

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

PJM Interconnection, L.L.C.)
) Docket No. ER17-367-000
)

COMMENTS OF THE INDEPENDENT MARKET MONITOR FOR PJM

Pursuant to Rule 211 of the Commission’s Rules and Regulations, Monitoring Analytics, LLC, acting in its capacity as the Independent Market Monitor for PJM (“Market Monitor”), submits these comments on the proposed revisions to the market rules relating to the aggregation of resources offered in PJM’s Reliability Pricing Model (RPM) by PJM Interconnection, L.L.C. (“PJM”) on November 17, 2016 (“November 17th Filing”).^{1 2} Specifically, the November 17th Filing includes proposed revisions to the aggregation rules in the OATT and RAA for certain eligible resources in RPM, revisions to the rules for obtaining winter Capacity Interconnection Rights (“CIRs”) and modifications to the rules for measurement and verification (“M&V”) of Demand Resource (“DR”) performance.³

While PJM’s goal in attempting to create rules to accommodate seasonal resources is commendable, the Capacity Performance (“CP”) market design already provides strong incentives to seasonal resources through bonus payments. The proposed revisions will dilute the performance incentives of the Capacity Performance (“CP”) market design and

¹ 18 CFR § 385.211 (2016).

² PJM Interconnection, L.L.C. (“PJM”) is a Commission-approved Regional Transmission Organization. Capitalized terms used herein and not otherwise defined have the meaning used in the PJM Open Access Transmission Tariff (“OATT”), PJM Operating Agreement (“OA”), or PJM Reliability Assurance Agreement (“RAA”).

³ Demand Resources refer to the emergency or pre-emergency load response program.

distort market pricing to the detriment of customers and annual resources. Consistent with the Commissions' past orders defending CP, the revisions in the November 17th Filing should be rejected. The issues with the winter Demand Side proposal could be fixed with a relatively simple modification. The Commission should require PJM to modify its filing to address these issues.

I. COMMENTS

A. Background

PJM proposes two new methods of aggregation: commercially aggregated and PJM aggregated.

PJM proposes to allow Capacity Storage Resources, Intermittent Resources, DR, Energy Efficiency ("EE"), and Environmentally Limited Resources that may be located in different LDAs, to enter into bilateral agreements to form "commercially aggregated resources" and offer into the PJM Capacity Market as Annual Capacity Performance resources across LDAs. The sharing of capacity revenues and nonperformance charges/bonus performance credits among the underlying individual resources would be agreed upon among the parties. This is an extension of the currently existing aggregation provision for resources within the same LDA. These resources are referred to in this document as commercially aggregated resources.

Commercially aggregated resources need not be seasonal resources. For example, two hydro resources or a hydro and a storage resource can enter into a bilateral agreement to form a commercially aggregated resource and offer into the capacity auction as a Capacity Performance resource. PJM currently allows commercially aggregated resources consisting of individual underlying resources located in the same LDA. The Capacity Performance parameters such as the Nonperformance Charge Rate, Market Seller Offer Cap and annual stop loss for such a commercially aggregated resource is the same as that would apply for the individual resources because they are located in the same LDA. The RPM auction clearing method recognizes the locational deliverability of capacity from such a

commercially aggregated resource because the underlying resources contribute to meeting the reliability requirement of the same LDA.

PJM also proposes a new method of aggregation which creates new resource types that can participate in the capacity market. PJM proposes to allow Capacity Market Sellers of certain resources to submit Sell Offers as summer period Capacity Performance resources or winter period Capacity Performance resources. PJM defines these resources as Seasonal Capacity Performance Resources, starting with the 2020/2021 delivery year.⁴ These offers do not involve bilateral agreements between the resource owners prior to the auction. Instead, PJM proposes to create annual aggregates consisting of equal cleared quantities of summer period and winter period Capacity Performance resources within the auction clearing engine. The summer period Capacity Performance resource would have a performance obligation from June through October and the following May in a delivery year. The winter period Capacity Performance resource would have a performance obligation from November through April in a delivery year. This approach is referred to in this document as PJM aggregation. PJM also proposes rules on how the PJM aggregated resources clear in the RPM auction, the appropriate clearing price, the individual resource's compensation and performance obligations.

B. Commercially Aggregated Resources

1. Cross LDA Aggregation Erodes the Locational Component of the Capacity Market.

PJM's current proposal to allow commercially aggregated resources to aggregate across LDAs is similar to PJM's previous cross LDA aggregation proposal, which the Commission rejected.^{5 6} In the February 2015 Filing, PJM proposed to model the aggregated

⁴ See PJM Proposed OATT Attachment DD § 5.5A(c).

⁵ See Answer of PJM Interconnection L.L.C., Docket No. ER15-623-000 (February 13, 2015) at 25 – 26. (“February 2015 Filing”).

resources, for RPM clearing and nonperformance charges/bonus performance credits, in the LDA that is expected to be the least constrained.⁷ In the June 9th Order, the Commission determined that “allowing aggregation across Locational Deliverability Areas appears inconsistent with the design of PJM’s Capacity Performance proposal.”⁸

There is no material difference between the proposal in the November 17th Filing and the proposal rejected in the June 9th Order. The only difference between the two proposals is that under the current proposal, aggregate resources would be modeled at the “highest level LDA” while under PJM’s prior proposal, aggregate resources were to be modeled in the least constrained LDA.⁹ PJM defines “highest level LDA” as the smallest LDA that contains both the resources.¹⁰

The current proposal suffers from the same inconsistencies as the previously rejected proposal. Commercially aggregated resources that consist of underlying individual resources across LDAs would be modeled and cleared in the RPM in LDAs different from the LDA in which the individual resources are physically located, while the individual resource’s performance obligation during the delivery year is based on the resource’s physical location. Under the proposed rules, a resource located in PS-North LDA in New Jersey could be combined with a resource located in ComEd LDA in Illinois and offered as a single aggregated resource. The aggregated resource under the proposed rules would be

⁶ See *PJM Interconnection, L.L.C.*, 151 FERC ¶ 61,208 at P 103 (June 9, 2015) (“June 9th Order”).

⁷ February 2015 Filing at 26.

⁸ June 9th Order at P 103.

⁹ November 17th filing at 11–12.

¹⁰ *Id* at n.20.

modeled as if located in the Rest of RTO LDA and compensated at the Rest of RTO clearing price.¹¹

In the June 9th Order, the Commission stated:

PJM has not demonstrated why Capacity Emergency Transfer Limits should not be taken into account for purposes of aggregating a Capacity Performance offer. [footnote omitted] PJM's Capacity Emergency Transfer Limits recognize system constraints and the ability to provide capacity across Locational Deliverability Areas. We are not persuaded that aggregation will be feasible across Locational Deliverability Areas in all circumstances, or would be able to provide the required resource adequacy during emergency conditions. Moreover, allowing aggregation across Local Deliverability Areas appears inconsistent with the design of PJM's Capacity Performance proposal... several Capacity Performance rate parameters, such as the Non-Performance Charge rate, Performance Bonus Payment rate, stop-loss limits, and default offer caps, are designed to be Locational Deliverability Area-specific.¹²

PJM's current proposal to allow commercially aggregated resources to aggregate across LDAs raises exactly the issues that were the basis for the Commission's rejection of a similar approach in the June 9th Order. PJM's current proposal does not demonstrate why Capacity Emergency Transfer Limits that recognize system constraints should not be taken into account. The proposed cross LDA aggregation ignores the locational value of capacity which can vary significantly by LDA. In the 2019/2020 Base Residual Auction ("BRA"), the clearing prices for the Capacity Performance product were \$100.00 per MW-day in the Rest of RTO, \$119.77 per MW-day in PS-North, and \$202.77 per MW-day in ComEd. Locational

¹¹ Rest of the RTO is the highest level LDA for an aggregated resource comprised of a resource located in PS-North LDA and ComEd LDA. PJM defines the highest level LDA as the smallest LDA that contains both the resources.

¹² June 9th Order at P 103.

pricing is a core element of the capacity market design and was a key reason for the introduction of RPM by PJM in 2007.

The proposed cross LDA aggregation would also exacerbate the price separation between the LDAs. Clearing a resource physically located in ComEd as a Rest of RTO resource relative to not clearing the resource at all would decrease the clearing price in the Rest of RTO, while keeping the ComEd clearing price the same.

2. PJM's Cross LDA Aggregation Proposal Allows Potential Manipulation to Avoid Nonperformance Charges.

PJM clarifies that the Nonperformance Charge rate applicable to each individual underlying resource of a cross LDA aggregated resource is the rate associated with the LDA where the resource is located. The November 17th Filing states (at 12–13):

As far as performance, individual resources that comprise the commercially aggregated resource will be expected to respond during a Performance Assessment Hour in the area in which such individual resource is physically located. If one or more individual resources that are part of a commercially aggregated resource are in the same area where there is a Performance Assessment Hour, the under or over performance of the commercially aggregated resource will be based on the total commitment and performance of all of the individual resources during the Performance Assessment Hour.

“[T]he total commitment and performance of all of the individual resources” means only those individual resources that are located in the area where an emergency event is declared by PJM and does not include individual resources that are part of the aggregate but located outside of the area where an emergency event is declared. PJM did not propose any tariff language that defines the performance obligations of individual underlying resources across LDAs that comprise a commercially aggregated resource that is committed in RPM.

Currently, PJM allows individual resources located in the same LDA to form commercially aggregated resources and offer them as Capacity Performance resources in RPM. PJM allows these commercially aggregated resources to allocate the committed

quantity among the individual resources that comprise the aggregate, prior to the start of the delivery year, and adjust this allocation for any operating day up to 12 noon EPT of the day preceding the operating day.¹³ These rules are not in the OATT or RAA but are defined in PJM Manual 18. If an emergency event that triggers a Performance Assessment Hour (“PAH”) is declared on any operating day, each individual resource’s Performance Shortfall/Bonus Performance is calculated, and the sum of the Performance Shortfall/Bonus Performance of the individual underlying resources establishes the aggregate resource’s Performance Shortfall/Bonus Performance. Nonperformance Charges or Bonus Performance Credits are assessed to the aggregate resource.¹⁴

Under the current rules, an individual resource that is part of an aggregate, that expects locational emergency events on any particular day, can simply transfer the committed quantity to the other resources in the aggregate that are not expected to be part of the emergency to avoid potential Nonperformance Charges. However, since current rules limit aggregation to only underlying resources located in the same LDA, the ability to avoid potential Nonperformance Charges by transferring the committed capacity is limited to the extent there are other resources within the same LDA that are part of the aggregate resource but are not expected to be part of the PAH.

If the proposed changes to allow cross LDA aggregation are accepted, then resources located in an area with a higher likelihood of a PAH would be able to transfer their commitment to other resources in the aggregate with a lower likelihood of a PAH to avoid Nonperformance Charges. The ability and the incentive for this type of manipulative behavior increases significantly with PJM’s proposal to allow cross LDA aggregation. PJM does not propose any rules or tariff language to prevent this behavior.

¹³ See PJM Manual 18: PJM Capacity Market, Section 4.9, Rev. 34 (July 28, 2016) at 98.

¹⁴ *Id.*

If the proposal to allow cross LDA aggregation is not rejected, then PJM should be directed to file tariff language to require aggregate resources to allocate the committed quantity among the underlying individual resources prior to the delivery year and not allow any adjustments to this allocation during the delivery year. The tariff language should specify that each individual underlying resource's expected performance be based on the individual resource's share of the commercially aggregated resource's UCAP prior to the start of the delivery year.

3. Market Seller Offer Cap for Cross LDA Aggregated Resources.

PJM does not explicitly propose any new tariff language to define the Market Seller Offer Cap ("MSOC") of commercially aggregated resources across LDAs. PJM does propose that these resources would be modeled in RPM at the "highest level LDA." The Market Monitor interprets that the applicable MSOC for the commercially aggregated resource would be based on the Net CONE of the highest level LDA. This could lead to resources having the wrong market seller offer cap. For example, using the values published by PJM for the 2019/2020 BRA, the default MSOC for a resource in the BG&E Zone is \$163.13 per MW UCAP per day.¹⁵ The default MSOC for a resource in the APS Zone is \$189.12 per MW UCAP per day. The smallest common LDA where both the resources are located and therefore modeled in RPM is the Rest of RTO LDA. The default MSOC for the Rest of RTO LDA is \$226.44 per MW UCAP per day, which is greater than the default MSOC that would have applied for individual resources in their LDAs. The default offer cap that results from PJM's proposal to model the aggregate resource at the smallest common LDA does not align with the competitive offers of the individual resources' that comprise the aggregate. PJM's default Market Seller Offer Caps are published by zone and not by LDA, which

¹⁵ See "Final CP Market Seller Offer Cap Values," which can be accessed at: <http://www.pjm.com/~media/markets-ops/rpm/rpm-auction-info/final-cp-market-seller-offer-cap-values-for-2019-2020.ashx> (February 9, 2016).

makes the determination of the appropriate offer cap for a commercially aggregated resource in certain circumstances impossible. For example, if the resource in the previous example in the BG&E Zone (Southwest MAAC LDA) aggregates with another resource in the PSEG Zone (EMAAC LDA), the commercially aggregated resource is modeled in the MAAC LDA since that is the smallest common LDA where both the resources are located. PJM does not publish the default MSOC for MAAC LDA, which makes it impossible to determine the appropriateness of the offer cap applicable to this particular resource.

The difference in the Net CONE value used for the offer cap and stop loss limit (Net CONE of highest level LDA) from the Net CONE value used for each individual resource's Nonperformance Charge rate/Performance Bonus Payment rate (Net CONE of the LDA where individual resources are physically located) combined with the provision to change the allocation of the committed MW among the individual resources across LDAs leads to potential exercise of market power and gaming of the Capacity Performance construct.

C. PJM Aggregated Seasonal Capacity Performance Resources

1. PJM's Proposal Is Likely to Inefficiently Increase Make Whole Payments.

PJM's proposed clearing process for seasonal Capacity Performance resources requires PJM to procure equal MW for summer seasonal and winter seasonal capacity. Procuring capacity from different LDAs is likely to result in the clearing of an aggregated resource where at least one of the underlying resource's offer prices is above the clearing price. Such provision is likely to increase the number of resources requiring make whole payments. If clearing a cheaper seasonal resource when paired with an expensive seasonal resource will result in a reduction in the clearing prices, the clearing process is likely to clear the expensive resource. If the expensive resource's offer price is above the market clearing price, this will result in make whole payment which is not properly accounted for in the optimization or market clearing software.

Explained differently, adding constraints to the optimization without including the associated shadow prices in the clearing prices will only increase the potential for make

whole payments. Currently, inflexible generation offers impose additional constraints on the optimization. However, the shadow prices associated with these generation offers are not included in the clearing price of the auction.¹⁶ The make whole payment arising from this provision is exactly equal to the shadow price of these constraints. Similarly, PJM's proposal to include a new constraint that the clearing quantity of summer capacity resources should equal the clearing quantity of winter capacity resources without changing the calculation of clearing prices will automatically result in a make whole payment if that constraint happens to bind in the auction.

For example, a 50 MW summer capacity resource offered at \$20 per MW-day in the PSEG LDA and a 100 MW winter capacity resource offered at \$100 per MW-day in ComEd LDA could both clear to satisfy the Rest of the RTO LDA's requirement. If the clearing price of the Rest of the RTO is \$75 per MW-day, the winter capacity resource would receive a make whole payment of \$25 per MW-day for the 50 MW-day cleared capacity. In this example, the constraint that the total cleared quantity of summer capacity resources should equal the total cleared quantity of winter capacity resources will be binding with a shadow price equal to \$25 per MW-day, which reflects the savings from the optimization if this constraint were to be relaxed by 1 MW day.

The November 17th Filing acknowledges this problem (at 18–19). PJM stated that after exploring multiple options on how to allocate the make whole payments, PJM proposed to allocate the resulting make whole payments associated with seasonal offers to load. Make whole payments are part of the cost of resources and must be included in the optimization calculations in order to ensure that the capacity requirements are met at least cost.

¹⁶ The clearing price of the base residual auction is based on RTO VRR constraint, LDA VRR constraint and product constraints for each LDA.

The current process used by PJM for clearing the auction does not explicitly include the cost of make whole payments. The Market Monitor previously recommended that PJM change its solution methodology to explicitly take into account the tradeoff between the clearing of a low priced inflexible offer and a high priced flexible offer.¹⁷ The inclusion of seasonal aggregation is only likely to exacerbate the problem associated with the exclusion of make whole payments from the optimization process. If the constraints and associated make whole payments are not included in the optimization, the market outcome will not be the least cost outcome and load will pay too much for capacity.

2. Eligibility to be a Seasonal Capacity Performance Resource.

PJM defines seasonal Capacity Performance resource in the update to Section 5.5A of Attachment DD to the OATT.¹⁸ As proposed in the November 17th Filing (at 61), an “Environmentally-Limited Resource that has an average expected energy output during summer peak-hour periods consistently and measurably greater than its average expected energy output during winter peak-hour periods” is eligible to participate as a summer period Capacity Performance resource. Similarly an “Environmentally-Limited Resource that has an average expected energy output during winter peak-hour periods consistently and measurably greater than its average expected energy output during summer peak-hour periods” is eligible to participate as a winter period Capacity Performance resource.¹⁹

There is no reason to define Environmentally Limited Resources as seasonal capacity. A resource’s inability to reliably perform during a Performance Assessment Hour is the key factor when determining whether a resource can or cannot meet the annual

¹⁷ See “Analysis of the 2019/2020 RPM Base Residual Auction,” which can accessed at: <http://www.monitoringanalytics.com/reports/Reports/2016/IMM_Analysis_of_the_20192020_RPM_BRA_20160831-Revised.pdf> (August 31, 2016).

¹⁸ November 17th Filing at 61.

¹⁹ *Id.*

standards of the Capacity Performance product. Environmentally-Limited Resources are not necessarily limited to generating in a particular season of the year, and in fact most Environmentally-Limited Resources in PJM have annual or rolling annual limits. PJM allows Environmentally-Limited Resources to manage their exposure to the environmental limits by including an opportunity cost adder in their energy offers. This adder enables the resource to maintain its capability year round and to be available during both summer and winter Performance Assessment Hours. PJM's definition of seasonal Capacity Performance resource will allow Environmentally-Limited Resources to choose to not participate in the capacity market for half the year, or to participate at a reduced capability, based on the expected output, during half the year.

Eligibility to participate as a seasonal Capacity Performance resource, both summer period Capacity Performance Resource and winter period Capacity Performance resource, should be limited to resources that have an exception under Section 6.6A(c) of Attachment DD of the PJM OATT. Intermittent Resources, Capacity Storage Resource, Demand Resource, and Energy Efficiency Resource are categorically exempt under Section 6.6A(c).

3. Market Seller Offer Cap for Seasonal Capacity Performance Resources.

PJM did not propose any new rules or tariff language regarding the market power mitigation of seasonal Capacity Performance resource offers. PJM did propose to compensate both cleared summer period and winter period resources at a uniform clearing price for the period that they cleared. This suggests that PJM proposes that the applicable Market Seller Offer Cap (MSOC) for a seasonal Capacity Performance resource (summer period or winter period) be equal to that of an annual Capacity Performance Resource. The Market Seller Offer Cap calculation for an annual Capacity Performance resource is the competitive offer of a CP resource with certain assumptions regarding the bonus performance payment rate, the number of performance assessment hours, the Balancing Ratio etc.

The competitive offer of a seasonal CP resource is not the same as that of an annual CP resource. A summer period CP resource is expected to perform to the Balancing Ratio times cleared UCAP during the summer months and is not expected to perform in the winter months. In the winter months, the summer period CP resource is equivalent to an energy only resource. For any energy generated or reserves provided during PAH in the winter months, a summer period CP resource receives capacity performance bonus payments. Likewise, a winter period CP resource receives capacity performance bonus payments for any energy generated or reserves provided during PAH in the summer months. In addition, the balancing ratio, which is approximately the ratio of load and reserve requirement to the total committed capacity, is expected to be very different in the summer months compared to the winter months. The fact that PJM compensates the seasonal CP resources only for the days in the season in which it has the performance obligation and the fact that performance assessment hours are not equally distributed in the summer and winter seasons in PJM changes the competitive offer calculation of a seasonal CP resource. The calculation of the competitive offer of a seasonal CP resource should take into account all these differences. PJM's proposal simply ignores it.

PJM's proposal to aggregate seasonal CP resource offers across different LDAs with different CP parameters such as Nonperformance Charge Rate, annual stop loss, and clearing prices makes the competitive offer calculation further complicated. One of the possibilities for seasonal CP resources that could be aggregated by PJM is a summer only demand response resource with a winter only wind resource. Since Demand Response resources do not have Market Seller Offer Caps, clearing an auction with different offers from the seasonal resources can lead to inefficient clearing of the capacity market. Cross LDA aggregation also leads to an inconsistent application of the default Market Seller Offer

Cap.²⁰ PJM states that the “Non-Performance Charge Rate will be based on the physical location of the resource that clears a Seasonal Capacity Performance Resource Sell Offer,” but PJM does not address the offer cap issue in the filing.^{21 22} Capping the cross LDA aggregate resource at the level applicable to the parent LDA where the resource is modeled for RPM clearing and pricing disconnects the resource’s competitive offer from the default Market Seller Offer Cap, and hence is not consistent with the derivation of the default Market Seller Offer Cap.²³ Capping the cross LDA aggregate resource at the level applicable to the LDA where the resource is physically located creates a scenario where the offer cap methodology is not consistent for the resources in the LDA where the cross LDA aggregate resource is modeled for RPM clearing and pricing. Therefore, cross LDA aggregate resources should not be eligible to use the default Market Seller Offer Cap, and cross LDA aggregate resources should be required to obtain a resource specific Market Seller Offer Cap.²⁴ The rules for offer caps need to be defined.

D. Winter Capacity Interconnection Rights

PJM proposes to assign winter Capacity Interconnection Rights (CIRs) to resources whose current CIRs limit their ability to participate as winter period CP resources that could be aggregated by PJM, such as wind resources and environmentally limited

²⁰ PJM’s proposal does not contain explicit rules for Market Seller Offer Caps for commercially aggregated resources.

²¹ November 17th Filing at P 15.

²² Attachment DD, Section 10A(f) in the PJM Open Access Transmission Tariff defines a resource’s applicable Non-Performance Charge Rate to be Net Cost of New Entry in the LDA where the resource is physically located multiplied by the ratio (365/30).

²³ See “Analysis of the 2019/2020 RPM Base Residual Auction”, Monitoring Analytics, Attachment B, August 31, 2016

²⁴ See OATT Attachment § 6.4(b).

resources. PJM states that such additional winter CIRs would be for a one year period and proposes to solicit requests from these resources every year. PJM states:

PJM shall study such requests in a manner so as to prevent infringement on available system capabilities of any resource which is already in service, or which has an executed Interconnection Service Agreement, Transmission Service Agreement, Upgrade Construction Service Agreement, or has obtained a Queue Position in the New Services Queue.²⁵

The CIRs that PJM proposes to assign to additional winter seasonal capacity are not free. Winter seasonal resources have the ability to inject more MW in the winter because the lower peak loads in the winter allow higher injections from certain resources without needing any additional network upgrades. This additional available system capacity in the winter is already paid for by resources that applied for needed network upgrades to inject in the summer to meet the annual peak loads that are expected to occur in the summer. This additional capacity in winter is available not because the resources with CIRs cannot perform to their summer capability in winter; it is available because they are not needed to perform at their summer capability in the winter due to lower peak loads.

PJM proposes to give away winter CIRs that exist because of other resources that paid for necessary network upgrades, without any compensation to the resources that paid for the system capacity. Even though PJM's proposal is a temporary year to year proposal, it creates a cross subsidization of interconnection costs. The additional capacity revenues that the winter seasonal resources will receive based on winter capacity commitments that require use of the system capability paid for by other resources, increases the cross subsidization even further. If PJM were to move to a seasonal capacity markets construct, creating a market mechanism to value and efficiently allocate CIRs is among the issues that

²⁵ PJM Proposed OATT Part IV Preamble.

would need to be carefully studied. The November 17th Filing and its expedited implementation timeline ignore these questions.

E. Demand Resource Measurement and Verification Should not Overpay for Capacity Compliance.

The November 17th Filing proposes to change the M&V of Demand Resources from a customer baseline load (“CBL”) to a Firm Service Level (“FSL”) or Guaranteed Load Drop (“GLD”) approach defined for the non-summer period. In order to create a nonsummer FSL or GLD, each customer would calculate a Winter Peak Load (“WPL”) similar to a customer’s Peak Load Contribution (“PLC”). The PLC is the load of the customer during the PJM summer peak. In the PJM capacity market design, customers pay for capacity based solely on their summer peak, which is the value of their PLC. In PJM’s proposal, the WPL for a customer could be above or below a customer’s PLC. Customers do not pay for capacity based on the value of their WPL.

When the WPL is above PLC, the customer is credited for reducing demand from a level of capacity that the customer did not pay for. For example, a customer may have a PLC of 100 MW and a WPL of 120 MW. In this case, the customer paid for 100 MW of capacity under the rules of the PJM capacity market. Under PJM’s proposal, in the winter, the customer could reduce load by 20 MW, from the WPL of 120 MW to 100 MW, and receive DR payments for 20 MW. The customer did not pay for 120 MW of capacity and should not be paid a capacity payment for reducing load from 120 MW to the 100 MW level that the customer did pay for.

Having the summer and winter rules for capacity compliance comparable is logical. Allowing customers to receive capacity payments for not using capacity that the customers did not pay for is inconsistent with economic logic and inconsistent with the logic of PJM capacity markets. The Commission previously ruled against this double counting.²⁶

²⁶ See *PJM Interconnection, L.L.C.*, 138 FERC ¶ 61,138 (2012).

The WPL must be the lesser of PLC or the WPL to avoid overpayment and double counting of a load reduction.

F. Seasonal Issues in the Capacity Market

In this filing, PJM is proposing various distortions to the capacity market design in order to accommodate seasonal resources in a market designed for an annual product. The significant unintended consequences that would result if PJM's proposal were approved illustrate the pitfalls associated with this exercise. The modifications are designed to accommodate a relatively small share of total capacity resources at the expense of the majority of capacity resources. Price distortions that affect incentives for the annual resources that make up most of PJM's capacity resources could have significant negative impacts on PJM markets. The fundamental Capacity Performance design, if implemented as designed with appropriate penalty payments, would result in strong and appropriate incentives for seasonal resources. If a wind resource, derated to 13 percent of installed capacity, performs at a level greater than $B * 13$ percent of installed capacity during a Performance Assessment Hour, it will receive a bonus payment.²⁷ That bonus payment comes without the penalty risk associated with registering all installed capacity MW as a capacity resource. That bonus payment is central to the Capacity Performance design and is the basis for offer caps for annual resources because it represents the benefits of being an energy only resource. The competitive market clearing price in the Capacity Performance design, $B * \text{Net CONE}$, equals that opportunity cost.

Nonetheless, if PJM is convinced that seasonal resources need to be paid seasonal prices, the only way to accomplish that result is to create an actual seasonal capacity market. That design would reflect that the demand for capacity is related to both winter and summer load. That design would reflect the fact that load in both the winter and

²⁷ For intermittent resources, the UCAP is calculated as the nameplate capacity times the capacity factor. The capacity factor for a wind resource is 13 percent.

summer cause the need for capacity and should be assigned capacity costs. That design would take time and effort to develop, but it is logically possible. Such a design would be superior to PJM's current effort to distort the annual design and its key locational elements to accommodate seasonal resources.

II. CONCLUSION

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

Respectfully submitted,



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Dated: December 8, 2016

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 8th day of December, 2016.



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