

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 |
| Total | \$570,589 | \$335,745,340 | \$336,315,929 | \$428,629 | \$355,000,934 | \$355,429,564 |

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