

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

Dominion Resources Services, Inc.	)	
	)	
v.	)	Docket No. EL13-12-000
	)	
PJM Interconnection, L.L.C.	)	

**COMMENTS OF THE INDEPENDENT MARKET MONITOR FOR PJM**

Pursuant to Rule 211 of the Commission’s Rules and Regulations,<sup>1</sup> Monitoring Analytics, LLC, acting in its capacity as the Independent Market Monitor for PJM<sup>2</sup> (“Market Monitor”), submits these comments responding to the complaint filed by Dominion Resources Services, Inc. (“Dominion”) on October 19, 2012. The Market Monitor supports prospective relief in response to this complaint.

Dominion complains (at 15) of “PJM’s failure to amend its cost allocation methodology for Operating Reserves charges to correspond with its new method of committing resources to supply those reserves.” Dominion alleges (at 15) that, “The new processes result in charges for Day-Ahead Operating Reserves service that do not honor cost causation principles, and are unfair, unjust and unreasonable.” Dominion requests (at 16) that, “The Commission should (a) order PJM to amend provisions of its Tariff relevant to cost allocation for Operating Reserves to conform with its new Operating Reserves commitment practices, so that costs are allocated on the basis of their causes, and (b) require

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<sup>1</sup> 18 CFR § 385.211 (2011).

<sup>2</sup> Capitalized terms used herein and not otherwise defined have the meaning set forth in the PJM Open Access Transmission Tariff (“OATT”).

PJM to refund approximately \$8,000,000, reflecting all overcharges caused by changes to PJM's Operating Reserve practices from September 13 through March 1, 2013."

The Market Monitor agrees that PJM should propose tariff modifications to ensure that the allocation of Operating Reserves is consistent with cost causation principles, but the Market Monitor does not agree that PJM should make any refunds.

## I. BACKGROUND

The term "operating reserves" can refer to physical operating reserves or to accounting operating reserve payments. Physical operating reserves are capacity available to the grid operator to maintain system reliability. Physical operating reserves include regulation, synchronized reserves and non-synchronized reserves. Accounting operating reserve payments in the PJM market are make whole or uplift payments made to market participants under specified conditions in order to ensure that resources are not required to operate for the PJM system at a loss.<sup>3</sup> Operating reserve payments are called operating reserve charges and the corresponding revenues are called operating reserve credits.

The Day-Ahead Energy Market is solved with the objective function of minimizing the total cost of the system. PJM meets the demand and reserves requirement with the least-cost combination of the offers submitted by all resources.<sup>4</sup> Under some circumstances PJM schedules units as must run when PJM is certain that such units will be needed in real time for reliability.

Participants can submit their units as self-scheduled resources, or as must run, meaning that the unit must be committed. A unit submitted by a participant as must run can be committed to run at economic minimum but dispatchable from economic minimum

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<sup>3</sup> See the *2011 State of the Market Report for PJM: Volume II*, Section 3, "Operating Reserve" at "Description of Operating Reserves" for a detailed description of all operating reserve categories, credits and charges.

<sup>4</sup> OATT Attachment K - Appendix § 1.10.8 (a)

to economic maximum or committed at a fixed output.<sup>5</sup> A unit submitted by a participant as must run does not set locational marginal prices (LMP) and is not eligible for operating reserve credits.

On September 13, 2012, PJM increased the number and MWh of units scheduled as must run in the Day-Ahead Energy Market because the units were needed for reliability in real time. PJM identified the need to schedule these units in the Day-Ahead Energy Market after determining that these units were affecting the commitment process of combustion turbines in real time. The increase in such scheduling was intended to reduce the divergence between the scheduled resources in the Day-Ahead Market and the actual resources operating in the Real-Time Energy Markets, this generation must be scheduled in the Day-Ahead Energy Market.

PJM may schedule units as must run in the Day-Ahead Energy Market when needed in real time to address reliability issues of various types. PJM put such reliability issues in four categories:<sup>6</sup> voltage issues (high and low); black start requirement (from automatic load rejection units); local contingencies not seen in the Day-Ahead Energy Market; and units with long lead times not able to be scheduled in the Day-Ahead Energy Market. Units scheduled as must run by PJM are eligible for operating reserve credits when they are submitted as dispatchable or economic by their owners.

Scheduling these units in the Day-Ahead Market reduces the divergence between the Day-Ahead and the Real-Time Energy Markets in two ways. It reduces the difference between the MW being scheduled in day ahead and the units actually operating in real time to generate these MW. It also reduces the difference between the day-ahead and real-time

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<sup>5</sup> See "PJM eMkt Users Guide" Section Managing Unit Data (version June, 2012) p. 40.

<sup>6</sup> See "Item 12 - October 2012 MIC DAM Cost Allocation" from PJM's MIC meeting <<http://www.pjm.com/~media/committees-groups/committees/mic/20121010/20121010-item-12-october-2012-mic-dam-cost-allocation.ashx>>. (Accessed October 25, 2012)

LMPs by impacting the Day-Ahead Energy Market in the same way these units impact the Real-Time Energy Market.

## II. COMMENTS

The change in scheduling on September 13<sup>th</sup> shifted substantial operating reserve credits from the Balancing Energy Market to the Day-Ahead Energy Market. This is significant, as day-ahead operating reserve charges and balancing operating reserve charges are allocated differently. Day-ahead operating reserve charges are paid by day-ahead load, day-ahead exports and decrement bids across the entire RTO. Balancing operating reserve charges are paid by real-time load and real-time exports, or by deviations from the day-ahead schedule, depending on the allocation process. Balancing charges are allocated across three different regions, while day-ahead charges are not. In addition, reactive services charges (attributable to units providing voltage support) are paid by real-time load on a zonal level.

On October 10, 2012, PJM staff presented a problem statement to PJM's Market Implementation Committee (MIC) indicating the need to modify the allocation rules of day-ahead operating reserve charges as a result of the shift of operating reserve charges to the Day-Ahead Market.<sup>7</sup>

The Market Monitor supports the concept of PJM's change in unit commitment as consistent with improved market efficiency. However, it would have been preferable to provide more notice to the market and go through a stakeholder process to consider these changes prior to implementation. The Market Monitor also supports the position that the allocation of operating reserve charges in the Day-Ahead Energy Market must be made consistent with cost causation.

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<sup>7</sup> See "Item 12 - October 2012 MIC DAM Cost Allocation" from PJM's MIC meeting <<http://www.pjm.com/~media/committees-groups/committees/mic/20121010/20121010-item-12-october-2012-mic-dam-cost-allocation.ashx>>. (Accessed October 25, 2012)

Accordingly, PJM should, on an expedited basis, request that the tariff be modified to permit allocation of day-ahead operating reserve charges consistent with the prior allocation of these charges in real time. This would be a short term solution to the issue created by shifting operating reserve charges to the Day-Ahead Market and therefore changing the allocation of those charges. In addition, PJM should start a stakeholder process to consider the market design and cost allocation issues in detail and propose a permanent tariff change that results from the process.

The Market Monitor recommends that this stakeholder address three areas of incorrect allocation that are directly related to and part of the current issue. The costs of black start units should not be included in operating reserve charges either in the Day-Ahead or Real-Time Markets. Removing these costs immediately is consistent with the tariff and would reduce the size of the issue.<sup>8 9</sup> The costs of reactive service should not be included in operating reserve charges either in the Day or Real-Time Markets. Removing these costs immediately is consistent with the tariff and would reduce the size of the issue.<sup>10</sup>  
<sup>11</sup> Real-time operating reserve charges are currently significantly overstated because the calculations of lost opportunity cost, which is part of operating reserve charges, do not

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<sup>8</sup> 2011 *State of the Market Report for PJM*, Volume II, Section 3, "Operating Reserve" at "Black Start and Voltage Support Units" p. 82

<sup>9</sup> The Market Monitor has raised issues concerning the cost allocation of make whole payments to resources providing black start service. See "Meeting Minutes" from PJM's MIC meeting, <<http://www.pjm.com/~media/committees-groups/committees/mic/20120808/20120808-minutes.ashx>>. (Accessed October 16, 2012)

<sup>10</sup> 2012 *Quarterly State of the Market Report for PJM: January through June*, Section 3, "Operating Reserve" at "Reactive Service Credits and Operating Reserve Credits" p. 79

<sup>11</sup> The Market Monitor has raised issues concerning the cost allocation of make whole payments to resources providing reactive services. See "Item 7: Reactive Service and Operating Reserve Credits Problem Statement and Issue Charge" from the PJM's MIC meeting, <<http://www.pjm.com/~media/committees-groups/committees/mic/20121010/20121010-item-07-reactive-service-and-operating-reserve-credits-problem-statement-and-issue-charge.ashx>>. (Accessed October 16, 2012)

include no load costs when subtracting costs from LMP to calculate foregone profit. This is simply incorrect and should be corrected as part of addressing these operating reserve charge issues.<sup>12</sup> As part of the stakeholder process, the Market Monitor recommends that PJM clearly identify and classify the reasons for operating reserve credits in the Day-Ahead and the Real-Time Energy Markets in order to ensure the correct allocation of the corresponding charges.

Because Dominion has not shown that PJM has acted inconsistently with the PJM Market Rules as filed, the Market Monitor does not agree that Dominion has justified its claim to retrospective relief. The Market Monitor believes that the estimated \$8,000,000 requested is unsupported.

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<sup>12</sup> See the *2012 Quarterly State of the Market Report for PJM: January through June*, Section 3, "Operating Reserve" at "Lost Opportunity Cost Credits", pp. 74-76.

### III. CONCLUSION

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

Respectfully submitted,



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Dated: November 2, 2012

**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 2<sup>nd</sup> day of November, 2012.



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Attachment

# PJM Market Update

MIC

November 7, 2012

Joe Bowring

Joel Romero Luna



Monitoring Analytics

# Day-ahead operating reserve charges

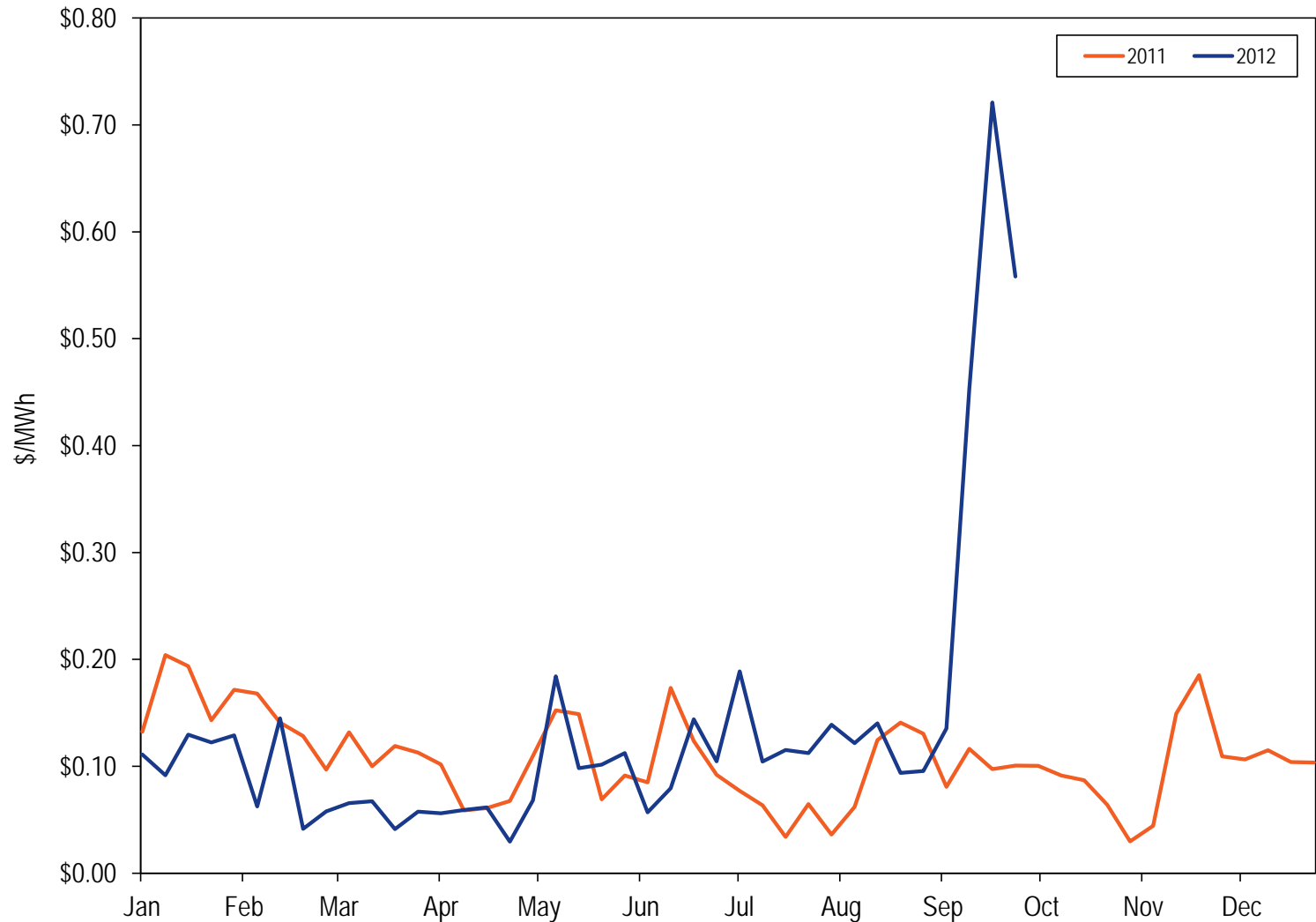
- **PJM modified treatment of certain units taken for reliability reasons in the real time market.**
- **Included out of merit units in the day-ahead market for comparability to real-time market**
- **Results:**
  - **Higher day-ahead operating reserve charge rates**
  - **Lower real-time operating reserve charge rates**
  - **Changes in allocation of operating reserve charges**

# Day-ahead operating reserve charges

- **Allocation of day-ahead operating reserve charges, including reactive service credits**
  - **Load including decs**
  - **Exports**
- **Allocation of real-time operating reserve charges**
  - **Reliability**
    - **Regional: load, exports**
  - **Deviations**
    - **Regional: deviations from day ahead**
  - **Reactive service credits**
    - **Zonal real-time load**



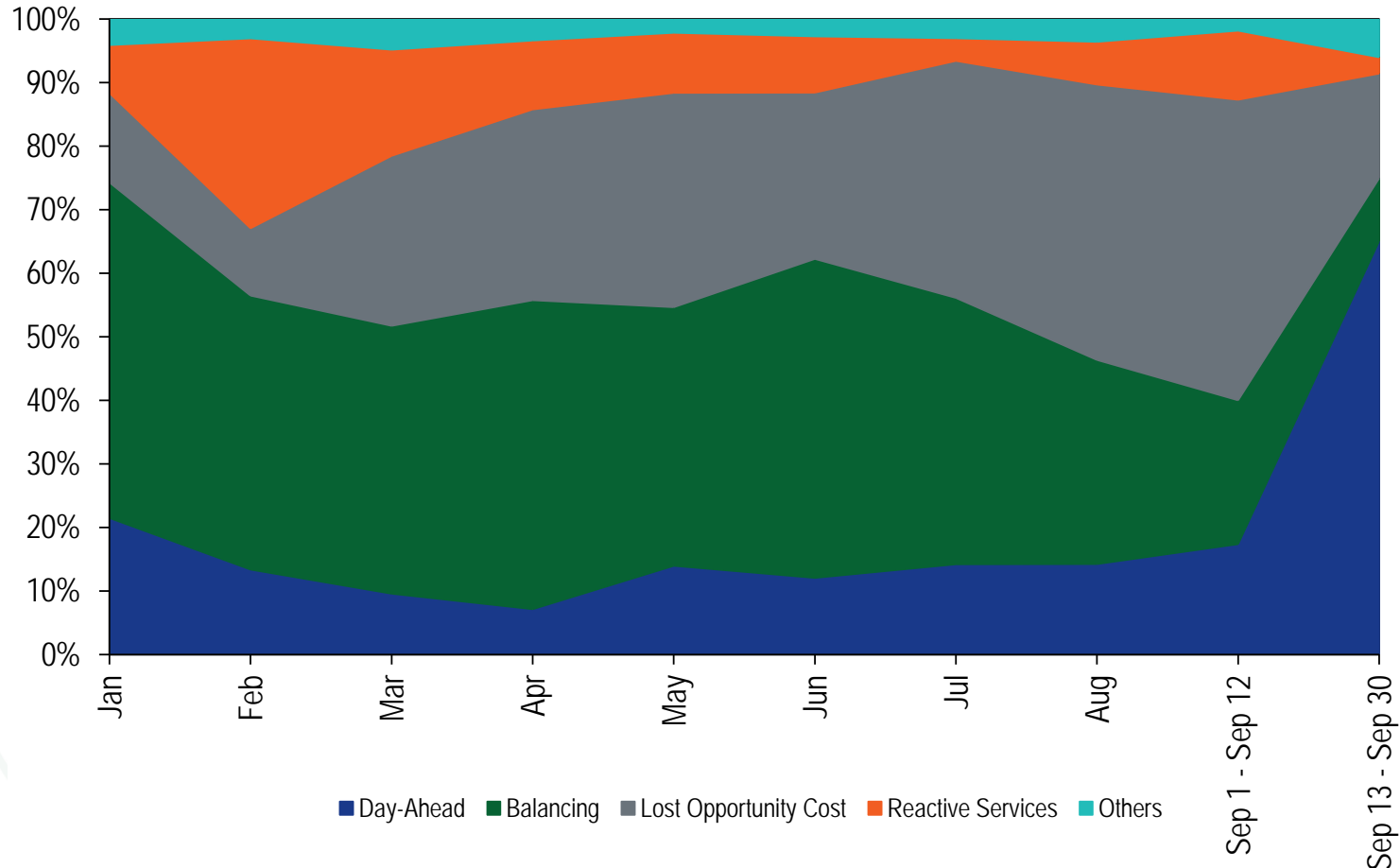
# Day-ahead operating reserve rate (\$/MWh)



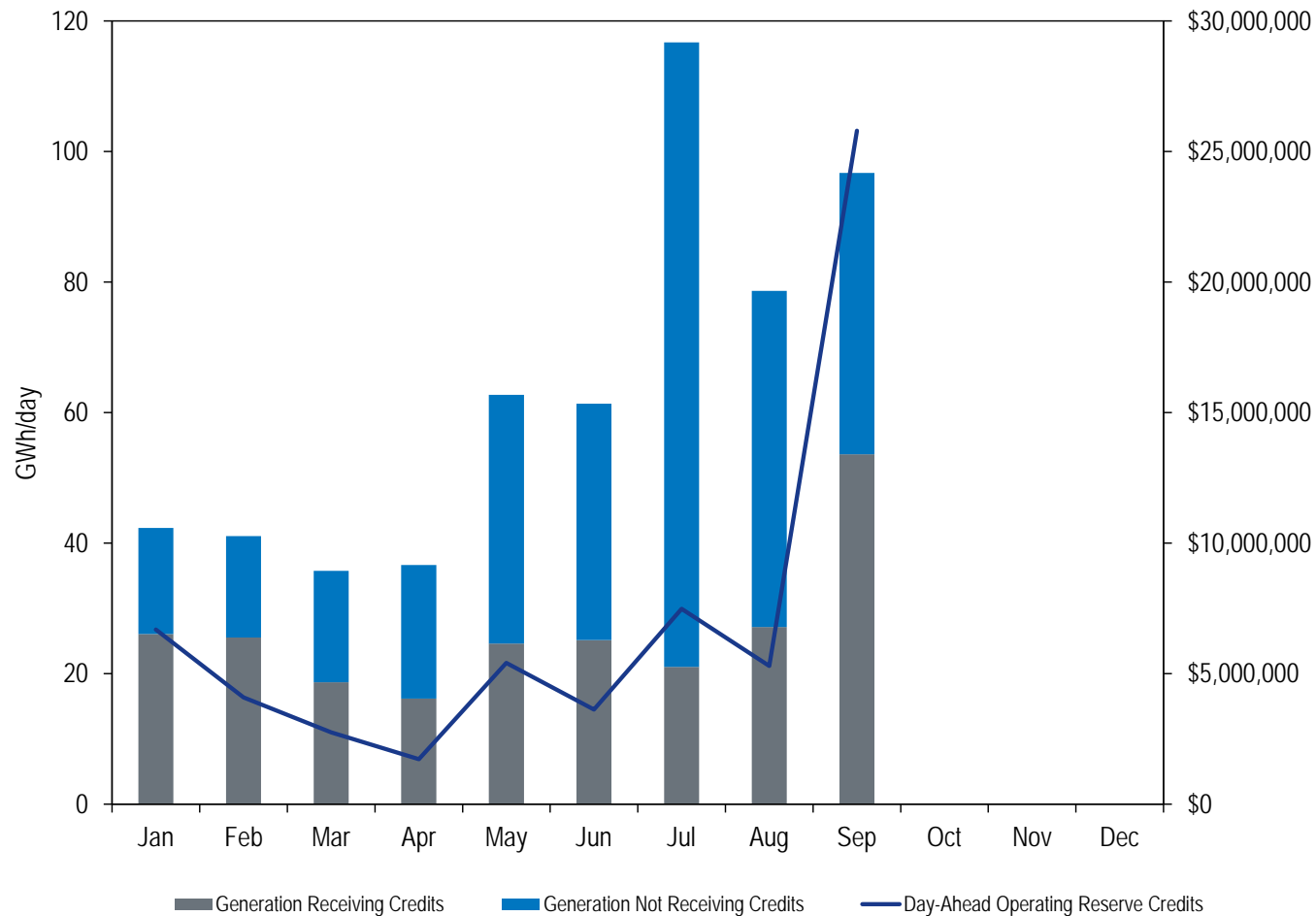
# Average operating reserve rates January 1 – September 12 and September 13 – September 30, 2012

	Rate before September 13 (\$/MWh)	Rate after September 13 (\$/MWh)	Difference (\$/MWh)	Percentage Difference
Day-Ahead	0.1043	0.6275	0.5231	501.4%
RTO Reliability	0.0237	0.0115	(0.0121)	(51.2%)
East Reliability	0.0294	0.0000	(0.0294)	(100.0%)
West Reliability	0.1596	0.0035	(0.1560)	(97.8%)
RTO Deviations	0.9638	0.5164	(0.4474)	(46.4%)
East Deviations	0.2554	0.0000	(0.2554)	(100.0%)
West Deviations	0.1367	0.0000	(0.1367)	(100.0%)
Lost Opportunity Cost	1.3482	0.9918	(0.3564)	(26.4%)
Canceled Resources	0.0318	0.0003	(0.0315)	(99.2%)

# Operating reserve charges share by category: January through September 2012

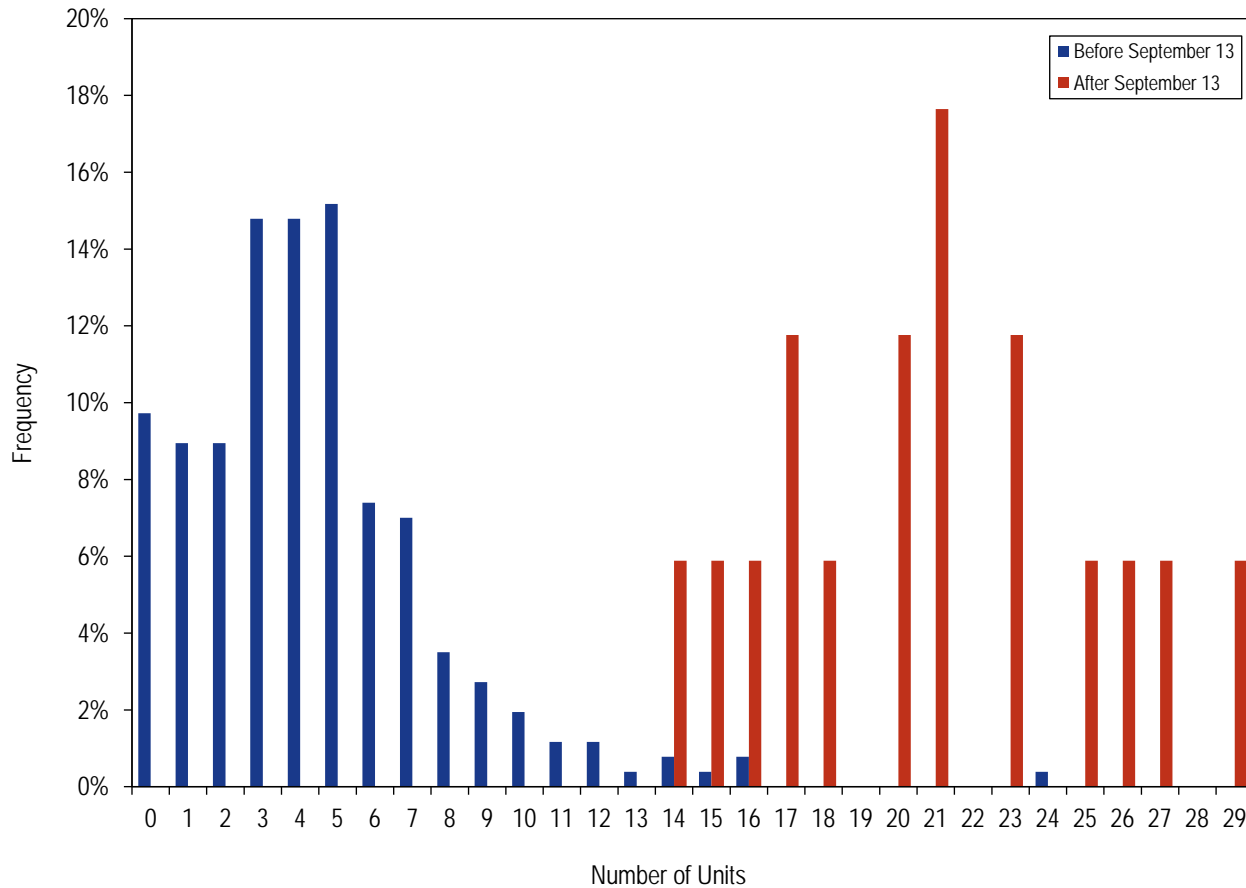


# Daily average day-ahead generation from units scheduled as must run by PJM





# Units scheduled as must run by PJM receiving day-ahead operating reserve credits



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