UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Panda Stonewall LLC	)	Docket Nos. ER17-1821-000, -002

BRIEF ON EXCEPTIONS OF THE INDEPENDENT MARKET MONITOR FOR PJM

Pursuant to Rule 711 of the Commission's Rules and Regulations,[1] Monitoring Analytics, LLC, acting in its capacity as the Independent Market Monitor ("Market Monitor") for PJM Interconnection, L.L.C. ("PJM"),[2] submits this Brief on Exceptions to the Initial Decision issued in this proceeding.[3]

I. SUMMARY OF ARGUMENT

The Initial Decision erred in finding that the Market Monitor did not present sufficient evidence to support the two issues argued by the Market Monitor on brief: (i) Should the level of Panda Stonewall LLC's ("Panda Stonewall") cost of service rate be limited to the recovery of costs unaccounted for in the parameters of the PJM Market Design? and (ii) What power factor should Panda Stonewall use to calculate its reactive capability rate? Both of these issues concern properly coordinating Panda Stonewall's reactive capability rate with the PJM market design of which it is a part. Reactive capability rates filed under Schedule 2 of the OATT are a component of the PJM market design. All

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1 18 CFR § 385.711 (2018).

2 Capitalized terms used herein and not otherwise defined have the meaning used in the PJM Open Access Transmission Tariff ("OATT"), the PJM Operating Agreement or the PJM Reliability Assurance Agreement.

3 *Panda Stonewall LLC*, 167 FERC ¶ 63,010 (2019).

design components must properly coordinate to produce just and reasonable rates for PJM customers, to allow efficient operation of PJM markets and to promote the public interest in regulation through competition. The fact that this issue has been ignored to date does not mean that it is not an issue. The issue is simple and clear. The Initial Decision should be reversed.

II. SPECIFICATION OF EXCEPTIONS

Pursuant to Rule 711(b)(2)(ii),[4] the Market Monitor submits the following exceptions to the Initial Decision:

1. The Initial Decision errs in finding that the Market Monitor raised policy issues beyond the scope of the proceeding.

2. The Initial Decision errs in finding no evidence of double recovery of the costs of reactive capability.

3. The Initial Decision errs in finding no evidence supporting the Market Monitor's position on the appropriate power factor.

4. The Initial Decision errs in finding that the Market Monitor failed to rebut evidence presented by Panda supporting a different power factor.

5. The Initial Decision errs in finding that the record lacks factual evidence showing Panda Stonewall failed to meet the Commission's prudence standards.

III. POLICY CONSIDERATIONS WARRANTING REVIEW

The current approach to the determination of reactive capability rates for capacity resources in PJM applies an outdated cost of service approach. That approach, known as the *AEP* method, has been unquestioningly accepted as the approach purely for legacy reasons. The *AEP* method was developed for a vertically integrated utility operating under cost of service rates for recovery of all its capacity costs that did not participate in the PJM Capacity

[4] 18 CFR § 385.711(b)(2)(ii).

Market. Panda Stonewall uses the *AEP* method while operating under an entirely different design in which the Panda Stonewall plant participates in the PJM Capacity Market rather than under the cost of service approach for capacity costs. No case has addressed the basic questions raised in this case: whether or how cost of service reactive capability rates are properly integrated into the PJM market design; how should cost of service rates reflect market sellers' opportunity to recover reactive capacity costs in excess of the reactive revenue offset (currently $2,199 per MW-year); and how should cost of service rates reflect PJM's determination of the required level of reactive capability. Reactive capability costs and rates are part of the PJM market design. The development and level of such rates cannot be found just and reasonable without consideration of how such rates are integrated into the PJM market design. This case is a case of first impression, and it provides an opportunity to address areas of the PJM market rules that have never been examined.

IV. ARGUMENT

A. Panda Stonewall Must Show That Its Rate Is Just and Reasonable Within the PJM Market Design.

The Initial Decision states (at P 626):

> The issue set for hearing in this proceeding is the determination of a just and reasonable reactive revenue requirement for Panda under Schedule 2 of the PJM Tariff. As Panda and Dominion recognize, however, the Market Monitor appears to be, at least in part, raising policy arguments concerning "whether Schedule 2 properly interacts with other parts of the PJM [T]ariff that govern the capacity market."[n.1363: Dominion Initial Br. 2; see also Panda Initial Br. 73-74; Panda Reply Br. 46. Dr. Joseph E. Bowring suggests the Market Monitor may indeed be raising policy issues, as he conceded that the purpose of its participation in this proceeding is to "eliminate[e]" the "continued nonmarket approach to providing reactive [power]" because cost-based reactive compensation relies on economically inefficient cost allocators or reactive revenue offsets. Ex. IMM-001 at 8:3-4, 6:22-27 (Bowring).] To the extent that the Market Monitor is indeed raising such policy issues, these would go beyond the scope of this proceeding and thus I do not address them. Instead, I focus solely

on the Market Monitor's arguments as they relate to Panda's proposed reactive revenue requirement.

The Market Monitor recognizes that the scope of the issues in this case do not include the broader question of the appropriateness of cost of service rates for reactive. The Market Monitor has raised the broader policy issue in Docket No. AD16-17-000 and there is no reason why appropriate action could not be taken immediately in that proceeding.[5] The Market Monitor recognizes that the scope of issues in this case includes only the appropriate level of cost of service rates for the reactive capability provided by the Panda Stonewall plant. Consistent with the core policy goals of the Commission set forth in Order No. 888, the Market Monitor supports reliance on regulation through competition to produce just and reasonable rates in PJM. PJM includes a capacity market that relies on competitive investment to ensure resource adequacy. To date, the reactive issues raised in this case have been overlooked. But there is no reason to continue to overlook the fact that reactive compensation is, in fact, explicitly addressed in the PJM market design in the parameters of the capacity market, but that the interaction with markets has been ignored in individual reactive cases.

This proceeding concerns a cost of service rate filed under Schedule 2 of the OATT. The policy concerns implicated here are limited but still important. The current cost of service approach should conform to the existing market design, conform to logic, conform to ratemaking principles, and avoid imposing unjust and unreasonable costs on customers. In the current approach, the asserted costs of reactive capability are recovered under the *AEP* method through an awkward hybrid of market-based rates and cost of service rates. The Initial Decision does not recognize the existence of this hybrid. That the approach is awkward does make it reasonable to ignore the approach or the harm to customers and to

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[5] *See* Comments of the Independent Market Monitor for PJM, Docket No. AD16-17-000 (July 27, 2016); Comments of the Independent Market Monitor for PJM [re workshop convened June 30, 2016], Docket No. AD16-17-000 (July 29, 2016).

market efficiency caused by ignoring it. PJM customers should not be required to pay for any portion of reactive capability twice and PJM customers should only pay for the level of reactive capability that PJM independently determines is needed to operate the system reliably.

The Initial Decision improperly ignores the issues raised by the Market Monitor. This case concerns whether the rate filed here is just and reasonable, including its relationship to the PJM market design. Reactive revenues are a revenue stream whose relationship to the capacity market is comparable to the relationship of energy and ancillary service market revenues to the capacity market. No one argues against the explicit integration of the energy and ancillary services markets, and the capacity market and that capacity market prices are lower as a result of net revenues earned in the energy and ancillary services markets. Rules are necessary to ensure that all revenues that constitute compensation to generators are properly integrated consistent with competitive principles. To be just and reasonable, the reactive capability rate filed in this proceeding must recognize the fact of the integration of reactive rates with existing market rules.[6] The integration of reactive revenues in the PJM Capacity Market is a fact set forth in the PJM OATT. That this issue has been overlooked to date in the rote application of the *AEP* method does not mean the issue should be overlooked in this case now that it has been explicitly raised. The determination in the Initial Decision to ignore such concerns as out of the scope of the proceeding should be reversed.

B. Panda Stonewall Should Not Be Permitted to Receive Double Recovery of Investment Through Reactive Rates.

The Initial Decision states (at P 627):

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[6] *See PA Solar Park, LLC*, 164 FERC ¶ 61,118 (2018) ("[W]hile reactive power rates for particular generators have been and continue to be litigated in individual proceedings, they are part of a broader, continuing effort by the Commission to ensure that the rates for reactive power service within the PJM footprint are just and reasonable.").

> Upon review of the evidence and the participants' arguments, I conclude that there is insufficient evidence to support a finding of double recovery here. Significantly, Dr. Bowring, the Market Monitor's only witness, admitted that he did not identify any specific costs in Panda's reactive revenue requirement that Panda is already recovering through the EAS offset[footnote omitted] and stated that quantifying the Panda's alleged double recovery is "irrelevant" to the issue of whether Panda's proposed reactive revenue requirement should be capped.[footnote omitted.] Dr. Bowring also admitted that "markets don't provide for the recovery of a specific level of costs" and that the reactive power cost recovery in the market "could be zero, could be negative, [or] could be positive."[footnote omitted] Rather than supporting the Market Monitor's arguments, this testimony supports a contrary conclusion: that there is no evidence that double recovery is occurring here. The Market Monitor offers no other evidence supporting a finding that Panda is double recovering its reactive power costs in the PJM capacity market. The Market Monitor's claim is therefore speculative and unsubstantiated. [footnote omitted.]

The fundamental issue that the Market Monitor raises in this case is about the relationship between markets and cost of service ratemaking. The issue cannot be understood without understanding both markets and cost of service ratemaking. Panda's approach is to focus solely on cost of service ratemaking. The result was that most of the discussion in this case was about the arcane details of cost of service ratemaking and specific costs, based on the testimony of multiple witnesses. But it is not necessary to have multiple witnesses to make the fundamental point about the relationship between markets and cost of service ratemaking. It is not necessary to delve into the details of specific costs to understand that Panda's approach results in double recovery. Dollars are fungible. Linking the opportunity to recover revenues in markets to specific costs is based on a confusion between cost of service ratemaking and markets and is therefore irrelevant.

The Initial Decision misunderstands the relationship between cost of service ratemaking and markets. Cost of service ratemaking defines a specific level of revenue recovery based on specific costs and calculates a rate to ensure that recovery. Markets

provide an opportunity to recover costs but do not define a specific rate and do not ensure recovery. When the market design provides the opportunity to recover a dollar level of costs, it is double counting to also include the same dollar level of costs in a cost of service rate. The PJM capacity market rules already explicitly address the double recovery issue associated with reactive revenue. The Initial Decision fails to recognize this.

It follows logically that the opportunity to recover costs may result in actual market revenue less than costs, equal to costs or greater than costs. The actual level of revenues received by Panda in the markets is irrelevant. The market design does not include a cost of service backstop to ensure recovery of a specific level of revenue. The market design provides the opportunity to cover costs. The actual results depend on competition.

The Initial Decision appears to define double recovery solely as a cost of service concept. In this mistaken view, double recovery could only occur if there were two cost of service rates both designed to cover the same costs and it could be demonstrated that recovery of specific costs occurred in defined amounts under both rates.

Contrary to the Initial Decision, there is clear and sufficient evidence of double recovery in the form of the detailed explanation of how the PJM market design explicitly addresses double recovery. The explanation, which is unrefuted, shows that by failing to account for the level of the reactive capability rates offset, the proposal, if accepted, would defeat that design. It must be recognized that PJM's hybrid market design poses an analytical challenge because it incorporates recognition of cost of service recovery for a defined level of reactive revenue in the market. A logical decision, consistent with the PJM market design, consistent with the precedent fundamental ratemaking principles, and consistent with public interest, requires that the problem be directly addressed and resolved.

1. Reactive Capability Rates That Exceed the Reactive Rates Offset in the Capacity Market Double Recover Costs from Customers.

The existing PJM market rules recognize and explicitly address the double recovery of reactive revenues. The PJM market rules are designed to avoid double recovery of

reactive capability rates in the PJM Capacity Market. The PJM market rules explicitly recognize and account for the recovery of reactive revenues through a cost of service rate of $2,199 per MW-year. The PJM market rules reduce the opportunity to collect reactive revenues in the market by $2,199 per MW-year by reducing offer caps and shifting the capacity market demand curve. Capacity market prices are lower as a direct result of this offset. As a result of the offset included in the market rules, reactive capability rates up to the $2,199 per MW-year level, the reactive offset level, do not result in double recovery.

But reactive capability rates above the reactive offset level do result in double recovery. The market rules provide the opportunity to recover reactive revenues above $2,199 per MW-year through the capacity market. Therefore, any cost of service reactive revenues above $2,199 per MW-year result in double recovery.

Reactive capability rates for generating units that are capacity resources in the PJM market design must respect and account for how that design operates. It is improper and illogical to evaluate reactive capability rates in isolation. Prohibition of double recovery is a requirement for just and reasonable rates.[7]

This issue has not been raised in any case prior to this one.

2. The Commission Has Recognized the Interaction between Cost of Service Revenues and Market-Based Rates

The Commission has recognized the relevance of the issue associated with a "resource receiving cost-based rate recovery while concurrently receiving compensation for

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[7] *See, e.g.*, United Airlines, F.3d 122, 134 ("because FERC failed to demonstrate that there is no double-recovery of taxes for partnership, as opposed to corporate, pipelines, we hold that FERC acted arbitrarily or capriciously"); Cal. ex rel. Harris v. FERC, 784 F.3d 1267, 1276 (2015) ("Obviously, parties are not entitled to double recovery"); *see also Wabash Valley Power Association, Inc.*, 154 FERC ¶ 61,246 at P 24 (2016) ("Allowing recovery of fixed costs related to heating losses as part of the variable heating loss component would amount to double recovery of fixed costs for heating losses because those fixed costs are already included in the reactive power portion of the production plant investment."); *SFPP, L.P.*, 162 FERC ¶ 61, 228 (2018); *Inquiry Regarding the Commission's Policy for Recovery of Income Tax Costs*, 162 FERC ¶ 61,227 (2018)

market-based rate services involves potential double recovery of costs borne by the relevant cost based ratepayers."[8] The Commission states: "the potential for combined cost based and market based rate recovery to result in double recovery of costs" is an issue that "should be addressed."[9] The Commission has evaluated solutions, including but not limited to, "crediting any market revenues back to the cost based ratepayers."[10] The Commission stated its general policy: "Any solution would need to comport with cost of service precedent."[11]

The Commission further identified the need to tailor a solution to cases where there is a full or partial double recovery:

> [T]his market-revenue offset can be used to reduce the amount of the revenue requirement to be used in the development of the cost-based rate. This up-front rate reduction would also help ensure that the cost-based rate remains just and reasonable and provide the electric storage resource owner or operator with an incentive to estimate market revenues as accurately as possible. In this scenario, the need for crediting of market revenues could be proportionally reduced as well. In other words, full cost recovery through cost-based rates may require full crediting of projected market revenues; no cost recovery through cost-based rates would require no crediting of projected or actual market revenues; and partial cost recovery through cost-based rates could require partial

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8 *Utilization of Electric Storage Resources for Multiple Services When Receiving Cost-Based Rate Recovery*, 158 FERC ¶ 61,051 at P 15 (2017) ("Cost-Based Recovery Policy Statement"); *see also*, Transwestern Pipeline Company, 52 FERC ¶ 61,100 (1990) ("held that Transwestern could not file to recover costs incurred after market-based GIC rates were in effect").

9 *Id*. at P 13.

10 *Id*. at P 15.

11 *Id*. P 19, citing *The Nev. Hydro Co. Inc.*, 122 FERC ¶ 61,272 at P 83 (2008) ("allowing LEAPS to receive a guaranteed revenue stream through CAISO's [Transmission Access Charge] would create an undue preference for LEAPS compared to these other similarly situated pumped hydro generators"); *Western Grid Dev., LLC*, 130 FERC ¶ 61,056, *reh'g denied*, 133 FERC ¶ 61,029 (2010).

> crediting of market revenues. For example, if the cost-based rate is based on 25 percent of the asset's full cost-of-service, then perhaps only 25 percent of market revenues would need to be credited to cost-based ratepayers.[12]

To date, generators filing for reactive capability rates make no attempt to reconcile the proposed cost of service rates with the concurrent opportunity for the recovery of costs in PJM markets. Generators develop rate proposals and file them under Schedule 2 with no regard for the rest of the PJM market design. Reactive capability rates cases routinely settle on black box terms, and the issue is not raised at the Commission. The result is unjust and unreasonable rates for reactive capability because customers are required to pay twice for the same costs of reactive capability.

In PJM, the allocation that results from the *AEP* method is between cost of service rates for reactive power and market based rates for generators and all their costs. The PJM market rules explicitly account for the recovery of a defined amount of reactive costs under a cost of service rate, $2,199 per MW-year. It is essential that the reactive costs recovered under the cost of service rates not exceed that defined amount. The balance of reactive costs is assigned to the markets. In the PJM market rules, successful application of the *AEP* method continues to depend upon a proper and nonduplicative allocation of costs between two rates.

No rate should be approved under one part of the PJM market design (OATT Schedule 2) that is inconsistent with the rest of the PJM market design. The Cost-Based Recovery Policy Statement recognizes (at P 19) that multiple options to address double recovery are possible.[13] PJM has filed and the Commission has approved an approach

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[12] *Id*. at P 18.

[13] Cost-Based Recovery Policy Statement at P 15 (Recognizing the relevance of the issue associated with a "resource receiving cost-based rate recovery while concurrently receiving compensation for market-based rate services involves potential double recovery of costs borne by the relevant cost based ratepayers," the Commission states (at P 13): "the potential for combined cost based and

including an offset that is not at issue here. Under the prevailing hybrid regulatory regime, there is a need for a proper reconciliation of cost of service and market approaches remains in order to ensure just and reasonable rates. Ignoring the problem creates an unjust and unreasonable result.

Double recovery is a ratemaking concept that has traditionally been applied to a situation where there are two or more rates, both of which are calculated under the cost of service approach. That situation does not exist in PJM because most rates in PJM are a result of competitive prices determined in PJM markets.

Under market-based rates in the capacity market, unit owners receive revenues but the revenues are not uniquely associated with specific elements of fixed costs. For example, if a unit receives $300 per MW-day in capacity market revenues during a delivery year, the revenue contributes to covering all fixed costs and cannot be identified as covering a specific element of fixed costs. This is particularly true for reactive costs as the same generating equipment produces both real and reactive power. If the unit's total costs are $400 per MW-day, the shortfall cannot be assigned to reactive fixed costs or all other fixed costs.

When markets replaced cost of service regulation, the opportunity to recover costs replaced the accounting recovery of specifically identified costs. That fact makes actually demonstrating double recovery in an accounting sense related to specific costs impossible. But that does not mean that double recovery does not result when the same level of costs is in cost of service rates and recoverable in market-based rates. Double recovery results by definition when the same level of costs is in cost of service rates and recoverable in market based rates.

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market based rate recovery to result in double recovery of costs" is an issue that "should be addressed."); *see also*, *Transwestern Pipeline Company*, 52 FERC ¶ 61,100 (1990) ("held that Transwestern could not file to recover costs incurred after market-based GIC rates were in effect").

The courts have not required mathematical analyses, but have instead addressed the theory and concepts.[14] The Commission has not rejected arguments about double recovery because they could not be quantified, but because the Commission did not agree that the conflict existed in the rules.[15]

PJM market rules provide for the opportunity to recover the costs of reactive power capability in two ways: through the definition of the demand curve for capacity and through the default market seller offer cap.[16] This is exactly the same way that PJM market rules provide for the opportunity to recover all the costs of capacity resources.

One of the key parameters of the demand curve for capacity, the Variable Resource Requirement (VRR) curve, is the net cost of new entry or net CONE.[17] Net CONE affects the location and shape of the demand curve for capacity and thus the clearing price for capacity.[18] Net CONE equals the gross cost of new entry for the reference unit technology

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[14] *See* United Airlines, 827 F.3d 122, 136 ("Despite their attempts to inundate the record with competing mathematical analyses of whether a double recovery of taxes for partnership pipelines exists, the parties do not disagree on the essential facts. First, unlike a corporate pipeline, a partnership pipeline incurs no taxes, except those imputed from its partners, at the entity level. [citation omitted] Second, the discounted cash flow return on equity determines the pre-tax investor return required to attract investment, irrespective of whether the regulated entity is a partnership or a corporate pipeline. [citation omitted]. Third, with a tax allowance, a partner in a partnership pipeline will receive a higher after-tax return than a shareholder in a corporate pipeline, at least in the short term before adjustments can occur in the investment market."). Consistent with *United Airlines*, the Commission has identified a double recovery between two components of a cost of service rate, where one component (DCF analysis) served as a substitute for estimated market revenues. *See SFPP, L.P.*, 162 FERC ¶ 61,228 at P 22 (2018) ("[T]he Commission finds that a double recovery results from granting an MLP such as SFPP an income tax allowance and a DCF ROE. This finding is based upon the following: MLPs and similar pass-through entities do not incur income taxes at the entity level. Instead, the partners are individually responsible for paying taxes on their allocated share of the partnership's taxable income.")

[15] *PJM Interconnection, L.L.C.*, 158 FERC ¶ 61,133 at P 125 (2017).

[16] *See* IMM-001 at 3: 6–10.

[17] *Id*. at 3: 11–19.

[18] *Id*.

less the revenues from energy and ancillary services revenues that offset that cost.[19] The energy market revenues are calculated based on the dispatch of the reference unit against historical locational marginal price (LMPs) for the last three years and the revenues for ancillary services (reactive only) are included in the tariff as a fixed number, $2,199 per MW-year.[20]

The $2,199 per MW-year reactive revenues offset is a simple rule that established a just and reasonable reconciliation of different regulatory approaches in the same market design. The offset assumes that a defined level of revenues is received under cost of service rates. The offset reduces the opportunity to recover that level of costs in the capacity market because it is recovered through cost of service rates. When the actual level of reactive revenue exceeds the $2,199 level, the actual reactive revenues are not reflected in the offset in the net CONE calculation or the offset in capacity market offers, and the net CONE calculation is too high by that difference and such offers are too high by that difference. Reactive rates cannot be just and reasonable if they do not account for the market design in which PJM units operate.

3. The PJM Hybrid Regulatory Approach Is Not an Excuse to Ignore Double Recovery.

The current PJM market rules provide for concurrent cost of service and market-based regulation. The best approach would be to eliminate cost of service rates and rely on markets, but that is not an option in this proceeding. The Market Monitor instead advocates the only approach within the framework of the current rules that allows the hybrid regulatory approach to operate in a just and reasonable manner.

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19 *Id.*

20 *Id.*

a. Full Overlap

Imagine two market designs. Under one market design, unit owners recover 100 percent of the capacity costs of generating units through cost of service regulation. The capacity costs are allocated to wholesale customers. Under the other market design, unit owners have the opportunity to recover 100 percent of the capacity costs of the same generating units through a capacity market. The capacity costs are allocated to wholesale customers. Both market designs provide unit owners the opportunity to recover 100 percent of their capacity costs.

Now imagine a wholesale market design in which both approaches to capacity costs are implemented.

Is there double recovery in this situation if both cost of service and the market are implemented in the same design?

Logically, there is double recovery. There is double recovery because there are two elements of the market design, both designed to provide unit owners the opportunity to recover 100 percent of their capacity costs.

There is double recovery not because unit owners would recover exactly the same amount under both approaches, but because unit owners have the opportunity to recover 100 percent of capacity costs under both approaches.

If annual capacity costs are $100 million, unit owners would expect to receive $100 million under cost of service regulation. Unit owners would expect to recover an amount less than, equal to or greater than $100 million under the market approach.

There would be double recovery if unit owners recovered zero capacity costs under the market approach, recovered $100 million under the market approach or recovered $200 million under the market approach. It is not necessary to demonstrate actual recovery of $100 million under the markets approach in order to demonstrate double recovery. The actual level of recovery under the market approach is irrelevant.

A logical wholesale market design would have one mechanism for capital costs or the other, but not two mechanisms, both designed with the same goal.

b. Partial Overlap

Imagine the same market design with one modification. In the new design, unit owners are allowed to recover only 25 percent of capacity costs through cost of service regulation. In the new design, unit owners still have the opportunity to recover 100 percent of the capacity costs of the same generating units through a capacity market.

Is there double recovery in this situation if both cost of service and the market are implemented in the same design?

Logically, there is double recovery, although less than in the first design. There is double recovery because there are two elements of the market design, one designed to provide unit owners the opportunity to recover 25 percent of their capacity costs and the other designed to provide unit owners the opportunity to recover 100 percent of their capacity costs.

There is double recovery not because unit owners would recover exactly the same amount under both approaches, but because unit owners have the opportunity to recover the same 25 percent of capacity costs under both approaches.

If annual capacity costs are $100 million, unit owners would expect to receive $25 million under cost of service regulation. Unit owners would expect to recover an amount less than, equal to or greater than $100 million under the market approach.

There would be double recovery if unit owners recovered zero capacity costs under the market approach, recovered $25 million under the market approach, recovered $125 million under the market approach or recovered $200 million under the market approach. It is not necessary to demonstrate actual recovery of $100 million under the markets approach in order to demonstrate double recovery. The actual level of recovery under the market approach is irrelevant.

c. Hybrid Approach

While a more logical, more efficient, more transparent and more easily administered wholesale market design would have one mechanism for capital costs or the other, but not

two, both designed with the same goal, PJM has a hybrid design for legacy reasons. What would a logical hybrid design look like?

A logical hybrid design would reflect in the market approach that 25 percent of capacity costs are already collected through cost of service rates. The design of the market approach only has to provide the opportunity to recover 75 percent of capacity costs, or $75 million in this example. An essential point is that the division must be explicitly stated and that there must be an explicit recognition that the two parts of the design are different but must be made compatible. In this case, 25 percent of the capacity costs are assigned to cost of service regulation and 75 percent of the capacity costs are assigned to the market. In that case there would not be double recovery.

However, there cannot be a workable design that assigns an undefined share of capacity costs to cost of service regulation but 75 percent to the market. If 50 percent of costs for a unit owner were allowed to be recovered under cost of service regulation and 75 percent of costs were assigned to the market, there would be double recovery. While not as extreme as assigning 100 percent to both mechanisms, the logical issue is identical. To be just and reasonable, cost of service reactive capability rates must account for the PJM capacity market design. The Initial Decision improperly ignores the overlap, and should be reversed.

C. Panda Stonewall Should Not Be Permitted to Be Paid for Investment in Reactive Capability That PJM Does Not Request or Require.

The Initial Decision states (at P 37):

> Importantly, the Market Monitor failed to raise the issue of an appropriate power factor in its testimony or exhibits and has not produced evidence in support of its position. The prefiled answering testimony of its sole witness, Dr. Joseph E. Bowring, only generally referred to power factors. Specifically, Dr. Bowring testified that "[a]rguments about the power factor to use in the allocation of costs to reactive are an example" of the difficulties that third parties face in accessing information underlying reactive rates established on a fleet basis or resulting from a black box settlement.57 Dr. Bowring also noted that "PJM requires a 0.90

> lagging power factor at economic maximum output" and testified that units in PJM "assert that they can, under defined test conditions, produce reactive at a 0.85 or lower power factor."[footnote omitted] He did not, however, testify about Panda's power factor.

The Market Monitor's argument is a legal argument: Who decides what PJM needs? The question of who decides what is needed precedes an engineering analysis of what is delivered. PJM customers should not be forced to pay for reactive capability that they do not need. The generator's ability to establish that it is providing more than PJM customers need is not relevant to this issue.

The tariff provides that PJM decides how much reactive power capability it needs from generators.[21] PJM has enacted a standard rooted in Commission policy that requires a power factor of 0.90.[22] The requirement is specified in the OATT's interconnection service agreement.[23] PJM confirms in the record that the 0.90 power factor standard constitutes its determination of what it needs.[24]

Panda Stonewall has not provided evidence that any other standard should apply. Therefore, the standard in Schedule 2 should govern.

In addition, Panda Stonewall witnesses affirm that the company intentionally incurred significantly additional costs in order to provide capability that PJM did not ask

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21 *See* OATT Part IV and VI & Attachment O § 12.0; *see also* PJM Manual 14-D § 5.2.1. The requirement is set at 0.95 leading to 0.90 lagging for synchronous units and at least 0.95 leading to 0.95 lagging for nonsynchronous units. The Panda Stonewall unit is a synchronous unit.

22 *See* 18 CFR § 35.28(f)(1); *see, e.g., Standardization of Generator Interconnection Agreements and Procedures*, Order No. 2003, FERC Stats. & Regs. ¶ 31,146 at P 542 (2003), pro forma Large Generator Interconnection Agreement (LGIA) § 9.6 & Appendix G, pro forma Small Generator Interconnection Agreement (SGIA) § 1.8 & Appendix G, which can be accessed at: <https://www.ferc.gov/industries/electric/indus-act/gi/stnd-gen.asp>.

23 *See* OATT Attachment O § 12.0.

24 *See* IMM–006.

for, does not want, and PJM customers do not need.[25] The Market Monitor is entitled to rely on record evidence, regardless of its source. Panda Stonewall is the appropriate source for defining its options for reactive capability, and its decision to procure greater capability at significant cost.

The record shows that Panda Stonewall procured more reactive capability than needed and unnecessarily raised its costs. Panda Stonewall should use the power factor that PJM requires, not the power factor that resulted from its unilateral decision to procure greater capability than PJM requires. The Initial Decision should be reversed.

The Initial Decision states (at P 38):

> The Market Monitor's testimony does not clearly rebut Panda's rationale for using a 0.85 power factor in its reactive revenue calculations (or even clearly challenge Panda's use of this value). Furthermore, Dr. Bowring conceded at hearing that he did not offer testimony regarding the appropriate power factors for the units at the Facility.[footnote omitted] In failing to provide any testimony or evidence on this issue, insofar as the Market Monitor is attempting to raise a factual dispute on this issue, it has failed to do so.[footnote omitted]

The Market Monitor has not contested the engineering evidence concerning the Panda Stonewall facility's actual reactive capability. Panda Stonewall states in the record that it had the option to obtain a facility with 0.90 power factor and instead, at significantly greater cost, obtained a facility that it claims has a 0.85 power factor. Customers should not pay for more capability than PJM requires. This statement from the Initial Decision (at P 38) does not address the Market Monitor's issue and, therefore, does not decide that issue. The Initial Decision should be reversed.

The Initial Decision states (at P 38 n.60):

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[25] Panda Stonewall witnesses testified that Panda Stonewall deliberately designed and constructed a generating unit with a 0.85 power factor, and that by doing so, Panda Stonewall incurred increased costs compared to what it would have incurred if it had instead opted for a 0.90 power factor. *See* Exh. PS-034 at 21 n.1; Exh. IMM-004 at 50:7–11.

> Moreover, by failing to provide any evidence rebutting Panda's prima facie case, it may not prevail on such factual disputes. [citation omitted]. Thus, insofar as the Market Monitor's references to the Commission's prudence standard were intended as a challenge to Panda's power factor on prudence grounds, its argument must fail because such an issue involves weighing factual evidence regarding the prudence of expenditures.

Panda Stonewall itself provided sufficient factual evidence, about the level of reactive capability that it decided to procure, to support the Market Monitor's position that Panda Stonewall's costs associated with the 0.85 power factor were not prudently incurred.[26] No "weighing" of evidence is required. The evidence concerning Panda Stonewall's decision to pay for more reactive capability than PJM required is in the record and is undisputed.

The Initial Decision states (at P 39):

> The Market Monitor's position, moreover, is unsupported by, and contrary to, Commission precedent. The Commission has held that generators are compensated for providing reactive service based on a unit's capability of providing that service;61 thus it has, on multiple occasions, used generators' nameplate power factors in calculating their reactive power revenue requirements under the AEP Methodology.[footnote omitted] As Panda observes, in *American Transmission Systems, Inc.*, the Commission rejected a proposal to limit reactive power compensation to the output specified in the generator's interconnection agreement. Instead, the Commission noted that it had "consistently used a generator's reactive power capability in determining its revenue requirement under the AEP methodology" and had "found that the reactive allocator factor should be based on the capability of the generators to produce vars and that this capability should be measured at the generator terminals, i.e., the nameplate capability."[footnote omitted] The Commission further explained that a generator is obligated to produce reactive power up to its nameplate capacity to prevent or respond to emergency situations and thus "there is no rationale that would warrant using anything

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[26] *Id*.

> less in determining a generator's reactive power capability."[footnote omitted] The Market Monitor has pointed to no instances where the Commission has limited a generator seeking reactive power compensation to using the power factor required by the transmission system operator, rather than the generator's nameplate power factor.

Panda Stonewall's assertion that *American Transmission Systems, Inc.*, 119 FERC ¶ 61,020 at PP 15, 27 (2007) ("MISO/ATSI Order"), resolves the issue is incorrect. The Initial Decision's reliance on the MISO/ATSI Order to address the issue raised by the Market Monitor in this proceeding is misplaced. First, the MISO/ATSI Order relies explicitly on a finding of an obligation based on capability under the MISO rules that does not exist under the PJM rules. Second, the MISO/ATSI Order relies on cost of service recovery rather than markets for the recovery of the costs of all investment in resources, for both real and reactive power, so the impact on markets and customers is materially different. Third, the MISO/ATSI Order references a settlement from another case specific to MISO. Fourth, the principle that compensation should track obligations supports the Market Monitor's position. Fifth, the MISO/ATSI Order approves a settlement, and is, therefore, not binding precedent. Because reliance on the MISO/ATSI Order is misplaced, the Initial Decision should be reversed.

The MISO/ATSI Order found that FERC trial staff in the MISO case provided no rationale for using the interconnection standard applicable in MISO. Here, the Market Monitor offers a clear and simple rationale: PJM and not a generator has the responsibility under the PJM OATT to determine the amount of reactive capability PJM needs, and that level is defined by a power factor of 0.90. Panda Stonewall has no obligation to provide reactive capability to PJM greater than provided at a power factor of 0.90. If the facility were rated at a power factor of 0.90, Panda would continue to receive interconnection service and the terms and level of payment for the facility's energy output in response to PJM directives would not change. The rationale provided in this case for using PJM's required power factor of 0.90 has not been refuted in the record. Panda does not explain why it is entitled to

change PJM's determination. There is no rationale in the record of this case for allowing a generator to usurp PJM's role in determining the level of capacity the PJM transmission system needs.

The MISO/ATSI Order relied on the following rationale (at P 27):

> Because a generator has the ability to produce reactive power up to its nameplate capability, and because it is obligated to do so to prevent or respond to emergency situations, [footnote omitted] there is no rationale that would warrant using anything less in determining a generator's reactive power capability.

The concern is that if MISO uses capability, then MISO should pay for use of that capability. The Commission concern does not apply in PJM because MISO relies on cost of service recovery rather than markets for the recovery of the costs of all investment in resources, for both real and reactive power, so the impact on markets and customers is materially different. The Commission cited to a provision of a particular settlement agreement in another case, and Panda Stonewall has not shown or asserted similar circumstances exist in this case.

The principle relied upon in the MISO/ATSI Order conflicts with Petitioners' position. The MISO/ATSI Order reasons that compensation for reactive capability should track the obligation to provide reactive capability. Petitioners here request a determination that they are entitled to be compensated for the full reactive capability of the generator even if such capability exceeds their obligations to PJM.

Finally, the passages cited in the MISO/ATSI Order are dicta, not precedent. The settlement was approved under the criteria for evaluating contested settlements in *Trailblazer Pipeline Company*.[27] Under Trailblazer, a settlement may be approved if the "settlement as a whole, considering not just the contested issues, but the uncontested issues

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[27] 85 FERC ¶ 61,345 (1998), *order on reh'g*, 87 FERC ¶ 61,110 (1999), *reh'g denied*, 88 FERC ¶ 61,168 (1999).

as well, provides a just and reasonable result."[28] The Commission has approved black box settlements under the *Trailblazer* criteria when the record is devoid of support for particular inputs or terms. Generators' argument exclusively relies on discussion from a decision without binding force. The Commission may resolve this issue as a matter of first impression.

V. CONCLUSION

The Market Monitor respectfully requests that the Commission afford due consideration to the arguments on brief as it resolves the issues raised in this proceeding.

Respectfully submitted,

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[28] *Id*. *mimeo* at 25.

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Eagleville, Pennsylvania,
this 12th day of June, 2019.

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