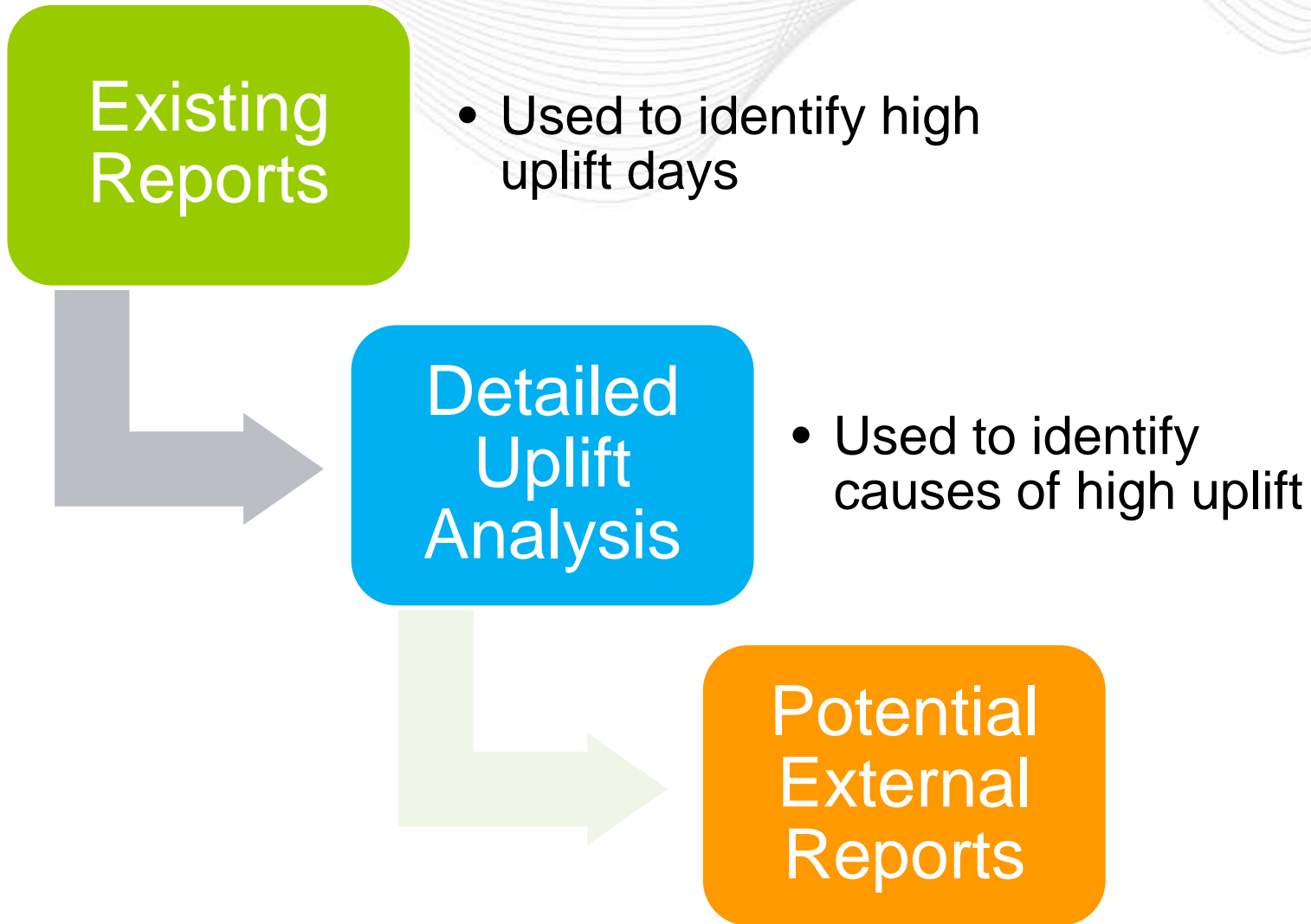




PJM Uplift Reporting

Chris Callaghan
Engineer
Markets Coordination Department
August 25, 2017

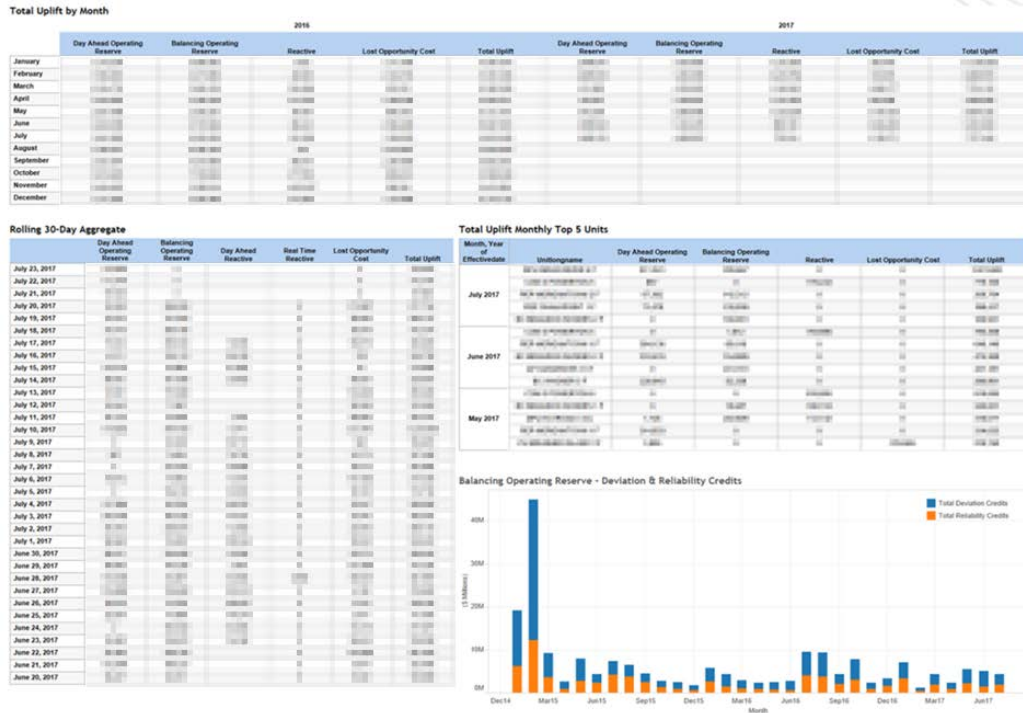






Existing Internal Reports for Uplift Identification

Reports are used to identify high uplift days and trends for further investigation



Daily Email Notifications

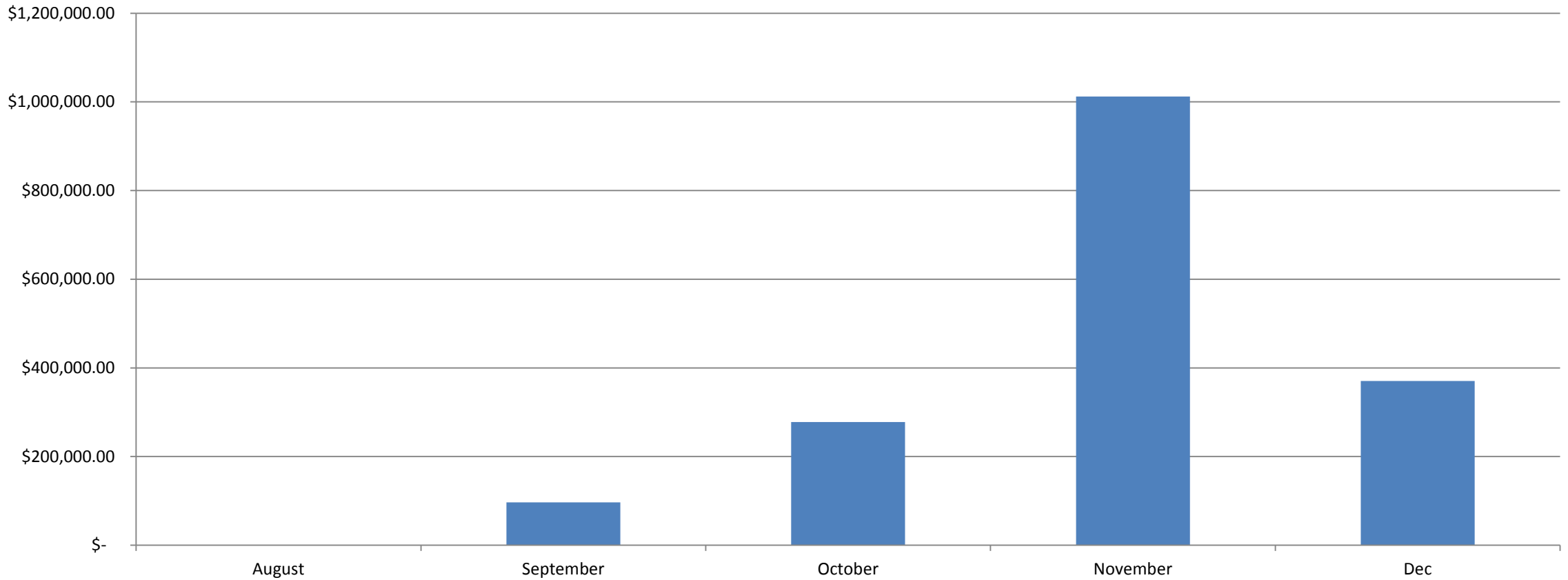


Unit Specific Uplift Reports

Current External Resources: Reactive Example

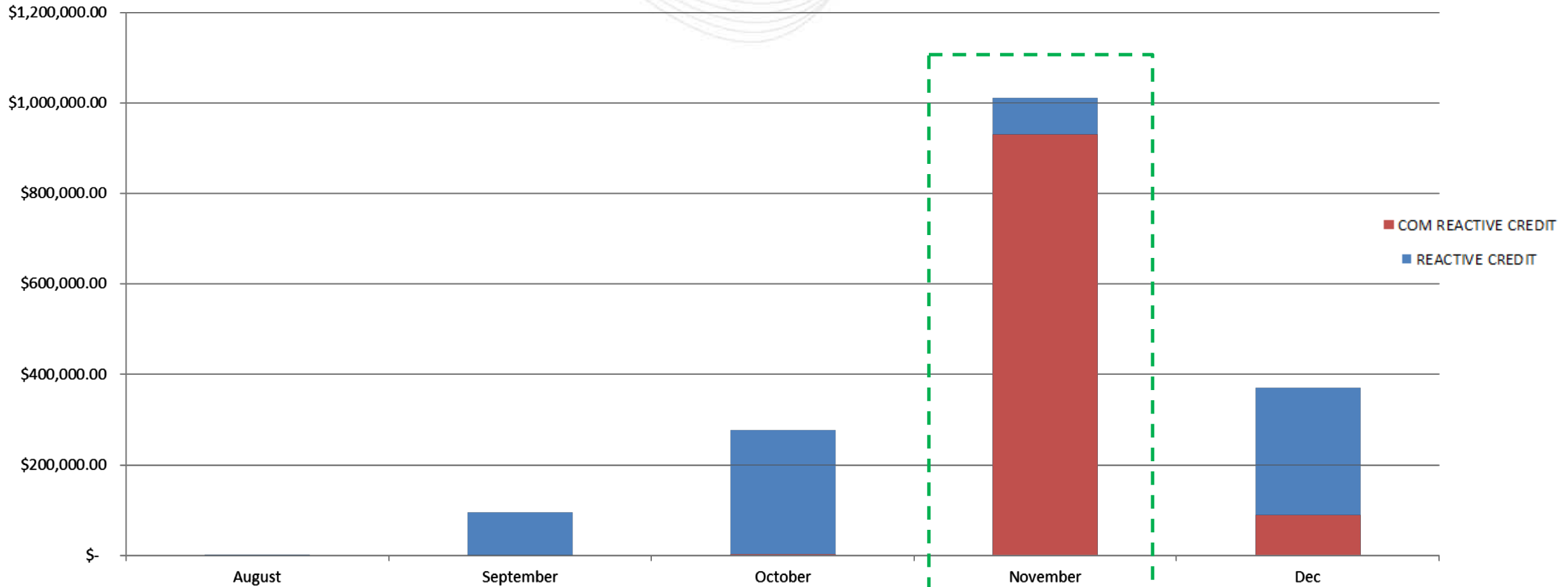
Source: <http://www.pjm.com/markets-and-operations/energy/uplift-data.aspx>

REACTIVE CREDIT



Current External Resources: Reactive Example

Source: <http://www.pjm.com/markets-and-operations/energy/uplift-data.aspx>



▶	101337	Alert	Cold Weather Alert	12.13.2016 09:00	AEP COMED DAY DEOK DUQ FE-AP FE-ATSI RMU WESTERN
▶	101303	Action	High System Voltage	11.24.2016 23:54	PJM-RTO
▶	101249	Action	High System Voltage	10.29.2016 23:55	PJM-RTO

- Emergency Procedures
 - High System Voltage Actions

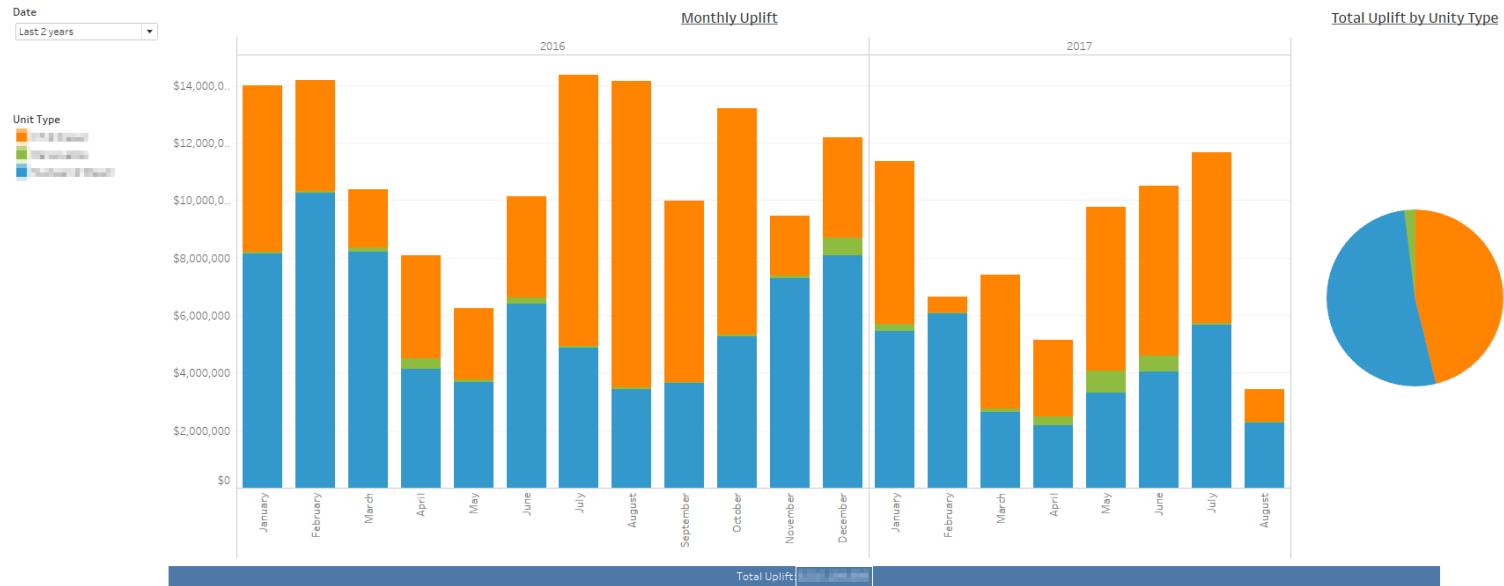
The data below is being posted in response to questions regarding the level of reactive service charges occurring 2016. The data below correlates system transmission outages or system conditions causing voltage issues in corresponding areas of the RTO for which reactive service charges are being settled.

Causes of Recent "Reactive Services Charge"			
Transmission Outage(s) and/or System conditions	Area(s) with voltage problems	Contingencies	Jan/Feb/March
Light load in DPL zone	DPL	Actual high voltage problems	
East Frankfurt-University Park 345KV	CE	Actual high voltage problems	
ETOWANDA-TGAS TAP 115 KV LINE	PN	Low Voltage on various contingencies	
08Cadiz-SouthAnderson	AEP	SAnderson I/o 08LapelJct-SouthAnderson	
Transmission Outage(s) and/or System conditions	Area(s) with voltage problems	Contingencies	Apr/May/June
Light load in DPL zone	DPL	Actual high voltage problems	
TEXSEAST-HUNTERST TEX-HUN 115 KV LINE	ME	newberry-roundtop 875 I/o 115 carlislepike-roxbury	
HARWOOD 4 XFORMER 230 KV XFMR	PL	hardwood susquehanna & 230/69 harwood 15	
Transmission Outage(s) and/or System conditions	Area(s) with voltage problems	Contingencies	July/August/Sept
Light load in DPL zone	DPL	Actual high voltage problems	
DOOMS4 -MIDWAYDP 39A 115 KV LINE	DOM	bremo #9 230/115 kv transformer	
Transmission Outage(s) and/or System conditions	Area(s) with voltage problems	Contingencies	Oct/Nov/Dec
BURCHESH-CHALKPT 5071 500 KV LINE	PEPCO	Calvert Cliffs-Waugh Chapel 5051 500KV line	
Various AEP outages	AEP	ABINGDON-CLINCHRI B 138 KV I/o 500/161 Sullivan / WOLF HILL 138KV L/O 500/161 SULLIVAN XF#3	
NILESVAL-OSCEOLA	PN	Mansfield-Mainsburg	
Light load in DPL zone	DPL	Actual high voltage problems	
Light Load in CE Zone	CE	Actual high voltage problems	

- Quarterly posting of Reactive Service Charges causes
 - Light load in CE zone
 - Actual high voltage problems

- Uplift by Zone:
 - <http://www.pjm.com/markets-and-operations/energy/uplift-data.aspx>
- Historical Load
 - <http://www.pjm.com/markets-and-operations/ops-analysis/historical-load-data.aspx>
- Emergency Procedures
 - <https://emergencyprocedures.pjm.com/ep/pages/dashboard.jsf>
- Quarterly Reactive Posting
 - <http://www.pjm.com/markets-and-operations/energy.aspx>

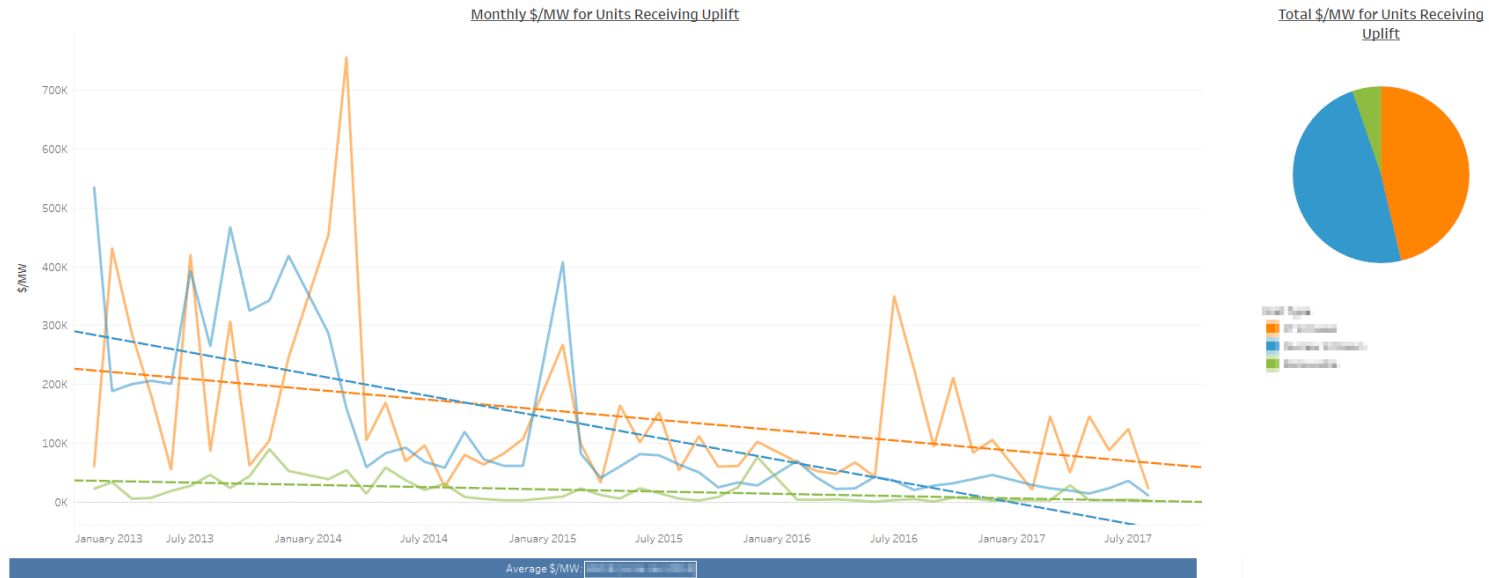
Potential External Report: Uplift by Fuel Type



Monthly Uplift by Unit Type (in Millions \$)

	2016												2017							
	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August
CT & Diesel	\$5,800	\$3,800	\$2,200	\$3,500	\$2,500	\$3,500	\$9,300	\$10,700	\$6,300	\$7,800	\$1,000	\$3,500	\$5,800	\$5,000	\$4,500	\$2,800	\$5,500	\$5,800	\$6,000	\$1,200
Nuclear & Steam	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Renewable	\$2,500	\$6,500	\$6,000	\$4,000	\$3,500	\$3,000	\$0	\$0	\$3,500	\$3,500	\$7,000	\$8,000	\$2,500	\$1,500	\$2,500	\$2,500	\$2,700	\$3,000	\$3,000	\$1,000

Potential External Report: Total Uplift by \$/MW



EFFECTIVEDATE
Last 2 years

Monthly \$/MW for Units Receiving Uplift

	2016												2017							
	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August
CT & Diesel	75,767	86,889	18,898	18,838	17,000	18,898	18,838	18,838	18,838	18,838	18,838	18,838	18,838	18,838	18,838	18,838	18,838	18,838	18,838	18,838
Nuclear & Steam	18,710	18,710	18,710	18,710	18,710	18,710	18,710	18,710	18,710	18,710	18,710	18,710	18,710	18,710	18,710	18,710	18,710	18,710	18,710	18,710
Renewable	1,839	4,381	4,327	4,381	4,381	88	4,327	4,381	1,221	1,177	1,839	1,839	1,839	1,839	1,839	1,839	1,839	1,839	1,839	1,839

Potential External Report: Total Uplift by Zone

