breaker  Replace the Brambleton 230 kV breaker '213702' with 63 kA breaker  Replace the Brambleton 230 kV breaker 'H302' with 63 kA breaker  Build a 2nd Loudoun - Brambleton 500 kV line within the existing ROW. The Loudoun - Brambleton 230 kV line will be relocated as an underbuild on the new 500 kV line  Replace the Beaumeade 230 kV breaker '2079T2116' with 63 kA  Replace the Beaumeade 230 kV breaker '2079T2130' with 63 kA  Replace the Beaumeade 230 kV breaker '208192' with 63 kA  Replace the Beaumeade 230 kV breaker '209592' with 63 kA  Replace the Beaumeade 230 kV breaker '211692' with 63 kA  Replace the Beaumeade 230 kV breaker '211692' with 63 kA

The Annual Revenue Requirement for all Virginia Electric and Power Company projects in this Section 20 shall be as specified in Attachment 7 to Appendix A of Attachment H-16A and under the procedures detailed in Attachment H-16B.

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required 1	ransmission Enhancements Ani	iuai Kevenue Kequirement	Responsible Customer(s)
b2403	Replace the Beaumeade 230 kV breaker '274T2130' with 63 kA		Dominion (100%)
b2404	Replace the Beaumeade 230 kV breaker '227T2095' with 63 kA		Dominion (100%)
b2405	Replace the Pleasant view 230 kV breaker '203T274' with 63 kA		Dominion (100%)
b2443	Construct new underground 230 kV line from Glebe to Station C, rebuild Glebe Substation, construct 230 kV high side bus at Station C with option to install 800 MVA PAR		Dominion (97.11%) / ME (0.18%) / PEPCO (2.71%)
b2443.1	Replace the Idylwood 230 kV breaker '203512' with 50 kA		Dominion (100%)
b2443.2	Replace the Ox 230 kV breaker '206342' with 63 kA breaker		Dominion (100%)
b2443.3	Glebe – Station C PAR		DFAX Allocation: Dominion (22.57%) / PEPCO (77.43%)
b2443.6	Install a second 500/230 kV transformer at Possum Point substation and replace bus work and associated equipment as needed		Dominion (100%)
b2443.7	Replace 19 63 kA 230 kV breakers with 19 80 kA 230 kV breakers		Dominion (100%)
b2457	Replace 24 115 kV wood h-frames with 230 kV Dominion pole H-frame structures on the Clubhouse – Purdy 115 kV line		Dominion (100%)
b2458.1	Replace 12 wood H-frame structures with steel H- frame structures and install shunts on all conductor splices on Carolina – Woodland 115 kV		Dominion (100%)

Required 1	ransmission Ennancements Ani	iuai Kevenue Kequiremeni	Responsible Customer(s)
b2458.2	Upgrade all line switches and substation components at Carolina 115 kV to meet or exceed		
	new conductor rating of 174 MVA		Dominion (100%)
b2458.3	Replace 14 wood H-frame structures on Carolina – Woodland 115 kV		Dominion (100%)
b2458.4	Replace 2.5 miles of static wire on Carolina – Woodland 115 kV		Dominion (100%)
b2458.5	Replace 4.5 miles of conductor between Carolina 115 kV and Jackson DP 115 kV with min. 300 MVA summer STE rating; Replace 8 wood H-frame structures located between Carolina and Jackson DP with steel H-frames		Dominion (100%)
b2460.1	Replace Hanover 230 kV substation line switches with 3000A switches		Dominion (100%)
b2460.2	Replace wave traps at Four River 230 kV and Elmont 230 kV substations with 3000A wave traps		Dominion (100%)
b2461	Wreck and rebuild existing Remington CT – Warrenton 230 kV (approx. 12 miles) as a double-circuit 230 kV line		Dominion (100%)
b2461.1	Construct a new 230 kV line approximately 6 miles from NOVEC's Wheeler Substation a new 230 kV switching station in Vint Hill area		Dominion (100%)
b2461.2	Convert NOVEC's Gainesville – Wheeler line (approximately 6 miles) to 230 kV		Dominion (100%)
b2461.3	Complete a Vint Hill – Wheeler – Loudoun 230 kV networked line		Dominion (100%)

Required 1	ransmission Enhancements Annual	Kevenue Kequirement	Responsible Customer(s)
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%)
			/ APS (5.64%) / ATSI (8.02%)
			/ BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
	Replace Midlothian 500 kV		DEOK (3.37%) / DL (1.76%) /
	breaker 563T576 and motor operated switches with 3		DPL (2.55%) / Dominion
	breaker 500 kV ring bus.		(12.97%) / EKPC (1.81%) /
b2471	Terminate Lines # 563 Carson		JCPL (3.92%) / ME (1.95%) /
	– Midlothian, #576		NEPTUNE* (0.24%) / OVEC
	Midlothian –North Anna,		(0.07%) / PECO (5.39%) /
	Transformer #2 in new ring		PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			DFAX Allocation:
			Dominion (100%)
	Rebuild 115 kV Line #32		
	from Halifax-South Boston (6		
1-2504	miles) for min. of 240 MVA and transfer Welco tap to Line		
b2504	#32. Moving Welco to Line		
	#32 requires disabling auto-		
	sectionalizing scheme		Dominion (100%)
	Install structures in river to		
1 2505	remove the 115 kV #65 line		
b2505	(Whitestone-Harmony Village 115 kV) from bridge and		
	improve reliability of the line		Dominion (100%)
	Replace the Loudoun 500 kV		( )
b2542	'H2T502' breaker with a 50		D (1000/)
	kA breaker		Dominion (100%)
b2543	Replace the Loudoun 500 kV 'H2T584' breaker with a 50		
04343	kA breaker		Dominion (100%)
	Reconductor wave trap at		( )
b2565	Carver Substation with a		D :: (1000()
	2000A wave trap Reconductor 1.14 miles of		Dominion (100%)
	existing line between ACCA		
b2566	and Hermitage and upgrade		
	associated terminal equipment		Dominion (100%)
	·		\ /

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required 1	ransmission Enhancements Ani	nuai Kevenue Kequirement	Responsible Customer(s)
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%)
			/ APS (5.64%) / ATSI (8.02%)
			/ BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
			DEOK (3.37%) / DL (1.76%) /
			DPL (2.55%) / Dominion
	Rebuild the Elmont –		(12.97%) / EKPC (1.81%) /
b2582	Cunningham 500 kV line		JCPL (3.92%) / ME (1.95%) /
	Cummignam 500 K v mic		NEPTUNE* (0.24%) / OVEC
			(0.07%) / PECO (5.39%) /
			PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			DFAX Allocation:
			Dominion (89.98%) / PEPCO
			(10.02%)
	Install 500 kV breaker at		
b2583	Ox Substation to remove Ox Tx#1 from H1T561		
	breaker failure outage		Dominion (100%)
	Relocate the Bremo load		
	(transformer #5) to #2028		
1.0504	(Bremo-Charlottesville		
b2584	230 kV) line and Cartersville distribution		
	station to #2027 (Bremo-		
	Midlothian 230 kV) line		Dominion (100%)
	Reconductor 7.63 miles of		
1.2505	existing line between		
b2585	Cranes and Stafford, upgrade associated line		
	switches at Stafford		PEPCO (100%)
	Wreck and rebuild the		<u> </u>
	Chesapeake – Deep Creek		
	- Bowers Hill - Hodges		
b2620	Ferry 115 kV line; minimum rating 239		
	MVA normal/emergency,		
	275 MVA load dump		
	rating		Dominion (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Rebuild Line #47 between Kings Dominion 115 kV and Fredericksburg 115 kV b2622 to current standards with summer emergency rating of 353 MVA at 115 kV Dominion (100%) Rebuild Line #4 between Bremo and Structure 8474 (4.5 miles) to current b2623 standards with a summer emergency rating of 261 Dominion (100%) MVA at 115 kV Rebuild 115 kV Lines #18 and #145 between Possum Point Generating Station and NOVEC's Smoketown DP (approx. 8.35 miles) to b2624 current 230 kV standards with a normal continuous summer rating of 524 MVA at 115 kV Rebuild 115 kV Line #48 Dominion (100%) between Thole Street and Structure 48/71 to current standard. The remaining line to Sewells Point is 2007 vintage. Rebuild 115 b2625 kV Line #107 line, Sewells Point to Oakwood, between structure 107/17 and 107/56 to current Dominion (100%) standard Rebuild 115 kV Line #34 between Skiffes Creek and Yorktown and the double circuit portion of 115 kV b2626 Line #61 to current standards with a summer emergency rating of 353 MVA at 115 kV Dominion (100%) Rebuild 115 kV Line #1 between Crewe 115 kV and Fort Pickett DP 115 b2627 kV (12.2 miles) to current standards with summer emergency rating of 261 MVA at 115 kV Dominion (100%)

Rebuild 115 kV Line #82

MVAR Variable Shunt Reactor at Dahlgren to provide line protection

during maintenance, remove the operational hazard and provide voltage reduction during light load conditions

Rebuild Boydton Plank Rd – Kerr Dam 115 kV Line #38 (8.3 miles) to current

standards with summer emergency rating of 353

Rebuild Carolina – Kerr Dam 115 kV Line #90 (38.7

Rebuild Clubhouse – Carolina 115 kV Line #130 (17.8 miles) to current

standards with summer emergency rating of 353

MVA at 115 kV

miles) to current standards with summer emergency rating of 353 MVA 115 kV

MVA at 115 kV

b2636

b2647

b2648

b2649

Required Transmission Enhancements Annual Revenue Requirement

Everetts – Voice of America (20.8 miles) to current b2628 standards with a summer emergency rating of 261 MVA at 115 kV Dominion (100%) Rebuild the 115 kV Lines #27 and #67 lines from Greenwich 115 kV to Burton 115 kV Structure 27/280 to b2629 current standard with a summer emergency rating of Dominion (100%) 262 MVA at 115 kV Install circuit switchers on **Gravel Neck Power Station** GSU units #4 and #5. Install b2630 two 230 kV CCVT's on Lines #2407 and #2408 for Dominion (100%) loss of source sensing Install three 230 kV bus breakers and 230 kV, 100

Responsible Customer(s)

Dominion (100%)

Dominion (100%)

Dominion (100%)

(17.8 miles) to current

standards with summer emergency rating of 353 MVA at 115 kV

b2650

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Rebuild of 1.7 mile tap to Metcalf and Belfield DP (MEC) due to poor condition. The existing summer rating of the tap is b2649.1 48 MVA and existing conductor is 4/0 ACSR on wood H-frames. The proposed new rating is 176 MVA using 636 AČSR conductor Dominion (100%) Rebuild of 4.1 mile tap to Brinks DP (MEC) due to wood poles built in 1962. The existing summer rating of the tap is 48 MVA and b2649.2 existing conductor is 4/0 ACSR and 393.6 ACSR on wood H-frames. The proposed new rating is 176 MVA using 636 AČSR conductor Dominion (100%) Rebuild Twittys Creek – Pamplin 115 kV Line #154

Rebuild Buggs Island –

Build 15 mile 115 kV line from Scotland Neck to S Justice Branch with

summer emergency rating of 353 MVA. New line will

Install 115 kV three-breaker

ring bus at S Justice Branch

Install 115 kV breaker at

Install a 2nd 224 MVA

230/115 kV transformer at

be routed to allow HEMC to convert Dawson's Crossroads RP from 34.5

kV to 115 kV

Scotland Neck

Hathaway

b2654.1

b2654.2

b2654.3

b2654.3

Required Transmission Enhancements Annual Revenue Requirement

Plywood 115 kV Line #127 (25.8 miles) to current standards with summer b2651 emergency rating of 353 MVA at 115 kV. The line should be rebuilt for 230 kV and operated at 115 kV Dominion (100%) Rebuild Greatbridge – Hickory 115 kV Line #16 and Greatbridge -Chesapeake E.C. to current b2652 standard with summer emergency rating of 353 MVA at 115 kV Dominion (100%) Build 20 mile 115 kV line from Pantego to Trowbridge with summer b2653.1 emergency rating of 353 Dominion (100%) MVĂ Install 115 kV four-breaker b2653.2 ring bus at Pantego Dominion (100%) Install 115 kV breaker at b2653.3 Trowbridge Dominion (100%)

Responsible Customer(s)

Dominion (100%)

Dominion (100%)

Dominion (100%)

Required Tra	ansmission Enhancements Annua	1 Revenue Requirement	Responsible Customer(s)
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%)
			/ APS (5.64%) / ATSI (8.02%)
			/ BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
			DEOK (3.37%) / DL (1.76%) /
			DPL (2.55%) / Dominion
			(12.97%) / EKPC (1.81%) /
b2665	Rebuild the Cunningham –		JCPL (3.92%) / ME (1.95%) /
02003	Dooms 500 kV line		NEPTUNE* (0.24%) / OVEC
			(0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG (6.40%) / RE (0.27%) <b>DFAX Allocation:</b> Dominion (72.18%) / PEPCO (27.82%)  Dominion (100%)
			` ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '
			` /
			`
			(27.82%)
b2686	Pratts Area Improvement		
02000	_		Dominion (100%)
	Build a 230 kV line from		
b2686.1	Remington Substation to		
	Gordonsville Substation		Dominion (100%)
	utilizing existing ROW Install a 3rd 230/115 kV		Dominion (10070)
b2686.2	transformer at Gordonsville		
	Substation		Dominion (100%)
	Upgrade Line 2088		
b2686.3	between Gordonsville		
	Substation and Louisa CT Station		Dominion (100%)
	Replace the Remington CT		Dominion (10070)
1.2000.4	230 kV breaker		
b2686.4	"2114T2155" with a 63 kA		
	breaker		Dominion (100%)
1000011	Upgrading sections of the		
b2686.11	Gordonsville – Somerset 115 kV circuit		Dominion (100%)
	Upgrading sections of the		Dominion (10070)
b2686.12	Somerset – Doubleday 115		
02000112	kV circuit		Dominion (100%)
	Upgrading sections of the		
b2686.13	Orange – Somerset 115 kV		D :: (1000/)
	circuit		Dominion (100%)
b2686.14	Upgrading sections of the Mitchell – Mt. Run 115 kV		
02000.14	circuit		Dominion (100%)
L			2 0111111011 (10070)

<sup>\*</sup>Neptune Regional Transmission System, LLC

required 11	ansimission Limanecinents	7 Hilliam Tee verime Teequiter	Hent Responsible Customer(s)
b2717.1	De-energize Davis – Rosslyn #179 and #180 69 kV lines		Dominion (100%)
b2717.2	Remove splicing and stop joints in manholes		Dominion (100%)
b2717.3	Evacuate and dispose of insulating fluid from various reservoirs and cables		Dominion (100%)
b2717.4	Remove all cable along the approx. 2.5 mile route, swab and cap-off conduits for future use, leave existing communication fiber in place		Dominion (100%)
b2719.1	Expand Perth substation and add a 115 kV four breaker ring		Dominion (100%)
b2719.2	Extend the Hickory Grove DP tap 0.28 miles to Perth and terminate it at Perth		Dominion (100%)
b2719.3	Split Line #31 at Perth and terminate it into the new ring bus with 2 breakers separating each of the line terminals to prevent a breaker failure from taking out both 115 kV lines		Dominion (100%)
b2720	Replace the Loudoun 500 kV 'H1T569' breakers with 50 kA breaker		Dominion (100%)
b2729	Optimal Capacitors Configuration: New 175 MVAR capacitor at Brambleton, new 175 MVAR capacitor at Ashburn, new 300 MVAR capacitor at Shelhorm, new 150 MVAR capacitor at Liberty		AEC (1.96%) / BGE (14.37%) / Dominion (35.11%) / DPL (3.76%) / ECP** (0.29%) / HTP*** (0.34%) / JCPL (3.31%) / ME (2.51%) / NEPTUNE* (0.63%) / PECO (6.26%) / PEPCO (20.23%) / PPL (3.94%) / PSEG (7.29%)

<sup>\*</sup> Neptune Regional Transmission System, LLC

<sup>\*\*</sup> East Coast Power, L.L.C.

<sup>\*\*\*</sup>Hudson Transmission Partners, LLC

required 11	ansimission Emiancements. Annual Revenue Requirement	1
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%)
		/ APS (5.64%) / ATSI (8.02%)
		/ BGE (4.12%) / ComEd
		(13.46%) / Dayton (2.12%) /
		DEOK (3.37%) / DL (1.76%) /
		DPL (2.55%) / Dominion
	Delevillador Como o Decembro	(12.97%) / EKPC (1.81%) /
b2744	Rebuild the Carson – Rogers Rd 500 kV circuit	JCPL (3.92%) / ME (1.95%) /
	Ru 300 k v cheuit	NEPTUNE* (0.24%) / OVEC
		(0.07%) / PECO (5.39%) /
		PENELEC (1.84%) / PEPCO
		(3.71%) / PPL (4.78%) / PSEG
		(6.40%) / RE (0.27%)
		DFAX Allocation:
		Dominion (94.47%) / EKPC
		(0.22%) / PEPCO (5.31%)
b2745	existing line between	
		Dominion (100%)
	Rebuild Line #137 Ridge Rd	Dominion (10070)
1-2746 1	- Kerr Dam 115 kV, 8.0	
02/40.1		D :: (1000()
	emergency rating	Dominion (100%)
	Kebuild Line #1009 Kidge Kd   Chase City 115 kV 05	
b2746.2	miles for 346 MVA summer	
Bebuild 21.32 miles of existing line between Chesterfield – Lakeside 230 kV  Rebuild Line #137 Ridge Rd – Kerr Dam 115 kV, 8.0 miles, for 346 MVA summer emergency rating Rebuild Line #1009 Ridge Rd Chese City 115 kV, 9.5	Dominion (100%)	
	Install a second 4.8 MVAR	
b2746 3	capacitor bank on the 13.8 kV	
02770.3		Dominion (100%)
		Dominion (10070)
b2747	between Dominion's	
		5 (1000/)
	FirstEnergy's 115 kV line	Dominion (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

10555	Install a +/-125 MVAr	•	, , , , , , , , , , , , , , , , , , ,
b2757	Statcom at Colington 230 kV		Dominion (100%)
			Load-Ratio Share Allocation:
b2758	Rebuild Line #549 Dooms – Valley 500 kV		AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%)
			DFAX Allocation: Dominion (100%)
b2759	Rebuild Line #550 Mt. Storm  – Valley 500 kV		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Update the nameplate for Mount Storm 500 kV

Replace the Mount Storm 500 kV "G2TY" with 50 kA

Replace the Mount

50 kA breaker

breaker

"57272" to be 50 kA breaker

Storm 500 kV "G2TZ" with

b2842

b2843

b2844

Required Transmission Enhancements Annual Revenue Requirement

The 7 mile section from Dozier to Thompsons Corner of line #120 will be rebuilt to current standards using 768.2 ACSS conductor with a b2800 summer emergency rating of 346 MVA at 115 kV. Line is proposed to be rebuilt on single circuit steel monopole structure Dominion (100%) Lines #76 and #79 will be rebuilt to current standard using 768.2 ACSS conductor with a summer emergency b2801 rating of 346 MVA at 115 kV. Proposed structure for rebuild is double circuit steel monopole structure Dominion (100%) Rebuild Line #171 from Chase City – Boydton Plank Road tap by removing end-of-life facilities and installing 9.4 miles of new conductor. b2802 The conductor used will be at current standards with a summer emergency rating of 393 MVA at 115 kV Dominion (100%) Build a new Pinewood 115 kV switching station at the tap serving North Doswell b2815 DP with a 115 kV four Dominion (100%) breaker ring bus

Responsible Customer(s)

Dominion (100%)

Dominion (100%)

Required 1	ransmission Enhancements Annual I	Revenue Requirement	Responsible Customer(s)
	Update the nameplate for		
1.00.45	Mount Storm 500 kV		
b2845	"G3TSX1" to be 50 kA		
	breaker		Dominion (100%)
	Update the nameplate for		Dominion (10070)
1.2046	Mount Storm 500 kV		
b2846			D :: (1000/)
	"SX172" to be 50 kA breaker		Dominion (100%)
	Update the nameplate for		
b2847	Mount Storm 500 kV "Y72"		
	to be 50 kA breaker	be for to the formulation to the formulat	Dominion (100%)
	Replace the Mount		, , ,
b2848	Storm 500 kV "Z72" with 50		
b2848 b2871 b2876	kA breaker		Dominion (100%)
	Rebuild 230 kV line #247		Bellimon (10070)
	from Swamp to Suffolk		
b2871	(31 miles) to current		
	standards with a summer		
	emergency rating of 1047		<b>D</b> (1000/)
	MVA at 230 kV		Dominion (100%)
	Rebuild line #101 from		
	Mackeys – Creswell 115 kV,		
	14 miles, with double circuit		
	structures. Install one circuit		
b2876			
02070	with provisions for a second circuit. The conductor used		
	will be at current standards		
	with a summer emergency		
	rating of 262 MVA at 115 kV		Dominion (100%)
	Rebuild line #112 from		Dominion (10070)
	Fudge Hollow – Lowmoor		
b2877	138 kV (5.16 miles) to		
02077	current standards with a		
	summer emergency rating of		
	314 MVA at 138 kV		Dominion (100%)
	Rebuild 230 kV line #231 to		
	current standard with a		
b2899	summer emergency rating of		
020))	1046 MVA. Proposed		
	conductor is 2-636 ACSR		Dominion (100%)
	Build a new 230/115 kV		Dominion (10070)
	switching station connecting		
	to 230 kV network line #2014		
1.2000			
b2900	(Earleys – Everetts). Provide		
	a 115 kV source from the		
	new station to serve Windsor		
	DP		Dominion (100%)

	T	<u> </u>	
b2922	Rebuild 8 of 11 miles of 230 kV lines #211 and #228 to current standard with a summer emergency rating of 1046 MVA for rebuilt section. Proposed conductor is 2-636 ACSR		Dominion (100%)
b2928	Rebuild four structures of 500 kV line #567 from Chickahominy to Surry using galvanized steel and replace the river crossing conductor with 3-1534 ACSR. This will increase the line #567 line rating from 1954 MVA to 2600 MVA		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%)
b2929	Rebuild 230 kV line #2144 from Winfall to Swamp (4.3 miles) to current standards with a standard conductor (bundled 636 ACSR) having a summer emergency rating of 1047 MVA at 230 kV  Replace fixed series capacitors on 500 kV Line		Dominion (100%)
b2960	#547 at Lexington and on 500 kV Line #548 at Valley		See sub-IDs for cost allocations

<sup>\*</sup>Neptune Regional Transmission System, LLC

		<u> </u>	Trespension Customer(s)
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%)
			/ APS (5.64%) / ATSI (8.02%)
		/ BGE (4.12%) / ComEd	
			(13.46%) / Dayton (2.12%) /
			DEOK (3.37%) / DL (1.76%) /
			DPL (2.55%) / Dominion
	D 1 C 1		(12.97%) / EKPC (1.81%) /
1-2060 1	#547 at Lexington NEP'	JCPL (3.92%) / ME (1.95%) /	
b2960.1		NEPTUNE* (0.24%) / OVEC	
		(0.07%) / PECO (5.39%) /	
		PENELEC (1.84%) / PEPCO	
			(0.07%) / PECO (5.39%) / PENELEC (1.84%) / PEPCO (3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			DFAX Allocation:
			DEOK (1.39%) / Dominion
			(21.26%) / EKPC (0.82%) /
			PEPCO (76.53%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required 11	ansmission Emiancements. Annual Revenue Requirement	Responsible Customer(s)
		<b>Load-Ratio Share Allocation:</b>
		AEC (1.67%) / AEP (13.94%)
		/ APS (5.64%) / ATSI (8.02%)
		/ BGE (4.12%) / ComEd
		(13.46%) / Dayton (2.12%) /
		DEOK (3.37%) / DL (1.76%) /
		DPL (2.55%) / Dominion
		(12.97%) / EKPC (1.81%) /
1 20 60 2	Replace fixed series	JCPL (3.92%) / ME (1.95%) /
b2960.2	capacitors on 500 kV Line #548 at Valley	NEPTUNE* (0.24%) / OVEC
	#346 at valicy	(0.07%) / PECO (5.39%) /
		PENELEC (1.84%) / PEPCO
		(3.71%) / PPL (4.78%) / PSEG
		(6.40%) / RE (0.27%)
		DFAX Allocation:
		DEOK (20.11%) / Dominion
		(67.22%) / EKPC (9.17%) /
		PEPCO (3.50%)
	Rebuild approximately 3	
b2961	miles of Line #205 & Line #2003 from Chesterfield to	
	Locks & Poe respectively	Dominion (100%)
	Split Line #227 (Brambleton	Deminier (10070)
b2962	– Beaumeade 230 kV) and	
02902	terminate into existing	
	Belmont substation	Dominion (100%)
b2962.1	Replace the Beaumeade 230 kV breaker "274T2081" with	
02902.1	63 kA breaker	Dominion (100%)
	Replace the NIVO 230 kV	
b2962.2	breaker "2116T2130" with 63	5 (1000)
	kA breaker	Dominion (100%)
b2963	Reconductor the Woodbridge to Occoquan 230 kV line	
	segment of Line #2001 with	
	1047 MVA conductor and	
	replace line terminal	
	equipment at Possum Point,	D :: (1000/)
	Woodbridge, and Occoquan	Dominion (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

required 1	ransimission Educations 7 militar Revenue Requireme	
		Load-Ratio Share Allocation:
		AEC (1.67%) / AEP (13.94%) /
		APS (5.64%) / ATSI (8.02%) /
		BGE (4.12%) / ComEd
		(13.46%) / Dayton (2.12%) /
	Install 2-125 MVAR	DEOK (3.37%) / DL (1.76%) /
	STATCOMs at Rawlings	DPL (2.55%) / Dominion
b2978	and 1-125 MVAR	(12.97%) / EKPC (1.81%) /
02978	STATCOM at Clover 500	JCPL (3.92%) / ME (1.95%) /
	kV substations	NEPTUNE* (0.24%) / OVEC
	K V Substations	(0.07%) / PECO (5.39%) /
		PENELEC (1.84%) / PEPCO
		(3.71%) / PPL (4.78%) / PSEG
		(6.40%) / RE (0.27%)
		DFAX Allocation:
		Dominion (100%)
	Rebuild 115 kV Line #43	
	between Staunton and	
b2980	Harrisonburg (22.8 miles)	
02760	to current standards with a	
	summer emergency rating	
	of 261 MVA at 115 kV	Dominion (100%)
	Rebuild 115 kV Line #29	
	segment between	
	Fredericksburg and Aquia	
	Harbor to current 230 kV	
b2981	standards (operating at 115	
	kV) utilizing steel H-frame	
	structures with 2-636	
	ACSR to provide a normal	
	continuous summer rating	
	of 524 MVA at 115 kV	
	(1047 MVA at 230 kV)	Dominion (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

New Road and Middleburg substations with single circuit steel structures to current 115

minimum summer emergency

kV standards with a

rating of 261 MVA

b3018

Required Transmission Enhancements Annual Revenue Requirement Install a second 230/115 kV Transformer (224 MVA) approximately 1 mile north of Bremo and tie 230 kV Line #2028 (Bremo – Charlottesville) and 115 kV Line #91 (Bremo -Sherwood) together. A three breaker 230 kV ring bus will split Line #2028 into two b2989 lines and Line #91 will also be split into two lines with a new three breaker 115 kV ring bus. Install a temporary 230/115 kV transformer at Bremo substation for the interim until the new substation is complete Dominion (100%) Chesterfield to Basin 230 kV line – Replace 0.14 miles of 1109 ACAR with a conductor b2990 which will increase the line rating to approximately 706 MVĂ Dominion (100%) Chaparral to Locks 230 kV b2991 line – Replace breaker lead Dominion (100%) Acquire land and build a new switching station (Skippers) at the tap serving Brink DP b2994 with a 115 kV four breaker ring to split Line #130 and terminate the end points Dominion (100%) Rebuild Line #49 between

Responsible Customer(s)

required 11	ansinission Emiancements Amuan	Revenue Requirement	Responsible Cusionier(s)
			Load-Ratio Share Allocation:
			AEC (1.67%) / AEP (13.94%)
			/ APS (5.64%) / ATSI (8.02%)
			/ BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
			DEOK (3.37%) / DL (1.76%) /
		,	DPL (2.55%) / Dominion
	Rebuild 500 kV Line #552		(12.97%) / EKPC (1.81%) /
b3019	Bristers to Chancellor – 21.6		JCPL (3.92%) / ME (1.95%) /
	miles long		NEPTUNE* (0.24%) / OVEC
			(0.07%) / PECO (5.39%) /
			PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			DFAX Allocation:
			Dominion (93.48%) / PEPCO
			(6.52%)
1.0010.1	Update the nameplate for		
b3019.1	Morrisville 500 kV breaker		Dominion (100%)
	"H1T594" to be 50 kA Update the nameplate for		Dominion (100%)
b3019.2	Morrisville 500 kV breaker		
03017.2	"H1T545" to be 50 kA		Dominion (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

required 11	ansmission Ennancements Annual F	Cevenue Requirement	Responsible Customer(s)
			<b>Load-Ratio Share Allocation:</b>
			AEC (1.67%) / AEP (13.94%)
			/ APS (5.64%) / ATSI (8.02%)
			/ BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
			DEOK (3.37%) / DL (1.76%) /
			DPL (2.55%) / Dominion
			(12.97%) / EKPC (1.81%) /
	Rebuild 500 kV Line #574		JCPL (3.92%) / ME (1.95%) /
b3020	Ladysmith to Elmont – 26.2		NEPTUNE* (0.24%) / OVEC
	miles long		(0.07%) / PECO (5.39%) /
			PENELEC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			DFAX Allocation:
			APS (16.36%) / DEOK
			(11.61%) / Dominion (51.27%)
			/ EKPC (5.30%) / PEPCO
			(15.46%)
	Rebuild 500 kV Line #581 Ladysmith to Chancellor – 15.2 miles long		<b>Load-Ratio Share Allocation:</b>
			AEC (1.67%) / AEP (13.94%)
			/ APS (5.64%) / ATSI (8.02%)
			/ BGE (4.12%) / ComEd
			(13.46%) / Dayton (2.12%) /
		DEOK (3.37%) / DL (1.76%) /	
			DPL (2.55%) / Dominion
			(12.97%) / EKPC (1.81%) /
b3021			JCPL (3.92%) / ME (1.95%) /
			NEPTUNE* (0.24%) / OVEC
			(0.07%) / PECO (5.39%) /
			PENELÉC (1.84%) / PEPCO
			(3.71%) / PPL (4.78%) / PSEG
			(6.40%) / RE (0.27%)
			DFAX Allocation:
	Reconductor Line #274		Dominion (100%)
	Reconductor Line #2/4   (Pleasant View – Ashburn –		
b3026	Beaumeade 230 kV) with a		
	minimum rating of 1200		
	MVA. Also upgrade terminal		D
	equipment		Dominion (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

Required II	ansmission Ennancements Annual Revenue Requirement	Responsible Customer(s)
	Add a 2nd 500/230 kV 840 MVA transformer at	
b3027.1	Dominion's Ladysmith	
	substation	Dominion (100%)
	Reconductor 230 kV Line	2 0111111011 (10070)
	#2089 between Ladysmith	
1,2027.2	and Ladysmith CT	
b3027.2	substations to increase the	
	line rating from 1047 MVA	
	to 1225 MVA	Dominion (100%)
1 2 2 2 7 2	Replace the Ladysmith 500	
b3027.3	kV breaker "H1Ť581" with	Daminian (1009/)
	50 kA breaker	Dominion (100%)
	Update the nameplate for Ladysmith 500 kV breaker	
b3027.4	"H1T575" to be 50 kA	
	breaker	Dominion (100%)
	Update the nameplate for	
	Ladysmith 500 kV breaker	
b3027.5	"568T574" (will be	
	renumbered as "H2T568") to	
	be 50 kA breaker	Dominion (100%)
1.2055	Install spare 230/69 kV	
b3055	transformer at Davis	Dominion (100%)
		Dollinion (10078)
b3056	Partial rebuild 230 kV Line	
05050	#2113 Waller to Lightfoot	Dominion (100%)
	Rebuild 230 kV Lines #2154	
b3057	and #19 Waller to Skiffes	F (1000()
	Creek	Dominion (100%)
b3058	Partial rebuild of 230 kV	
03038	Lines #265, #200 and #2051	Dominion (100%)
	Rebuild 230 kV Line #2173	
b3059	Loudoun to Elklick	Dominion (100%)
1		

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Rebuild 4.6 mile Elklick – Bull Run 230 kV Line #295 and the portion (3.85 miles) of the Clifton – Walney 230 b3060 kV Line #265 which shares structures with Line #295 Dominion (100%) Rebuild 4.75 mile section of Line #26 between Lexington and Rockbridge with a b3088 minimum summer emergency rating of 261 MVA Dominion (100%) Rebuild 230 kV Line #224 between Lanexa and Northern Neck utilizing double circuit structures to current 230 kV standards. b3089 Only one circuit is to be installed on the structures with this project with a minimum summer emergency rating of 1047 MVA Dominion (100%) Convert the overhead portion (approx. 1500 feet) of 230 kV Lines #248 & #2023 to b3090 underground and convert Glebe substation to gas insulated substation Dominion (100%) Rebuild 230 kV line No.2063 (Clifton – Ox) and part of 230kV line No.2164 (Clifton – Keene Mill) with double circuit steel structures using b3096 double circuit conductor at current 230 kV northern Virginia standards with a minimum rating of 1200 **MVA** Dominion (100%) Rebuild 4 miles of 115 kV Line #86 between Chesterfield and Centralia to b3097 current standards with a minimum summer emergency rating of 393 MVA Dominion (100%) Rebuild 9.8 miles of 115 kV Line #141 between Balconv Falls and Skimmer and 3.8 miles of 115 kV Line #28 b3098 between Balcony Falls and Cushaw to current standards with a minimum rating of 261 MVA Dominion (100%)

Required 11	ansmission Ennancements Annual Rev	venue Requirement	Responsible Customer(s)
b3098.1	Rebuild Balcony Falls 115 kV substation		Dominion (100%)
b3110.1	Rebuild Line #2008 between Loudoun to Dulles Junction using single circuit conductor at current 230 kV northern Virginia standards with minimum summer ratings of 1200 MVA. Cut and loop Line #265 (Clifton – Sully) into Bull Run substation. Add three (3) 230 kV breakers at Bull Run to accommodate the new line and upgrade the substation		Dominion (100%)
b3110.2	Replace the Bull Run 230 kV breakers "200T244" and "200T295" with 50 kA breakers		Dominion (100%)
b3110.3	Replace the Clifton 230 kV breakers "201182" and "XT2011" with 63 kA breakers		Dominion (100%)
b3113	Rebuild approximately 1 mile of 115 kV Lines #72 and #53 to current standards with a minimum summer emergency rating of 393 MVA. The resulting summer emergency rating of Line #72 segment from Brown Boveri to Bellwood is 180 MVA. There is no change to Line #53 ratings		Dominion (100%)
b3114	Rebuild the 18.6 mile section of 115 kV Line #81 which includes 1.7 miles of double circuit Line #81 and 230 kV Line #2056. This segment of Line #81 will be rebuilt to current standards with a minimum rating of 261 MVA. Line #2056 rating will not change		Dominion (100%)
b3121	Rebuild Clubhouse – Lakeview 230 kV Line #254 with single-circuit wood pole equivalent structures at the current 230 kV standard with a minimum rating of 1047 MVA		Dominion (100%)

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Rebuild Hathaway – Rocky Mount (Duke Energy Progress) 230 kV Line #2181 and Line #2058 with double b3122 circuit steel structures using double circuit conductor at current 230 kV standards with a minimum rating of 1047 MVA Dominion (100%) Split Chesterfield-Plaza 115 kV Line No. 72 by rebuilding the Brown Boveri tap line as b3161.1 double circuit loop in-and-out of the Brown Boveri Breaker Dominion (100%) station Install a 115 kV breaker at the Brown Boveri Breaker b3161.2 station. Site expansion is required to accommodate the Dominion (100%) new layout Acquire land and build a new 230 kV switching station (Stevensburg) with a 224 MVA, 230/115 kV transformer. Gordonsville-Remington 230 kV Line No. 2199 will be cut and b3162 connected to the new station. Remington-Mt. Run 115 kV Line No.70 and Mt. Run-Oak Green 115 kV Line No. 2 will also be cut and connected to Dominion (100%) the new station Rebuild the 1.3 mile section of 500 kV Line No. 569 (Loudoun – Morrisville) with single-circuit 500 kV b3211 structures at the current 500 kV standard. This will increase the rating of the line to 3424 MVA Dominion (100%) Install 2nd Chickahominy b3213 500/230 kV transformer Dominion (100%) Replace the eight (8) Chickahominy 230 kV breakers with 63 kA breakers: "SC122", "205022", "209122", 210222-2", "28722", "H222", "21922" b3213.1 and "287T2129" Dominion (100%)

Sandlot and Cannon Branch

Required Transmission Enhancements Annual Revenue Requirement Responsible Customer(s) Install a second 230 kV circuit with a minimum summer emergency rating of 1047 MVA between Lanexa and Northern Next substations. The second b3223.1 circuit will utilize the vacant arms on the double-circuit structures that are being installed on Line #224 (Lanexa – Northern Next) as part of the End-of-Life Dominion (100%) rebuild project (b3089) Expand the Northern Neck terminal from a 230 kV, 4b3223.2 breaker ring bus to a 6breaker ring bus Dominion (100%) Expand the Lanexa terminal from a 6-breaker ring bus to a b3223.3 breaker-and-a-half Dominion (100%) arrangement Convert 115 kV Line #172 Liberty – Lomar and 115 kV Line #197 Cannon Branch – Lomar to 230 kV to provide a new 230 kV source between Cannon Branch and Liberty. The majority of 115 kV Line #172 Liberty – Lomar and Line #197 Čannon Branch – b3246.1 Lomar is adequate for 230 kV operation. Rebuild 0.36 mile segment between the Lomar and Cannon Branch junction. Lines will have a summer rating of 1047MVA/1047MVA (SN/SE) Dominion (100%) Perform substation work for the 115 kV to 230 kV line conversion at Liberty, b3246.2 Wellington, Godwin, Pioneer,

Required 11	ansinission Emancements Amuan	Acvenue Requirement	Responsible Customer(s)
b3246.3	Extend 230 kV Line #2011 Cannon Branch – Clifton to Winters Branch by removing the existing Line #2011 termination at Cannon Branch and extending the line to Brickyard creating 230 kV Line #2011 Brickyard - Clifton. Extend a new 230 kV line between Brickyard and Winters Branch with a summer rating of 1572MVA/1572MVA (SN/SE)		Dominion (100%)
b3246.4	Perform substation work at Cannon Branch, Brickyard and Winters Branch for the 230 kV Line #2011 Cannon Branch – Clifton extension		Dominion (100%)
b3246.5	Replace the Gainesville 230 kV 40 kA breaker "216192" with a 50 kA breaker		Dominion (100%)
b3247	Replace 13 towers with galvanized steel towers on Doubs – Goose Creek 500 kV. Reconductor 3 mile section with three (3) 1351.5 ACSR 45/7. Upgrade line terminal equipment at Goose Creek substation to support the 500 kV line rebuild		Load-Ratio Share Allocation: AEC (1.67%) / AEP (13.94%) / APS (5.64%) / ATSI (8.02%)
			DFAX Allocation: Dominion (100%)

<sup>\*</sup>Neptune Regional Transmission System, LLC

required 11	ransimission Emianeements Amidal Revenue	Requirement Responsible Customer(s)
b3262	Install a second 115 kV 33.67 MVAR cap bank at Harrisonburg substation along with a 115 kV breaker	Dominion (100%)
b3263	Cut existing 115 kV Line #5 between Bremo and Cunningham substations and loop in and out of Fork Union substation	Dominion (100%)
b3264	Install 40 kA breaker at Stuarts Draft 115 kV station and sectionalize the Doom to Dupont-Waynesboro 115 kV Line #117 into two 115 kV lines	Dominion (100%)
b3268	Build a switching station at the junction of 115 kV line #39 and 115 kV line #91 with a 115 kV capacitor bank. The switching station will be built with 230 kV structures but will operate at 115 kV	Dominion (100%)
b3300	Reconductor 230 kV Line #2172 from Brambleton to Evergreen Mills along with upgrading the line leads at Brambleton to achieve a summer emergency rating of 1574 MVA	Dominion (100%)

Required Tr	ansmission Enhancements Annual Re	venue Requirement	Responsible Customer(s)
b3301	Reconductor 230 kV Line #2210 from Brambleton to Evergreen Mills along with upgrading the line leads at Brambleton to achieve a summer emergency rating of 1574 MVA		Dominion (100%)
b3302	Reconductor 230 kV Line #2213 from Cabin Run to Yardley Ridge along with upgrading the line leads at Yardley to achieve a summer emergency rating of 1574 MVA		Dominion (100%)
b3303.1	Extend a new single circuit 230 kV Line #9250 from Farmwell substation to Nimbus substation		Dominion (100%)
b3303.2	Remove Beaumeade 230 kV Line #2152 line switch		Dominion (100%)
b3304	Midlothian area improvements for 300 MW load drop relief		Dominion (100%)
b3304.1	Cut 230 kV Line #2066 at Trabue junction		Dominion (100%)
b3304.2	Reconductor idle 230 kV Line #242 (radial from Midlothian to Trabue junction) to allow a minimum summer rating of 1047 MVA and connect to the section of 230 kV Line #2066 between Trabue junction and Winterpock, re-number 230 kV Line #242 structures to Line #2066		Dominion (100%)
b3304.3	Use the section of idle 115 kV Line #153, between Midlothian and Trabue junction to connect to the section of (former) 230 kV Line #2066 between Trabue junction and Trabue to create new Midlothian – Trabue lines with new line numbers #2218 and #2219		Dominion (100%)
b3304.4	Create new line terminations at Midlothian for the new Midlothian – Trabue 230 kV lines		Dominion (100%)