

# Reactive Power Compensation and the Capacity Market

RPCTF

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IMM



Monitoring Analytics

# Reactive Capability and the Capacity Market

- **Reactive capability is indistinguishable from unit capacity.**
  - **Carve out of parts of units is arbitrary and misleading.**
- **All units have reactive capability.**
- **Reactive capability is required for interconnection to PJM.**
- **Some units request reactive capability revenue when they are not interconnected directly to PJM.**
- **All reactive capacity costs are currently included in the capacity market.**
  - **Quadrennial review gross CONE**

# Reactive Capability and the Capacity Market

- **Reactive capability revenues are included in energy and ancillary service offset revenues in the capacity market**
  - **Unit specific offer caps based on net ACR.**
  - **Estimated reactive capability revenue in quadrennial review reference unit net CONE.**

# Reactive Capability and the Capacity Market

- **The costs of reactive capability are currently defined in a settlement process, primarily between FERC staff and unit owners, and frequently black box.**
- **Generally unit specific.**
- **Still some fleet rates covering multiple units.**
  - **Creates issues when a unit retires.**
- **Results are not consistent and methods are opaque.**

# Reactive Capability and the Capacity Market

- **AEP method is an arbitrary allocation method for defining reactive capability equipment and costs that predates markets. Created when all generator cost recovery was cost of service based.**
- **AEP is a cost of service method and not market based.**
- **AEP method developed for a steam plant.**
- **AEP method currently arbitrarily applied to all unit types including wind, solar and batteries.**
- **Requests have included approximately half of total capacity costs as reactive capability revenues.**
- **AEP method is inconsistent with markets and should be eliminated.**

# Reactive Capability and the Capacity Market

- **The separate process for setting reactive capability rates should be eliminated.**
- **All capacity costs should continue to be included in the capacity market.**
  - **That is the status quo**
  - **Quadrennial review**
  - **Unit specific offer caps**
- **Reactive capability revenues should not be included in the energy and ancillary services offset.**
  - **Change to status quo**
  - **Increase to capacity market offer caps and net CONE**

# Reactive service and capability charges

Zone	2019			2020		
	Reactive Service Charges	Reactive Capability Charges	Total Charges	Reactive Service Charges	Reactive Capability Charges	Total Charges
AECO	\$0	\$4,302,762	\$4,302,762	\$0	\$4,287,746	\$4,287,746
AEP	\$16,330	\$47,443,520	\$47,459,850	\$4,797	\$49,023,536	\$49,028,334
APS	\$14,903	\$15,457,310	\$15,472,213	\$0	\$17,834,079	\$17,834,079
ATSI	\$697	\$25,332,558	\$25,333,255	\$0	\$24,930,943	\$24,930,943
BGE	\$74,264	\$7,193,645	\$7,267,910	\$0	\$6,939,736	\$6,939,736
ComEd	\$0	\$36,552,189	\$36,552,189	\$0	\$40,087,232	\$40,087,232
DAY	\$0	\$2,822,626	\$2,822,626	\$0	\$2,812,775	\$2,812,775
DEOK	\$0	\$9,561,883	\$9,561,883	\$0	\$9,528,512	\$9,528,512
Dominion	\$182,436	\$38,736,292	\$38,918,728	\$0	\$41,365,119	\$41,365,119
DPL	\$124,034	\$9,836,843	\$9,960,877	\$10,538	\$10,599,586	\$10,610,123
DLCO	\$0	\$572,031	\$572,031	\$0	\$570,034	\$570,034
EKPC	\$14,944	\$2,185,379	\$2,200,323	\$46,753	\$2,177,752	\$2,224,505
JCPL	\$0	\$7,391,670	\$7,391,670	\$181,574	\$7,474,645	\$7,656,219
Met-Ed	\$5,072	\$5,287,973	\$5,293,045	\$4,631	\$6,126,496	\$6,131,126
OVEC	\$0	\$0	\$0	\$0	\$0	\$0
PECO	\$0	\$19,713,916	\$19,713,916	\$0	\$21,035,516	\$21,035,516
PENELEC	\$137,908	\$13,273,303	\$13,411,211	\$0	\$17,585,352	\$17,585,352
Pepco	\$0	\$11,161,942	\$11,161,942	\$0	\$10,838,558	\$10,838,558
PPL	\$0	\$34,837,111	\$34,837,111	\$180,337	\$35,345,889	\$35,526,226
PSEG	\$0	\$27,616,760	\$27,616,760	\$0	\$27,839,542	\$27,839,542
RECO	\$0	\$0	\$0	\$0	\$0	\$0
(Imp/Exp/Wheels)	\$0	\$16,465,627	\$16,465,627	\$0	\$18,597,887	\$18,597,887
<b>Total</b>	<b>\$570,589</b>	<b>\$335,745,340</b>	<b>\$336,315,929</b>	<b>\$428,629</b>	<b>\$355,000,934</b>	<b>\$355,429,564</b>

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