

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

Frequency Regulation Compensation in the Organized Wholesale Power Markets)))	Docket No. RM11-7-000 AD10-11-000
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COMMENTS OF THE ELECTRIC POWER SUPPLY ASSOCIATION

The Electric Power Supply Association (“EPSA”)¹ respectfully submits the following comments in response to the Federal Energy Regulatory Commission’s (“FERC” or “Commission”) February 17, 2011 Notice of Proposed Rulemaking (“NOPR”) regarding Frequency Regulation Compensation in the Organized Wholesale Power Markets.² The NOPR follows the Commission’s May 26, 2010 technical conference which addressed the compensation provided to faster-ramping regulation resources in organized markets.³ Pursuant to section 206 of the Federal Power Act (FPA), the Commission is proposing in the NOPR that market efficiencies can be achieved with more consistent and efficient price signals for regulation resources in RTO/ISO markets. Specifically, the Commission proposes to require RTO/ISOs to adopt tariff revisions that will ensure that resources providing frequency regulation service are comparably compensated.

¹ EPSA is the national trade association representing competitive power suppliers, including generators and marketers. Competitive suppliers, which, collectively, account for 40 percent of the installed generating capacity in the United States, provide reliable and competitively priced electricity from environmentally responsible facilities serving power markets. EPSA seeks to bring the benefits of competition to all power customers. The comments contained in this filing represent the position of EPSA as an organization, but not necessarily the views of any particular member with respect to any issue.

² Frequency Regulation Compensation in the Organized Wholes Power Markets, 134 FERC ¶ 61,124, Docket No. RM11-7-000 and AD10-11-000) (February 17, 2011).

³ Frequency Regulation Compensation in the Organized Wholes Power Markets, Technical Conference, Docket AD10-11-000, (May 26, 2010).

I. SUMMARY

EPSA supports tariff changes for regulation service that would include provisions which provide compensation for both the provision of regulation capability and for the ramping mileage provided by resources while on regulation. The ISO-NE currently uses such a mechanism to measure and compensate the “mileage” payment that resources receive in the regulation market. The Commission correctly recognizes that the compensation for mileage and regulation capability should be based on a uniform clearing price which reflects any opportunity costs of resources providing regulation service in that period, an important component of the costs for the marginal resource unit. With the exception of the need to incorporate any regulation resource opportunity costs in the uniform clearing price paid to all regulation resources, the ISO New England Regulation market satisfies the objectives of the NOPR. As a result, the NOPR changes can best be made by following the ISO-NE model. To the extent that implementation of that general model requires certain specific detail in other RTOs, the tariff changes contemplated in the NOPR can best be established through existing balanced stakeholder processes for each RTO/ISO. Use of these processes will ensure that a measured approach is taken so that one proceeding does not interfere with the goals of another ongoing policy initiative. This will make for efficient change in RTO/ISO regulation markets.

II. COMMENTS

A. Background

EPSA welcomes this rulemaking proceeding and the opportunity to provide comments since EPSA members provide a significant amount of regulation service in each of the RTO/ISO markets. EPSA members are operating across all the RTO and non-RTO regions, and are owners, operators, and/or developers of every type of generation resource and associated technologies, including investments in pumped hydro storage, compressed air storage (CAES), carbon capture and storage (“CCS”) projects, and Variable Energy Resources (VERs). Therefore, EPSA supports allowing all resources to compete fairly to benefit electricity consumers within applicable environmental requirements. To that end, EPSA members have been active stakeholder participants in RTO/ISO and other industry initiatives to identify barriers and develop market solutions to assure successful integration of new technologies with existing technologies into the markets under just and reasonable terms.

B. The Proposed Two Part Payment

The Commission proposes a compensation structure for regulation services for organized markets in order to eliminate undue discrimination and ensure just and reasonable rates. The NOPR states that faster-ramping resources provide more Area Correction Error (ACE) correction than slower-ramping resources, but that slower ramping resources, “at least in some ISOs and RTOs, are explicitly given priority in the dispatch order.” Further, the NOPR

states that market efficiencies can be achieved with more efficient price signals for regulation resources.

The NOPR proposes to require ISOs and RTOs tariffs to provide two components of compensation to regulation resources. The first part would be a payment for capability held in reserve by an RTO to provide regulation service.⁴ The second component would compensate each regulation resource based on its regulation ramping service, the up and down movement of the resource in megawatts in response to system control signals.⁵

1. Including Opportunity Costs to Determine the Regulation Clearing Price

The NOPR proposes that resources would specify the capacity available to provide regulation, a ramp-rate and bid into the market a price-per-MWh ramping capability and price-per-MW ACE correction. From these bids each ISO and RTO would determine the least cost set of resources based on the bid of the marginal resource's as-bid marginal cost to provide regulation service, including any opportunity cost. From the NOPR:

Therefore, the Commission proposes to require that all resource bids include opportunity costs and that all cleared frequency regulation resources be paid the single market clearing price, which will reflect the total marginal costs of the marginal cleared unit. We believe that this proposal will result in just and reasonable rates and correct potential undue discrimination.⁶

⁴ While the effectiveness of regulation service includes evaluation of frequency excursions and frequency bias, regulation service is needed to satisfy NERC Reliability Standard BAL-005 and BAL-006 and NERC CPS-1 and CPS-2 to maintain Area Control Error within acceptable limits.

⁵ NOPR, (Page 3).

⁶ NOPR, (Page 21).

EPSA supports revising RTO/ISO tariffs to expand regulation resource payments to compensate for more than just a regulation capability payment and net energy balancing. Competitive suppliers' support the determination of the regulation clearing price at the marginal cost of regulation capability procured, including any regulation resource's opportunity costs and that all winning bids should be paid a single uniform clearing price. We agree that the most efficient selection and fairest regulation market design is one in which all resources compete on the same basis for the same price. Specifically, the regulation market should consider each resource's as bid cost plus any opportunity cost, such that the marginal as-bid plus opportunity cost of the resources selected should set a uniform clearing price paid to all. A uniform market clearing price calculation mechanism will ensure consideration of all appropriate marginal costs for all regulation market participants. In addition, such a pricing mechanism will result in price signals that will properly incent efficient future infrastructure investment.

Competitive suppliers generally support the ISO-NE approach but agree with the Commission's assessment that the ISO-NE approach can be improved by assuring uniform compensation by reflecting any opportunity costs in the regulation clearing price. The current approach separately includes opportunity cost in the ranking of resources and makes that opportunity cost a side payment to only that resource. This approach risks understating the regulation clearing price where a unit with an opportunity cost is the marginal resource. Therefore, reflecting opportunity costs in the regulation clearing price is a better approach.

2. Mileage and Achieving Reliability

As the Commission notes, the “ISO-NE includes a payment for the amount of frequency service provided,” and as a result rewards resources for providing more ACE correction by tracking actual up and down movement. The ISO-NE inclusion of the mileage measure that tracks up and down movement properly compensates each resource for the amount of ramping service provided and serves as a better incentive to provide good regulation service performance. As the NOPR notes:

Frequency regulation service can prevent these adverse consequences by rapidly correcting deviations in the transmission system’s frequency to bring it within the acceptable range.⁷

In the NOPR the Commission further notes how frequency regulation service helps RTO/ISOs achieve compliance with the Commission approved reliability standards. Importantly, the NOPR notes that adequate frequency is being achieved currently under NERC ACE control standards through reliability requirement CPS1 today by each of the RTO/ISO balancing authorities.

EPSA encourages the Commission to recognize that paying for *enhanced performance* should only be done if there is a material need for that performance. Because loads withdraw from the system at continuously different levels and at different locations on the system at any given time, there is a natural injection/withdrawal netting affect that occurs in larger systems, and particularly in RTO/ISOs. Historical data has shown that the current approach to frequency control has been extremely effective, and over-reliance on faster regulation resources over more sustainable regulation resources could very well lead to

⁷ NOPR, Page 4.

over-correction, which would be economically inefficient and may actually decrease reliability margins. Therefore, regulation service should not be changed in a way in which electricity customers incur system enhancement costs that far outweigh the practical improvements needed for maintaining adequate bounds on Area Control Error and system frequency. While EPISA supports RTO/ISOs employing a mileage component similar to that employed in the ISO-NE Regulation market, that measure should be used to meet the objectives of regulation service and not require incremental performance levels which do not yield incremental benefits.

C. System Operations ACE Control Needs

The Commission asserts support of faster-ramping resources' ability to help control ACE and that other resources are "working against" the system operator. From the NOPR:

Both resources are considered, from the perspective of ISO-NE's current tariff, to be 100 percent accurate, even though at times the slower-ramping resource is working against the system operator's ACE control needs.⁸

This statement appears to imply a regulation performance standard which exceeds existing RTO requirements. RTOs are not expected to maintain zero ACE nor maintain perfect frequency. It would neither be practical nor cost-efficient to do so. As a practical matter, RTO regulation requirements and ramping instructions are instead targeted at maintaining ACE within acceptable limits (by greater than zero) as measured over a ten minute average period,

⁸ NOPR, Page 4.

consistent with NERC CPS1 and CPS2. Energy Management Systems used by all generation and transmission asset owners, as well as system and market operators, operate Automatic Generation Control (AGC), signals on four-second cycles. Accordingly, any perceived benefits provided by faster reacting regulation providers cannot be realized outside of a four-second interval. As a result, it is not accurate to state that “the slower-ramping resource is working against the system operator’s ACE control needs” such that the system operator is attempting to compensate for a subset of system resources. Indeed, RTOs and ISOs design and adjust their regulation software to account for differences among regulation resource characteristics to deliver the most efficient regulation service. Requiring RTOs to either pay more for fast ramping service or penalize other speeds of ramping regulation service is unnecessary given the regulation market objective function of regulating average ten minute ACE. Much like a requirement for commuters to buy a Maserati where a Honda would be sufficient, doing either would risk increasing regulation market costs without incremental benefit. While fast-ramping resources provide more ramping mileage service per unit of regulation capability, the regulation response of less fast ramping resources are not “working against the system operator’s ACE control needs”. The ISO-NE Regulation market algorithm addresses regulation resource differences by allocating ACE correction on a basis proportionate to the regulation resources’ relative response rates. The four second updates to regulation resource set points account for differences in relative response rates to deliver efficient control of ten minute average ACE and all regulation resources

receive the same clearing price with the only distinction being the quantity of ramping mileage compensated.⁹

D. Regulation Service Changes Should be Made with a Balanced and Measured Approach

EPSA encourages the Commission to embrace a balanced approach with respect to any potential regulatory changes in this proceeding, considering impacts to and fully optimizing use of all generation resources and transmission infrastructure in organized wholesale electricity markets. The capital intensity of wholesale electric power infrastructure requires recognition and efficient use of all grid facilities, both mature and new technologies.

A measured approach to frequency regulation compensation is necessary due to the many different policy considerations currently before the Commission that impact one another. The Commission currently has proceedings and initiatives at different procedural stages and/or utilizing different procedural vehicles that are addressing significant, intertwined policy issues affecting regulation markets and frequency response, including, but not limited to: the Lawrence Berkeley National Laboratory Frequency Response Metrics Study; Staff Inquiry on Rates, Accounting and Financial Reporting for New Electric Storage Technologies; NERC efforts with BAL-003; the NERC Frequency Response Standards process; Bi-annual Assessments of Demand Response

⁹ The ISO-NE clearing price does not currently incorporate lost opportunity costs and some resources receive a side payment for lost opportunity costs; however, this distinction is based on whether or not the resource incurs opportunity costs and not based on any relative response rate differences.

and Advanced Metering (Staff Reports); and the VERs NOPR.¹⁰ EPSA believes regulatory changes to address these various policy goals or initiatives should occur in a coordinated manner to ensure consistent and rational outcomes, and further, the Commission should consider how any changes should extend to market-related services provided by existing generating technologies as well as new technologies within those proceedings.

The May 26, 2010 technical conference highlighted that the RTO/ISO markets are actively seeking to revise their regulation market tariffs to adhere to much of what is proposed in the NOPR. The final rule should not frustrate these efforts. Changes to RTO/ISO regulation markets should take a measured approach that respects the stakeholder based efforts currently underway.

¹⁰ Lawrence Berkeley National Laboratory, *Use of Frequency Response Metrics to Assess the Planning and Operating Requirements for Reliable Integration of Variable Renewable Generation*, (December 2010); *Request for Comments Regarding Rates, Accounting and Financial Reporting for New Electric Storage Technologies*, Docket No. AD10-13-000, (June 11, 2010); *Smart Grid Interoperability Standards*, Docket No. RM11-2-000 and *Smart Grid Policy Statement*, 128 FERC ¶ 61,060, Docket No. PL09-4-000 (issued July 16, 2009); *Mandatory Reliability Standards for the Bulk Power System*, Docket Nos. RM16-010, -011; *Assessment of Demand Response and Advanced Metering Staff Report* (Staff Reports issued August 2006, December 2008, September 2009, and February 2011); and, *Frequency Regulation Compensation in the Organized Wholesale Power Markets*, 134 FERC ¶ 61,124, Docket No. RM11-7-000 and AD10-11-000 (issued February 17, 2011).

III. CONCLUSION

Wherefore, EPSA supports the Commission proposal to have a two part payment construct for regulation markets including mileage and opportunity costs. These markets should use a clearing price based on the marginal cost of the marginal unit. Further, any tariff changes should respect the current reliability rules and utilize ongoing RTO/ISO processes so that the changes take a measured approach.

Respectfully Submitted,



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CERTIFICATE OF SERVICE

I hereby certify that I have served a copy of the comments via email upon
Each person designated on the official service list compiled by the Secretary in
this proceeding.

Dated at Washington, D.C. May 2, 2011.



Nancy Bagot, VP of Regulatory Affairs