

172 FERC ¶ 61,033  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Neil Chatterjee, Chairman;  
Richard Glick, Bernard L. McNamee,  
and James P. Danly.

Indicated Generation Owners

Docket No. EL19-70-000

ORDER ESTABLISHING PAPER HEARING PROCEDURES

(Issued July 16, 2020)

1. On May 3, 2019, Indicated Generation Owners (Petitioners), a coalition of merchant generators,<sup>1</sup> submitted a petition for a declaratory order (Petition), pursuant to section 207 of the Commission's Rules of Practice and Procedure.<sup>2</sup> The Petition seeks guidance regarding the Commission's cost-based methodology to compensate generators for Reactive Supply and Voltage Control from Generation or Other Sources Service (Reactive Service), under Schedule 2 of the PJM Interconnection, L.L.C. (PJM) Open Access Transmission Tariff (Tariff).<sup>3</sup> For the reasons discussed below, we establish paper hearing procedures to further consider one of the issues raised by the Petition, namely, what is a reasonable proxy to determine the capital structure and cost of capital<sup>4</sup> for a merchant generator.

**I. Background**

2. Schedule 2 of the PJM Tariff provides that PJM will compensate owners of generation and non-generation resources for the capability to provide reactive power to PJM to maintain transmission voltages. Specifically, Schedule 2 states that, for each month of Reactive Service provided by generation and non-generation resources in the PJM region, PJM shall pay each resource owner an amount equal to the resource owner's

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<sup>1</sup> Ares EIF Management, LLC; Competitive Power Ventures, Inc.; Invenegy Thermal Development LLC; J-Power USA Development Co., Ltd; Panda Power Generation Infrastructure Fund LLC; Tenaska, Inc.; and Vistra Energy Corp.

<sup>2</sup> 18 C.F.R. § 385.207(a)(2) (2019).

<sup>3</sup> See PJM, Intra-PJM Tariffs, OATT, Schedule 2 (4.0.0) (Reactive Supply and Voltage Control from Generation or Other Sources Service).

<sup>4</sup> Cost of capital includes both the Return on Equity (ROE) and Return on Debt.

monthly revenue requirement, as accepted or approved by the Commission.<sup>5</sup> In PJM, reactive power supply and voltage control is a transmission service that is a non-market, cost of service product.

3. In *WPS Westwood Generation LLC*,<sup>6</sup> the Commission specified that generators seeking reactive power cost recovery, that have actual cost data and support, should use the multi-part formula first developed in *American Electric Power Service Corp. (AEP)*.<sup>7</sup> Under the *AEP* methodology, a generator first identifies the individual costs it incurred to construct three categories of plant equipment – the generator-exciter, the generator step-up transformers, and the accessory electric equipment – as well as the costs for the remainder of the production plant equipment.<sup>8</sup> In each of these categories of costs, the Commission has allowed reactive power filers to include both direct costs, such as the cost of materials and labor, and indirect costs, such as site acquisition and development costs, financing costs, supervision costs, and legal costs.<sup>9</sup>

4. Because the costs in all four categories are incurred to produce both reactive and real power, the Commission has approved allocators to identify the share of those costs apportioned to reactive power production. After the cost of reactive power producing facilities is identified, that total is multiplied by a fixed charge rate, which reflects an annual carrying cost and includes a cost of capital, depreciation, income taxes, administrative and general costs, and fixed operating and maintenance (O&M) expenses.<sup>10</sup>

## II. Petitioners' Requests

5. Petitioners argue that, while the *AEP* methodology provides important guidance to generators in developing their reactive power tariffs, the methodology was approved almost twenty years ago, prior to the evolution of current industry conditions. Petitioners

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<sup>5</sup> PJM, Intra-PJM Tariffs, OATT, Schedule 2 (4.0.0).

<sup>6</sup> 101 FERC ¶ 61,290, at 62,167 (2002).

<sup>7</sup> 88 FERC ¶ 61,141 (1999) (Op. No. 440).

<sup>8</sup> Petition at 11.

<sup>9</sup> *Duke Energy Fayette, LLC*, 104 FERC ¶ 61,090, at P 16 (2003).

<sup>10</sup> Petition at 12.

add that certain ambiguities in the application of the methodology have hindered efforts by generators to recover their actual costs of providing reactive power.<sup>11</sup>

6. Petitioners assert that guidance and clarification are required in six areas to reduce litigation costs for all parties, promote fair settlements, and facilitate recovery by merchant generators of their full reactive power costs, as allowed by Commission policy. Specifically, Petitioners ask the Commission to declare that:

- the cost of capital and capital structure reflected in PJM’s CONE Study is a reasonable proxy to use to determine a merchant generator’s capital structure and cost of capital;<sup>12</sup>
- fixed fuel transportation costs are includable in a reactive power revenue requirement;<sup>13</sup>
- the engineering, procurement and construction (EPC) contractor costs, as apportioned among the relevant major equipment categories by the reactive power provider’s EPC contractor, is sufficient for a generator to meet its burden concerning EPC contractor costs;<sup>14</sup>
- the categories of indirect cost accepted in *Chehalis Power Generating, L.P.*,<sup>15</sup> and *Bluegrass Generation Co., L.L.C.*,<sup>16</sup> are recoverable indirect costs under the AEP methodology;<sup>17</sup>
- a generator may recover a reactive power annual revenue requirement based on its full reactive capability;<sup>18</sup> and

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<sup>11</sup> *Id.* at 12 and Tab B, Borgatti Aff. at 2.

<sup>12</sup> *Id.* at 14-18.

<sup>13</sup> *Id.* at 18-21.

<sup>14</sup> *Id.* at 21-25.

<sup>15</sup> 123 FERC ¶ 61,038 (2008) (*Chehalis*).

<sup>16</sup> 121 FERC ¶ 61,018 (2007).

<sup>17</sup> Petition at 25-27.

<sup>18</sup> *Id.* at 27-33.

- reactive power filers may use actual plant load, rather than engineering judgment, to determine the Accessory Equipment Allocation Factor.<sup>19</sup>

### **III. Notice of Filings and Responsive Pleadings**

7. Notice of the Petition was published in the *Federal Register*, 84 Fed. Reg. 20,873 (May 13, 2019), with answers, interventions, and protests due on or before June 3, 2019. Notices of intervention and timely and out-of-time motions to intervene were submitted by the entities listed in the Appendix to this order. Protests and comments were filed by the entities noted in the Appendix.

8. Answers were submitted on June 18, 2019, by Indicated Generation Owners, the Interstate Natural Gas Association of America (INGAA), and the PJM Power Providers and the Electric Power Supply Association (P3/EPISA). Additional answers were submitted on June 21, 2019, by PJM, on July 12, 2019 and August 9, 2019, by Monitoring Analytics, LLC, acting as PJM's Independent Market Monitor (Market Monitor), and on July 29, 2019, by Indicated Generation Owners.

### **IV. Procedural Matters**

9. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2019), the notices of intervention and timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding. We grant the late motions to intervene out-of-time, given their interest, the early stage of this proceeding, and the absence of undue prejudice or delay.

10. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2019), prohibits an answer to a protest and/or answer unless otherwise ordered by the decisional authority. We accept the answers submitted by Indicated Generation Owners, INGAA, P3/EPISA, and the Market Monitor, because they have provided information that assisted us in our decision-making process.

### **V. Discussion**

11. Petitioners seek a declaration that PJM's CONE Study is a reasonable proxy to use to determine a merchant generator's capital structure and cost of capital in its reactive power rate schedule, under Schedule 2 of the PJM Tariff.<sup>20</sup> For the reasons discussed below, we establish paper hearing procedures to further consider this issue. Regarding

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<sup>19</sup> *Id.* at 33-36.

<sup>20</sup> Petition at 14-18.

the remaining declarations requested by the Petitioners, we will address them in a future order.<sup>21</sup>

**A. Petitioners' Positions**

12. Petitioners note that, currently, merchant generators are permitted to use a proxy to determine their capital structure and cost of capital, given that a merchant generator is not subject to traditional utility regulation.<sup>22</sup> Petitioners assert, however, that the prescribed proxy – based on the interconnected transmission utility's cost of capital and capital structure – is overly conservative, given the increased risks faced by merchant generators.<sup>23</sup>

13. Accordingly, Petitioners seek a declaration that merchant generators are permitted to use the capital structure and cost of capital determined in PJM's current CONE Study as a proxy. Petitioners note that the Commission has accepted the figures reflected in PJM's CONE Study, including the underlying analyses supporting these figures, in authorizations issued in both 2014 and 2019.<sup>24</sup> Petitioners assert that, in these authorizations, the Commission found that the CONE Study cost of capital reflected transparent data, reasonable assumptions, and was appropriate for merchant actors that are not guaranteed cost recovery.<sup>25</sup>

14. Petitioners note that the CONE Study, as prepared by The Brattle Group, estimates the costs for a typical new merchant generator entering the PJM capacity market without cost-of-service support or other subsidies. Petitioners add that the CONE Study focuses solely on generation facilities in PJM's territory and uses actual data from merchant plant owners to calculate the ROE and cost of debt. Petitioners note that, similarly, the CONE

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<sup>21</sup> We note that issues related to those presented here have been raised on exceptions to an initial decision issued in Docket No. ER17-1821-002 and remain pending. *See Panda Stonewall LLC*, 167 FERC ¶ 63,010 (2019).

<sup>22</sup> Petition at 14 (citing *Chehalis*, 123 FERC ¶ 61,038, at P 167, and *Bluegrass Generation Co., L.L.C.*, 118 FERC ¶ 61,214, at P 86 (2007) (*Bluegrass*)).

<sup>23</sup> *Id.* at 15-16.

<sup>24</sup> *Id.* at 14 (citing *PJM Interconnection, L.L.C.*, 149 FERC ¶ 61,183 (2014), and *2018 CONE Study Order*, 167 FERC ¶ 61,029).

<sup>25</sup> *Id.* at 14-15.

Study calculates capital structure based on data about the debt-equity ratio of publicly-traded independent power producers.<sup>26</sup>

15. Petitioners state that, historically, reactive power tariff applicants have based their costs of capital and capital structure on their interconnected transmission utility, but that the Commission has never mandated this approach, or precluded the use of other approaches. Petitioners assert that, regardless, it is not just and reasonable to require a merchant to use the interconnected utility's proxy reference points, given the finding in *Chehalis* that "the generator essentially faces more risk than the interconnected utility."<sup>27</sup> Petitioners add that this is so because merchant generators in PJM today face a fundamentally different risk profile than the generation fleet at issue in *AEP*, which involved a vertically-integrated utility. Petitioners conclude that higher returns and higher interest rates on debt are warranted today to compensate generators for the greater risks they face.<sup>28</sup>

16. Finally, Petitioners argue that the CONE Study ROE is generally conservative, with a 13.8 percent ROE, while the Commission has found that the ROEs for stand-alone projects have been in the range of 15-20 percent.<sup>29</sup>

## **B. Comments**

17. Comments generally supportive of Petitioners' request were submitted by P3/EPSC and the Midwest Power Coalition. P3/EPSC agree that, because a merchant generator faces significantly greater risk than a transmission owner, a merchant generator requires a different capital structure with a higher cost of debt and a greater ROE than transmission owners.<sup>30</sup> P3/EPSC add that the use of the capital asset pricing model (CAPM) to generate the ROE and capital structure would be the appropriate way to address this issue, given that many owners of merchant generators are not publicly traded and do not pay dividends. P3/EPSC further note that, unlike the discounted cash flow

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<sup>26</sup> *Id.* at 15.

<sup>27</sup> *Id.* at 16 (citing *Chehalis*, 123 FERC ¶ 61,038, at P 167) and Tab C, Sotkiewicz Aff. at 7.

<sup>28</sup> *Id.* at 16 and Tab B, Borgatti Aff. at 4.

<sup>29</sup> *Id.* at 17 (citing *N.Y. Indep. Sys. Operator, Inc.*, 158 FERC ¶ 61,028, at P 179 (2017) (*NYISO*)).

<sup>30</sup> P3/EPSC Comments at 6; *see also* Midwest Power Producers Comments at 4.

(DCF) methodology, the CAPM model does not require dividend payments to determine the ROE.<sup>31</sup>

18. Protests were filed by Dominion Zone Parties and AEPSC. Dominion Zone Parties state that Commission should reject Petitioners' claims that the theoretical cost of capital and capital structure reflected in the PJM CONE study are just and reasonable proxies to use in merchant generators' reactive power cost of service proceedings. Dominion Zone Parties argue that the use of the interconnected transmission utility's ROE as a proxy is already an *alternative* to the use of a generator's actual capital structure and ROE. Dominion Zone Parties assert that, if a merchant generator views that proxy as insufficiently compensatory, its recourse is to make a showing as to why that rate is too low based on its specific risk profile, not to demand a more favorable proxy.<sup>32</sup>

19. Dominion Zone Parties argue that, regardless, the ROE used in the 2014 PJM CONE Study is not a reasonable proxy for reactive power cost of service. Dominion Zone Parties assert that the CONE Study costs of capital are used for the purpose of estimating Gross CONE, with the seller's realization of the ROE dependent on the market clearing price, while the recovery of a reactive power ROE is guaranteed.<sup>33</sup> Dominion Zone Parties add that the methodologies used in the 2014 CONE Study differ from the ROE framework used in a cost of service case, citing several examples. First, the Dominion Zone Parties note that the assumption in the CONE Study that risks of the reference unit would be unhedged, is a practice that differs from the approaches followed by many merchant generators.<sup>34</sup> Second, the Dominion Zone Parties note that the CONE Study utilizes a CAPM that does not appear to apply any Commission proxy group screens, such as high-end and low-end outliers, or mergers and acquisitions screens.<sup>35</sup>

20. Dominion Zone Parties respond to Petitioners' argument that the interconnected transmission utility's ROE is overly conservative. Dominion Zone Parties argue that a proxy is intended to be conservative, with the built-in assurance that it will not be higher than the merchant applicant's actual ROE, while affording the merchant generator the alternative opportunity of justifying its own risk-based ROE.<sup>36</sup> Finally, Dominion Zone

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<sup>31</sup> P3/EPSC Comments at 6-7.

<sup>32</sup> Dominion Zone Parties Protest at 11.

<sup>33</sup> *Id.* at 11-12.

<sup>34</sup> *Id.* at 12.

<sup>35</sup> *Id.*

<sup>36</sup> *Id.* at 12-13.

Parties challenge Petitioner's reliance on the Commission's discussion of ROE in *NYISO* and its purported finding in that case that a CONE Study ROE is generally conservative, given the higher ROEs required for a stand-alone project. Dominion Zone Parties argue that the specific New York risk factors considered by the Commission in *NYISO*, including nuclear retirements and state clean energy policies, are not generally applicable in setting a reactive power revenue requirement.<sup>37</sup>

21. AEPSC argues that the issue of what proxy to use for capital cost and capital structure should be resolved on a case-by-case basis, not in broadly-applicable declaratory ruling proceeding.<sup>38</sup> AEPSC adds that while, for some purposes, the cost of capital and capital structure determined in PJM's 2014 CONE Study may be just and reasonable, a merchant generator, in the reactive power context, operates like a traditional vertically-integrated utility, with a cost of capital and capital structure that reflect an inherent lower risk profile, as compared to a merchant generator that operates in a competitive market.

### C. Answers

22. Petitioners filed an answer responding to the argument raised by AEPSC and Dominion Zone Parties that an ROE developed for a merchant generator based on its market risks cannot be applied to reactive power where a generator is guaranteed cost-based recovery for that service. Petitioners argue that this argument was rejected in *Chehalis*, where the Commission recognized that reactive power is not a stand-alone part of a merchant generator's operations and that financing costs "typically are determined for a whole company based on its overall risk profile."<sup>39</sup> Petitioners add that, in a state regulatory proceeding in Connecticut, Dominion itself sought and received an ROE based on the equivalent CONE calculation in ISO-NE.<sup>40</sup>

23. Petitioners also characterize as false the Dominion Zone Parties' argument that PJM's CONE Study did not consider the hedges merchant generators use. Petitioners argue that, in fact, the CONE Study uses a model built around publicly-traded companies, many of which use hedges.<sup>41</sup> Petitioners also respond to the Dominion Zone argument

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<sup>37</sup> *Id.* at 13.

<sup>38</sup> AEPSC Comments at 3-4.

<sup>39</sup> Petitioners June 18, 2019 Answer at 16 (citing *Chehalis*, 123 FERC ¶ 61,038, at PP 168-70).

<sup>40</sup> *Id.* at 17.

<sup>41</sup> *Id.* at 17-18.



that the CONE Study ROE is not a conservative proxy and is therefore inappropriate for use as a reactive power proxy. Petitioners argue that the Commission has never mandated that a merchant generator recover costs only at a conservative value of its risk.<sup>42</sup>

#### **D. Commission Determination**

24. Under the current *AEP* methodology, a reactive power provider can establish its cost of capital either by establishing its individual capital structure and costs of capital, or by using the capital structure and costs of capital of an interconnected utility.<sup>43</sup> The Commission has found that utilizing the interconnected utility's costs of capital provides a conservative estimate of the generator's risk profile because merchant generators face more risk than the interconnected facility.<sup>44</sup> The Commission has also authorized, on a case-by-case basis, the use of proxies based on the returns of other specified generators or companies.<sup>45</sup>

25. Petitioners propose an alternative proxy approach using the PJM CONE Study costs of capital, arguing that these costs have been accepted by the Commission as just and reasonable and are based on transparent data, reasonable assumptions, generally conservative estimates, and comparable risk profiles. The Dominion Zone Parties respond that the PJM CONE Study is limited in its applicability to the estimation of Gross CONE, for use in a competitive market (the PJM capacity market) in which the seller's realization of the ROE embedded in the CONE may, or may not, materialize.

26. Based on our review of the record, we conclude that the current record is insufficient for us to provide further guidance on what proxies, if any, may be used by merchant generators for reactive power service ratemaking purposes other than the use of the capital structure and the cost of capital of the interconnected utility.

27. To develop a fuller record on the issue of other proxies that may be used by merchant generators to determine their capital structure and their cost of capital for

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<sup>42</sup> *Id.* at 18.

<sup>43</sup> *Bluegrass*, 118 FERC ¶ 61,214, at P 86; *see also Calpine Fox, LLC*, 113 FERC ¶ 61,047, at P 17 (2005).

<sup>44</sup> *Id.*

<sup>45</sup> *See Chehalis*, 123 FERC ¶ 61,038, at P 167 (approving the generator's proposal to use the cost of debt of two other generators as a proxy, rather than its interconnected utility); *Dynegy*, 121 FERC ¶ 61,025, at P 55 (accepting the use of a five-company proxy group to calculate the generator's rate of return and return on common equity).

reactive power service ratemaking purposes, we establish paper hearing procedures, allowing both initial and reply comments. We direct the parties to submit, no later than 45 days from the date of this order, their initial comments including supporting documents and/or affidavits, if necessary. These initial comments should address the capital structure and cost of capital issues, as raised by the Petition and by the parties, including, but not limited to:

- (a) whether there is additional information that would assist the Commission in determining whether the use of the cost of capital component of the PJM CONE Study would be an appropriate proxy;
- (b) whether the adjustments to the Commission's standard methodology for determining the rate of return that PJM utilizes in its CONE study would be appropriate for use in determining the cost of capital for reactive power determinations;
- (c) whether the risks of a merchant generator providing reactive power service should be equated with the overall risk of a merchant generator in PJM or whether the risk of a merchant generator providing reactive power service is better approximated by the risk of a utility subject to cost-based rates in PJM, and why;
- (d) whether there are proxies based on transmission owner ROEs that are superior to relying on the interconnected transmission utility, such as the use of an average of transmission owner ROEs in PJM or the use of merchant transmission provider ROEs in PJM;
- (e) whether there are other proxy approaches the Commission should consider in PJM, such as the use of an ROE adder to account for the higher risks associated with merchant generation; and
- (f) whether publicly-available data on merchant generators or companies in PJM with a significant portfolio of generation could be used to develop a proxy cost of capital following the Commission's current ROE policy.<sup>46</sup>

No later than 30 days following the date for submission of initial comments, the parties may submit reply comments. To avoid the need for in-person contact when preparing

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<sup>46</sup> See *Ass'n of Bus. Advocating Tariff Equity v. Midcontinent Indep. Sys. Operator, Inc.*, Opinion No. 569, 169 FERC ¶ 61,129 (2019), *order on reh'g*, 171 FERC ¶ 61,154 (2020); *cf. Chehalis*, 123 FERC ¶ 61,038, at P 167 (affirming the use of a two-generator proxy group to establish the generator's cost of debt).

pleadings or testimony in this proceeding, electronic signatures are sufficient and notarization of sworn declarations is not necessary.

The Commission orders:

(A) The Commission hereby establishes paper hearing procedures to address the issue of the proxies that may be used to establish, for reactive power service ratemaking purposes, a merchant generator's capital structure and cost of capital, under Schedule 2 of the PJM Tariff, as discussed in the body of this order, with initial comments due no later than 45 days from the date of issuance of this order and reply comments due no later than 30 days from the date for submission of initial comments.

(B) Non-parties wishing to submit comments in the paper hearing, and participate in this proceeding as parties, may file motions to intervene on or before the initial comment deadline.

By the Commission.

( S E A L )

Nathaniel J. Davis, Sr.,  
Deputy Secretary.

**Appendix**

**List of Intervenors**

Ameren Illinois Company  
Ameren Transmission Company of Illinois  
American Electric Power Service Corporation (AEPSC)\*  
American Municipal Power, Inc.  
Boston Energy Trading and Marketing LLC  
Buckeye Power, Inc. (Buckeye) +  
Calpine Corporation  
Coalition of Midwest Power Producers (Midwest Power Coalition) \*  
Dominion Zone Parties \*  
East Kentucky Power Cooperative, Inc.  
EDF Renewables, Inc. \*  
Electric Power Supply Association (P3/EPSCA)  
Entergy Services, LLC  
Exelon Corporation  
Faraday Grid Limited  
Great Bay Solar I, LLC, Minonk Wind, LLC, and  
GSG 6, LLC  
IMG Midstream LLC  
Interstate Natural Gas Association of America (INGAA)  
LS Power Associates, L.P.  
Monitoring Analytics, LLC, acting as PJM's  
Independent Market Monitor (Market Monitor) \*  
NRG Power Marketing LLC  
PJM Interconnection, L.L.C. (PJM)  
PJM Power Providers Group (P3/EPSCA)\*  
Talen PJM Companies  
Union Electric Company  
Xcel Energy Services Inc. (Xcel) +

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\* parties submitting protests and/or comments

+ parties submitting motions to intervene out-of-time