UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

PJM Interconnection, L.L.C.	)	Docket No. EL19-8-001
v.	)	
PJM Interconnection, L.L.C.	)	

COMMENTS OF THE INDEPENDENT MARKET MONITOR FOR PJM

Pursuant to Rule 211 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 these comments on the response submitted by PJM Interconnection, L.L.C. ("PJM") on February 15, 2019 ("February 15th Response"), to the deficiency letter issued in this proceeding on January 15, 2019 ("Deficiency Letter").

PJM's explanations of its proposal and reasons for complaining that its current rules are unjust and unreasonable remain confusing and inconsistent. PJM acknowledges that it has no empirical studies supporting its Complaint initiating this proceeding on October 29, 2018 ("Complaint"). PJM acknowledges that it has no processes for verifying which specific maintenance costs Market Sellers include in energy market cost-based offers and in capacity market offers based on Avoidable Cost Rates. PJM has no way to avoid double counting of costs in offers. The only purpose of having cost-based offers is to prevent the exercise of

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1 18 CFR § 385.211 (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 ("OA") or the PJM Reliability Assurance Agreement ("RAA").

market power. PJM's proposal, by including in cost-based offers a wide range of costs that are not short run marginal costs, would permit and facilitate the exercise of market power. For these reasons, the Commission should deny the Complaint.

I. BACKGROUND

The Commission's deficiency letter requests clarity regarding the maintenance costs incurred at a power plant and how PJM proposes to categorize them. PJM's response does not provide adequate clarity to support its proposed changes. PJM's response illustrates the dangers of attempting to include costs that are not short run marginal costs in competitive energy offers.

Power plants include: prime movers (e.g. combustion turbines, steam turbines, reciprocating engines); electric generators; fuel supply systems; storage tanks for fuel, water, and chemicals; emission abatement equipment; water treatment facilities; transmission equipment; communications infrastructure; metering equipment; administrative facilities; safety equipment; warehouses for spare parts; physical barriers; roads, tracks, and parking lots for transportation; and facilities to support staff, like kitchens and bathrooms. All the facilities and equipment at the power plant require maintenance. All the facilities and equipment at the power plant serve the purpose of producing energy. When the plant is generating power, everything receives greater use, from the turbines to the toilets. In all cases, use eventually leads to maintenance. Therefore, all power plant maintenance results from electric production.

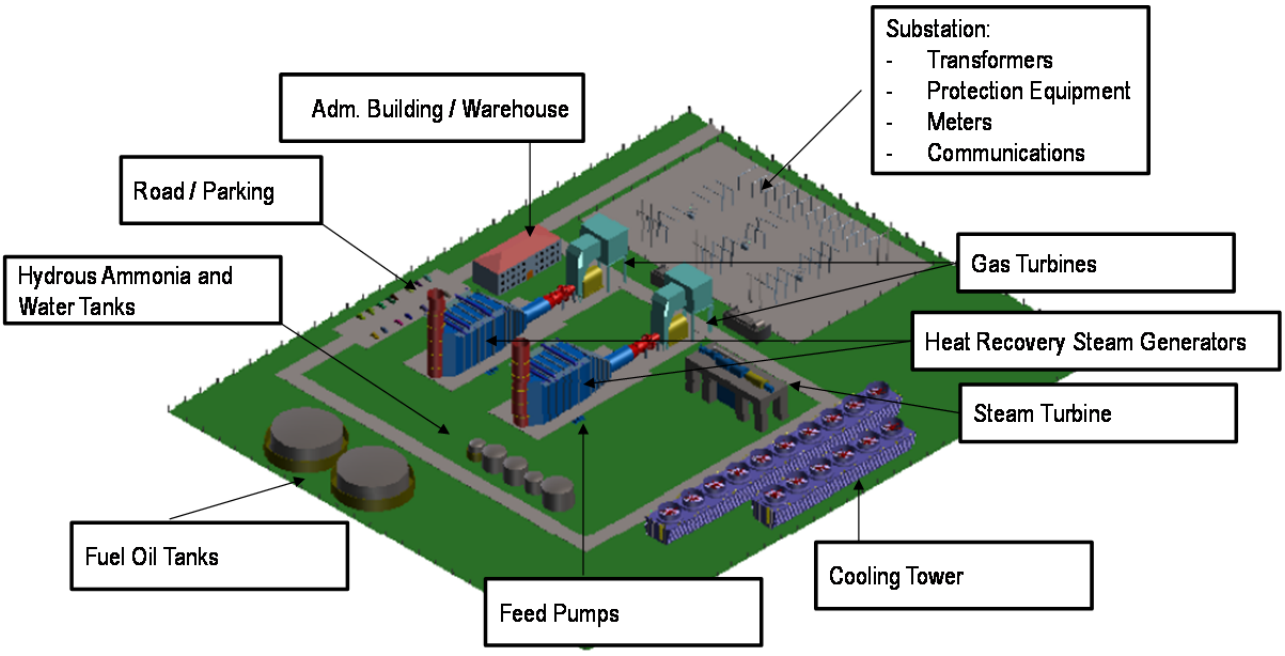
PJM's assertion that it can correctly categorize maintenance costs based on whether they result from electric production is incorrect. All maintenance costs result from electric production.

To allow maintenance costs in both energy market cost-based offers and capacity market cost-based offers requires a judgment as to which maintenance costs go in which market. Otherwise, an unacceptable outcome results, double counting of costs. PJM has not provided a workable, transparent proposal for categorizing maintenance costs as

appropriate for inclusion in energy market and capacity market cost-based offers. PJM uses various terms referring to various types of maintenance that occur at a power plant without defining those terms.

The schematic in Figure 1 illustrates the wide range of elements associated with a power plant and the relationship to the production of energy at the plant. Figure 1 shows the facilities and equipment of a 2 x 1 gas fired combined cycle power plant, including: the gas combustion turbines (CT); the heat recovery steam generators (HRSG) where fuel and steam are converted to electric power; and the tanks where fuel and other consumables are stored. For example, ammonia is stored for use in the selective catalytic reduction (SCR) process to reduce nitrogen oxide (NOx) emissions. **Figure 1** also shows: the cooling towers, where water is cooled after use in the HRSG; the substation where electric power is transformed; the administrative building including offices and the control room; and a warehouse for storing spare parts.

Figure 1: 2x1 Combined Cycle Schematic.



The term maintenance cost refers to the cost of maintenance for any equipment or facility at the power plant site, everything in Figure 1.

The FERC Accounts used in PJM Manual 15 for maintenance (512, 513, 530, 531, and 553) include any maintenance performed to the prime mover and generator, which include the turbine, boiler, engine, HRSG, cooling tower, and feed pumps, and to the accessory electric equipment, such as the substation.[3] The costs in these FERC accounts may result from planned routine maintenance or unplanned maintenance due to equipment malfunction, natural disasters, and weather.

Major maintenance overhaul is one category of maintenance costs specified in Manual 15, but not separately identified in the definition of FERC accounts. Major maintenance overhaul refers to maintenance during outages to inspect and repair any of the major components of a power plant (e.g. gas turbines, heat recovery steam generators, boilers, steam turbines) but it also include inspections, repair and/or replacement of auxiliary equipment such as cooling systems, fuel systems, water treatment equipment. During a major maintenance overhaul, parts are inspected and replaced if necessary, including, for example, turbine blades, rotors, bearings, valves.

Long term maintenance is another component of maintenance costs specified in Manual 15, but not separately identified in the definition of FERC accounts. Long term maintenance includes major maintenance overhauls as one component. Long term maintenance, the term used in the provisions of Manual 15 that PJM seeks to change, typically refers to planned maintenance, including inspection and repair, to the gas turbines, steam turbines and heat recovery steam generators as well as maintenance to auxiliary equipment known as balance of plant (BOP) such as feedwater and fuel pumps, cooling towers, filter replacement, etc. Long term maintenance is broader than maintenance overhauls.

Operating costs are the costs of labor, insurance, taxes, consumables, and other noncapital costs required to operate the plant. Short run marginal costs are a subset of

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[3] *See* PJM Manual 15: Cost Development Guidelines, Rev. 31 (February 15, 2019).

operating costs. Short run marginal costs are the consumables required to generate the next increment of power, including water, water chemistry, emission control reagents, and lubricants. Fuel is a short run marginal cost, but it is accounted for separately from other operating costs. Maintenance is not a short run marginal cost.

II. COMMENTS

A. PJM's Approach Fails To Have A Consistent or Coherent View of Costs

There is a logical and correct way to calculate offers for the energy market and the capacity market that is informed by the time frame applicable to each market. Getting this correct is the core issue and must be enforced in order to implement a logical and efficient market design. The illogical and incorrect treatment of costs is sufficient basis to reject PJM's proposal.

One harmful consequence of PJM's proposal is that it will result in improper double counting of costs in offers. Avoiding double counting constitutes an additional reason to reject PJM's proposal. However, even if PJM did include measures that would avoid double counting, PJM's proposal is still flawed and should still be rejected because it would allow for the wrong costs (i.e. costs that are not SRMC) to be included in energy market offers.

The categorization of costs is defined by the relevant time frame. In PJM markets, the relevant time frames are defined by the energy market and the capacity market. The energy market time frame is instantaneous or very short run. The capacity market time frame is one year, excluding the very short run. Total costs include short run marginal costs, variable or avoidable costs, and fixed costs. Each category of costs is mutually exclusive in the time frames defined by PJM markets. Short run marginal costs are the purely short run incremental costs of producing energy. Variable or avoidable costs are the costs which must be paid each year in order to keep a unit operating over and above short run marginal costs. Fixed costs are the return on and of capital which do not vary within a year.

The Commission refers to costs that are not short run marginal costs as fixed. The Commission is referencing a different time frame. In general, costs are defined by the

relevant time frame. Thus, long term maintenance costs are fixed costs at the time of energy production. But, long term maintenance costs are avoidable for the one year time frame of capacity offers. If costs are fixed for the capacity delivery year, they are not includable in ACR, except to the extent that they are included in APIR which allows recovery of incremental investments.

It is rational and consistent with basic economics to operate a unit whenever the price is greater than its short run marginal costs. It is rational and consistent with basic economics for an owner to continue to operate a unit rather than retire the unit if the unit is covering or is expected to cover its avoidable costs and therefore contributing to covering fixed costs. It is not rational for an owner to continue to operate a unit rather than retire the unit if the unit is not covering and is not expected to cover its avoidable costs. As a general matter, under those conditions, retirement of the unit is the logical option.

The behavior of market participants in PJM markets is entirely consistent with this definition of costs. Most market participants behave competitively and offer at short run marginal cost in the energy market and net avoidable costs in the capacity market. Those who do not are generally attempting to exercise market power. Units retire when they do not expect to cover avoidable costs and units continue to operate when they do cover avoidable costs.

B. PJM's Proposal Will Allow for Double Recovery of Maintenance Costs and the Exercise of Market Power.

The Commission inquired:

> In the filing, PJM explains that '[t]hese revisions will not prohibit Generation Resources from continuing to recover major maintenance costs through the capacity market if they choose to do so, provided they are not also planning to recover the same costs in their energy market cost-based offers.' In its answer, PJM includes language that would 'properly ensure that variable costs incurred as a result of energy production are included in the energy market rather than in the Avoidable Cost Rate component of capacity offers. At the same time, this will allow Market Sellers to continue to include costs that are not incurred as a result of

> energy production, and thus are treated by such Market Sellers as fixed costs, in the Avoidable Cost Rate.'

PJM's basic assertion that costs incurred as a result of electric production should be included in energy offers and not in capacity offers is simply incorrect. PJM's proposal would significantly change energy offers to include a wide range of costs that are not short run marginal costs. All maintenance costs are incurred as a result of electric production. The short run marginal costs that comprise appropriate energy offers are incurred as a result of electric production. Long term maintenance costs that are clearly not short run marginal costs are incurred as a result of electric production and are includable in ACR. Long term maintenance costs are fixed costs at the time of energy production. Long term maintenance costs are avoidable for the one year time frame of capacity offers. If costs are fixed for the capacity delivery year, they are not includable in ACR, except to the extent that they are included in APIR. Such fixed costs are not avoidable costs, by definition.

1. PJM Does Not Have a Process to Prevent Double Recovery.

The Commission inquired:

> a) Please describe the process PJM uses to verify that major maintenance costs are not double-recovered through both the capacity market and energy market. Specifically, for the 953 resources that are not required to submit supporting cost data for their capacity market offers because they elect the default offer cap (Net CONE of the zone in which the resource is located times the balancing ratio) for their Capacity Performance offers, do market sellers provide PJM a breakdown of capacity market cost data that includes a variable operations and maintenance line item?

PJM responds that is has no such process. PJM does not require market sellers to provide capacity market cost data when they elect the default offer cap. PJM does not routinely review capacity market Avoidable Cost Rate submissions when reviewing Maintenance Adders for energy market cost-based offers. PJM does not know if resources currently double recover maintenance costs or will do so it the future.

PJM asserts that its proposed addition to Attachment DD will resolve any double recovery concerns. However, PJM's proposed language, which would use "variable costs that are directly attributable to the production of energy" as the definition of what belongs in energy offers and not in capacity offers does not resolve anything. PJM's proposed approach does not provide an operational definition of what, even in their view, belongs in energy offers and capacity offers. Short run marginal costs are directly attributable to the production of energy. Avoidable costs are directly attributable to the production of energy. The fact is that only short run marginal costs belong in energy offers and that avoidable costs belong in capacity offers and there is no overlap.

2. PJM's Maintenance Cost Definition is Ambiguous.

The Commission inquired:

> b) Recognizing the wide range of possible major maintenance costs, which may differ by technology type, manufacturer, and vintage, please provide a detailed list of the costs, by resource type, that PJM proposes to allow a Market Seller to classify as major maintenance costs directly related to the production of energy. Please explain why each of these cost items is appropriately classified as energy-related.

PJM failed to respond to the question. In the February 15th Response, PJM does not provide a detailed list of the costs, by resource type, that PJM proposes to allow in cost-based offers. PJM provides only a subset of costs allowable under its proposal and only for CC and CT resource types. PJM fails to include a list for any other resource types.

PJM provides a list of 11 typical activities performed during a major inspection and overhaul of a CT or CC:

- Turbine blade repair/replacement;
- Turbine diaphragm repair;
- Casing repair;
- Bearing repair/refurbishment;
- Seal repair/replacement and generator refurbishment;
- Compressor blade repair/replacement;

- Hot gas path inspections, repairs, or replacements;
- Stop valve repairs;
- Throttle valve repairs;
- Nozzle block repairs; and
- Intercept valve repairs.

PJM's list is incomplete and does not reflect the list of all maintenance costs that PJM will include in energy offers if PJM's approach is approved. In 2012, PJM modified Manual 15 to exclude long term maintenance costs from cost-based energy offers.[4] The version of Manual 15 prior to the exclusion of long term maintenance costs (2011 version) included a list of long term maintenance items. That list is more comprehensive than PJM's response to the Commission's question in this matter. Based on PJM's current approval of maintenance costs and PJM's additional list, PJM will include at least all the items in the list in the 2011 version of Manual 15. The 2011 list includes everything in PJM's list in their response plus more costs. The list for CCs was:

- BFW Pump Inspection and Overhaul
- Casing Repair and Replacements
- Chemical Cleaning or Hydro-Blasting of Heat Transfer Surfaces
- Circulation Pump Inspection and Overhaul
- Combustion Inspections including Parts, Labor, Rentals and Specialized technical expertise and support
- Combustion Turbine Generator ("CTG")
- Combustion Turbine Generator Inlet Air System
- Condensate Pump Inspection and Overhaul
- Cooling Tower

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[4] *See* PJM Manual 15: Cost Development Guidelines, Rev. 17 (June 1, 2011) at 44.

- Cooling Tower Fan Motor and Gearbox Inspection and Overhaul
- Distillate Fuel Pumps Inspection and Overhaul
- Electric Generator Inspection and Overhaul
- Environmental
- Evaporative cooling system media replacement
- Fuel Gas Compressors Inspection and Overhaul
- Fuel System
- Heat Recovery Steam Generator ("HRSG")
- Heat Transfer Surface Replacements
- Hot Gas Path Inspection
- Inlet Air Filter Replacement
- Major Overhaul
- Mechanical inlet air cooling chiller and pump inspection and overhaul
- Replacement of Cooling Tower Fill and Drift Eliminators
- Resin Replacement
- RO Cartridges Replacement
- SCR and/or CO Reduction Catalyst Replacement
- Steam Turbine Generator ("STG")
- Surface Condenser
- Water Treatment

In addition to maintenance to the CT and HRSG, the 2011 version includes maintenance for other parts of the power plant, such as cooling towers, fuel and water pumps, emissions reduction catalyst equipment, and replacement of filters and cartridges. The list provided by PJM in response to the Commission does not include some items that PJM would include as related to electric production, as illustrated by the list in the 2011 version of Manual 15.

3. Estimated Range of Maintenance Costs by Item

The Commission inquired:

> c) Please provide an estimated range of the value for each of these costs (e.g., from historical data, manufacturer's and/or PJM's estimates, etc.).

PJM's response to the Commission's question is inadequate. PJM does not provide a range for each of the costs that PJM lists and does not provide a range for each of the costs in the list from the 2011 Manual 15. PJM provides a range of total costs for an entire major overhaul, but only for steam turbine generators.

PJM states that the typical cost range for a major overhaul on steam turbine generators is approximately $2 million to $10 million depending on unit size. PJM states that it expects major maintenance to be similar for combustion turbines and combined cycles without providing support or relevant details. PJM's proposed cost range is so broad as to be meaningless, both as to what is included and as to the level of dollars.

The total value of the maintenance costs is not the relevant metric. The relevant metric for evaluating the impact on energy offers is dollars per MWh. If $10 million in maintenance costs are incurred by a resource with a high capacity factor that produces 5,000,000 MWh in a year, the average cost of maintenance is $2.00 per MWh. If $10 million in maintenance costs are incurred by a resource with a low capacity factor that produces 50,000 MWh in year, the average cost of maintenance is $200.00 per MWh.

4. FERC System of Accounts.

The Commission inquired:

> d) Please clarify whether PJM proposes to allow all costs from FERC Accounts 512, 513, and 553 to be included as major maintenance costs recoverable in the energy market. If not, please explain which maintenance costs would not be permitted.

PJM responds that all maintenance costs in the identified FERC accounts can be included, including all major maintenance expenses, except straight time labor costs and

costs that are not directly related to electric production.[5] PJM does not provide, as requested by the Commission, an explanation of which maintenance costs in the FERC accounts would not be permitted. PJM repeated that only costs "directly related to electric production" are includable, which does not clarify which maintenance items are excludable. All the maintenance costs in these accounts are directly related to electric production.

FERC accounts 512 (maintenance of boiler plant), 513 (maintenance of electric plant) and 553 (maintenance of generating and electric equipment) include the cost of labor, materials used and expenses incurred in maintenance of plant (steam or electric). These accounts include maintenance to boiler plant equipment (account 312), maintenance to engines and engine driven generators (account 313), turbogenerator units (account 314), maintenance to accessory electric equipment for steam turbines (account 315), maintenance to prime movers (account 343), maintenance to generators (account 344) and maintenance to accessory electric equipment for units other than steam turbines (account 345).

The FERC system of accounts does not differentiate between variable or fixed, between major or minor, between costs related to electric production or not. The FERC accounting system was not developed based on maintenance costs directly related to electric production. PJM's proposed use of FERC accounts for the development of cost-based offers is unworkable and unsupportable.

5. Maintenance Cost Allocation Discretion.

The Commission inquired:

> e) Please explain whether resources will have any discretion in determining which costs are variable and whether PJM will review these choices to determine whether the particular cost items are properly included in either market.

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[5] PJM's response is not consistent with PJM's proposed Manual 15 language which states that the only costs that have to be excluded from the FERC accounts are straight time labor costs. See PJM's February 15th Response at 5.

PJM responds that Market Sellers will have no discretion in determining which maintenance costs are variable (includable in the energy market) and which are fixed (included in the capacity market).

PJM's response to the Commission's question is inadequate. The distinction is not between variable and fixed costs. The distinction in PJM markets is between short run marginal costs and avoidable costs.

Market Sellers would clearly have discretion under PJM's proposed approach. PJM defines variable costs as costs "directly related to electric production." Based on the list of equipment proposed by PJM, a Market Seller can argue that maintenance on a transformer due to a lighting strike or maintenance on a substation due to flooding is directly related to electric production. PJM leaves open the possibility for the Market Seller to include equipment not listed in the proposed Manual 15 by including the open ended phrase "not limited to." That phrase provides discretion, in addition to the other areas of discretion. In theory and in practice, PJM and Market Sellers will have discretion over which maintenance costs can be included in cost-based offers.

The PJM tariff allows Avoidable Operations and Maintenance Labor costs (AOML), Avoidable Maintenance Expenses (AME) and Avoidable Variable Expenses (AVE) to be included in ACR in cost-based capacity market offers. The definitions of these avoidable costs overlap with PJM's proposed definition for operating costs and maintenance costs includable in cost-based energy market offers. Overlap allows for discretion regarding which avoidable maintenance costs are included in the capacity market offer and in the energy market offer.

PJM's position is that all maintenance is includable in cost-based offers in the energy market except labor. Attachment DD allows ACR to include maintenance costs other than just labor. Therefore, overlap exists, which means there is discretion.

Both PJM and market sellers will have excessive discretion to define the maintenance costs included in the energy market cost-based offers and capacity market, without a sound basis in economics or accounting and without consistency among sellers.

C. Double Recovery.

The Commission inquired:

> 2) PJM states that during its annual review of variable operation and maintenance costs, it discovered that certain types of resources, such as steam and nuclear resources, were including major maintenance costs as part of their energy market offers.

The Commission then inquired into three areas.

1. PJM Did Not Perform a Study to Support Their Position'

The Commission inquired:

> a) Please provide the study that PJM references in its filing related to the 'unit-specific Maintenance Adders in 2017.'

PJM responds that it performed no study.

Instead, PJM's describes some anecdotal observations from its review of Maintenance Adder calculations. PJM's description of Maintenance Adder calculations, using an average cost over a 10 to 20 year history, demonstrates the long term nature of these costs.[6] These costs do not vary with short run electric production. PJM stated: "Major maintenance typically occurs on a 4 to 10 year interval depending on starts and run hours and results in a cost spike in the year(s) the major maintenance took place." PJM also stated: the "intent of the Maintenance Adder calculation using a maintenance history is to average major maintenance cost spikes in a resource's history over multiple years." This is the definition of average costs, not marginal costs. The same calculation can be done with other types of avoidable costs. Dividing an avoidable cost by MWh does not create a marginal cost.

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6 *See* February 14th Response at 8.

2. PJM Miscalculates the Number of Units That Include Major Maintenance in Energy Offers.

The Commission inquired:

> b) Were all non-CC and CT resources including major maintenance costs in energy market offers? If not, please provide, for each resource type, how many of these resources and the percentage of the total number of each resource type that have been including major maintenance costs in energy market offers.

PJM responds that the majority of resources do not include major maintenance costs in their Maintenance Adders. But PJM asserted: "This review revealed that a large fraction (i.e., over 25 %) of steam and nuclear resources included major maintenance costs in their Maintenance Adders." This assertion is entirely based on 53 resources, but the facts about those units do not support PJM's assertions. PJM's entire justification for the Complaint relies on these 53 resources. This justification is not sufficient to support PJM's proposal.

PJM did not answer the Commission's question. The Commission asked for the number of resources that include major maintenance in their energy market offers. PJM listed the number of resources that received approval from PJM for a Maintenance Adder that included major maintenance. PJM fails to point out that not all 53 resources include their approved maintenance adder in their energy market offers. PJM also failed to distinguish between units that offered competitively and units that attempted to exercise market power by offering a greater than competitive levels.

PJM provided to the Market Monitor the list of the 53 steam turbines that according to PJM included major maintenance in their maintenance adder. Out of 53, 24 have retired or have announced retirement, five do not include the maintenance adders approved by PJM in their cost-based offers, 10 had an average negative markup at economic minimum in 2018, effectively removing some or all maintenance costs from their offers, and five are nuclear units which were price takers in the energy market, meaning that their offers are irrelevant to the market. The balance from PJM's list of 53 units is nine units. There are 148 coal, oil or natural gas fired steam turbines in PJM. Nine units is six percent of that resource

type. Based on the list provided by PJM, only nine units owned by four companies consistently include major maintenance costs in their energy market offers. The behavior of nine units does not justify PJM's proposal.

Most resources in PJM follow the rules and behave competitively. The PJM Market Rules do not require revision to accommodate nine resources offering in a way that allows them to exercise market power.

3. PJM's Position Is Not Based on Analysis.

The Commission inquired:

> c) Please explain the analysis PJM conducted that resulted in it concluding that major maintenance costs for CT and CC resources should no longer be recoverable in the capacity market and instead are more appropriately included in the energy market.

PJM responds that it did not perform an analysis of the appropriateness of recovery of these costs in the energy market. PJM argues that the focus of the filing was to ensure equal treatment for the potential recovery of these costs between CT and CC resources versus all other resources and therefore such analysis is beyond the scope of the filing.

PJM's response to the Commission's question is illogical. PJM has provided no argument for allowing maintenance costs in the energy market cost-based offers instead of the capacity market cost-based offers (ACR).[7] [8] PJM has not established that market participants include maintenance costs in competitive energy market offers.

PJM instead argues that the intent of the filing is to "ensure equal treatment for the potential recovery of [maintenance costs] costs between CT and CC resources versus all other resources." If equal treatment were PJM's only concern, PJM could have agreed with the Market Monitor's proposal of defining cost-based offers as short run marginal cost for

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[7] *See* the IMM November 19, 2018, Protest at 4-20.

[8] *See* the IMM December 20, 2018, Answer at 2-10.

all units. PJM has made no argument that the Market Monitor's proposal is not consistent with economic theory and not consistent with market outcomes. If the Commission finds that differential treatment among resources exists, the Market Monitor's proposal provides consistent treatment for all resources and is the only proposal consistent with competitive market economics.

D. Operating Costs.

The Commission inquired:

> 3) PJM proposes to revise Operating Agreement, Schedule 2, section 1.1(a) by adding the term 'Operating Costs' to the list of recoverable costs in the energy market.

1. Operating Costs.

The Commission inquired:

> a) In which market have resources historically recovered these operating costs?

PJM responds that Operating Costs have been historically recovered in the energy market as other fuel related costs or included in the Maintenance Adder.

The tariff already includes an "other incremental operating costs" component. The creation of a new term without revising the current tariff language creates the possibility for including costs as "other incremental operating costs" not properly categorized as "Operating Costs." The Commission should direct PJM to list in Schedule 2 Section 1.1 (a) only the tariff defined components and remove all components not defined. The tariff components should include only operating costs that are short run marginal costs.

2. Operating Costs Classification.

The Commission inquired:

> b) Recognizing the wide range of possible major maintenance costs, which may differ by technology type, manufacturer, and vintage, please provide a detailed list of the costs, by resource type, that PJM proposes to allow a Market Seller to classify as operating costs directly related to the production of energy.

PJM responds that PJM and the Market Monitor jointly determined and presented to stakeholders a list of allowable costs that could be considered Operating Costs for all unit technology types, manufacturers, and vintage and a methodology to include costs not included in the initial list. But PJM does not consistently define the operating costs includable in cost-based energy offers as short run marginal costs.

PJM is proposing to include language in Manual 15 that lists types of operating costs. Operating costs should be defined as short run marginal costs. OA Schedule 2 should clarify that variable operating costs are the short run marginal expenses for consumables, other than fuel, to generate the next increment of power, including water, water chemistry, emission control reagents, and lubricants.

3. Operating Cost Allocation Discretion

The Commission inquired:

c) Are these operating costs based on a specific FERC Account?

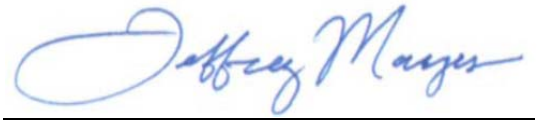
PJM responds that Operating Costs are not based on specific FERC Accounts. PJM argues that additional items that are included in other FERC accounts (besides the maintenance accounts) can be used as long as such costs are directly related to electric production.

PJM's answer to the Commission's question highlights the potential for arbitrary discretion. PJM argues that Market Sellers can use FERC accounts as long as such costs are directly related to electric production related to operating the resource. Market Sellers that argue that certain costs in the FERC accounts are related to electric production would be able to use these accounts. The discretion will always reside in PJM's interpretation of its ambiguous standard of costs "directly related to electric production." Directly related to electric production does not provide a standard for defining whether costs are short run marginal costs or avoidable costs. The correct standard is short run marginal costs. Unlike maintenance costs, properly defined operating costs are short run marginal costs.

III. CONCLUSION

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

Respectfully submitted,



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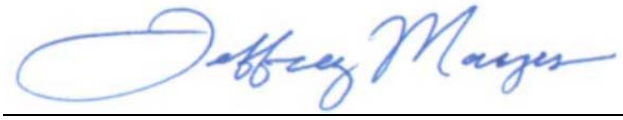
Dated: March 7, 2019

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 7th day of March, 2019.



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