UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Price Formation in Energy and Ancillary Services Markets Operated by Regional Transmission Organizations and Independent System Operators	**)** **)** **)** **)**	**Docket No. AD14-14-000**

COMMENTS OF THE ELECTRIC POWER SUPPLY ASSOCIATION ON REPORT OF THE SOUTHWEST POWER POOL, INC.

The Electric Power Supply Association ("EPSA")[1] respectfully submits the following comments on the Report[2] of Southwest Power Pool Inc. ("SPP") that responded to the Federal Energy Regulatory Commission ("FERC" or "Commission") Order Directing Reports issued in the above-captioned proceeding[3] on November 20, 2015 ("the Order") on five price formation issues: (1) pricing of fast-start resources, (2) commitments to manage multiple contingencies, (3) look-ahead modeling, (4) uplift allocation, and (5) transparency.

As EPSA has reiterated in numerous proceedings and forums over the past several years, reforming flawed ISO/RTO energy, ancillary services and

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1 EPSA is the national trade association representing leading competitive power suppliers, including generators and marketers. Competitive suppliers which collectively account for 40 percent of the installed generation capacity in the United States provide reliable and competitively priced electricity from environmentally responsible facilities. 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 *Southwest Power Pool, Inc. Report On Price Formation Issues,* Docket No. AD14-14-000 (filed March 4, 2016), ("SPP Report" or "Report").

3 *Price Formation in Energy and Ancillary Services Markets Operated by Regional Transmission Organizations and Independent System Operators* 153 FERC ¶ 61,221 (Order Directing Reports) (2015).

operating reserve price formation policies and practices in both day-ahead and real-time markets is critical to achieving price signals that reflect actual system conditions and support investment which maintains system reliability. In order to again highlight the urgency, priority and scope of energy price formation issues that require action and direction from FERC to every ISO-RTO on a specifically delineated, expedited basis, EPSA is filing separate concurrent comments in this proceeding in addition to responses to each ISO/RTO report joined by regional competitive supplier organizations as appropriate.[4]

Herein, EPSA provides comments on the SPP Report addressing the five issues included in the Order. Notably, SPP is a nascent market compared to other ISOs/RTOs. Yet, SPP should continue to develop and implement market design improvements and practices that improve energy price formation. Specifically, every ISO/RTO should undertake reforms to ensure certain core elements are present in fast-start pricing mechanisms. Additionally, uniform approaches to reporting and transparency can improve market operations on several fronts and in every region. These changes, along with improvements to modeling and contingency management, all help decrease the need for out of market actions by system operators, thereby decreasing uplift costs and concerns about uplift cost allocation. Such reforms are critical to the ISO market, and therefore the Commission should direct improvements as discussed below

[4] *Cf.*, Comments of the Electric Supply Association, Price Formation Proceeding, Docket No. AD14-14-000 (Filed April 6, 2016) (extensively discussing the views of the Electric Supply Association on the urgent need for market design and pricing reforms across all ISOs/RTOs).

on a clear timeline supported by a detailed work plan so that such initiatives are approved within 2016 and can be implemented expeditiously.

I. Background and Comments

In 2012 the Commission conditionally approved SPP's Integrated Marketplace filing that included day-ahead and real-time energy and operating reserve markets and Transmission Congestion Rights ("TCR") markets aimed at maximizing the cost-effective utilization of energy resources and the regional transmission system.[5] SPP's market design is now characterized as a "day-2 market," that began operation in March of 2014, thereby ostensibly replicating the general market operations of the other RTOs and ISOs in the nation that already operated under a Day-2 market design. From SPP's inception, EPSA strongly supported SPP's "efforts to implement a Day 2 market featuring independent unit commitment, transparent commodity pricing, consolidated Balancing Authority Areas, and a market for ancillary service products."[6]

While EPSA supported SPP's market development, there remained concern that SPP's limited day-ahead must-offer requirement could lead to artificially high real-time prices and contribute to price divergence between the day-ahead and real-time markets. EPSA members have remained diligent in the SPP stakeholder processes in an effort to ensure that the ongoing improvement of SPP's market design continues.

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5 *Integrated Marketplace of Southwest Power Pool, Inc.*, Docket No. ER12-1179-000 (Feb. 29, 2012) ("Integrated Marketplace Filing").

6 Comments of the Electric Power Supply Association, Integrated Marketplace of the Southwest Power Pool, Inc., Docket No. ER12-1179-000) (filed April 6, 2012), at 1.

EPSA supports SPP's efforts to model its Integrated Marketplace on market designs already successfully operating in other markets. As SPP has stated, "SPP maintains that to the extent possible, SPP and its stakeholders incorporated the major features used successfully in the four eastern RTOs – Midwest Independent Transmission System Operator, Inc. (MISO), PJM Interconnection, L.L.C. (PJM), New York Independent System Operator, Inc. (NYISO) and ISO New England (ISO-NE)."[7]

SPP is still early in its development as a market; notably the Day 2 market began operations the same year in which the Commission opened the instant proceeding to examine and improve price formation in ISO/RTO markets. Therefore, while SPP has continued to make progress, time is of the essence even in that region, and EPSA urges the Commission to ensure that SPP continues to improve its market design and operations to not only meet that of the other markets, but to ensure that price signals support and promote efficient investment decisions, reliability, and resource adequacy. Such market rules and reforms are critical to the ISO market, and therefore should be required and implemented expeditiously.

A. Pricing Fast Start Resources

EPSA supports dispatch-based pricing, where all resources needed to operate the system reliably are reflected in the market-clearing price. This minimizes uplift and provides efficient locational price signals. However, to the

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7 SPP Integrated Marketplace filing at 7.

extent the dispatch-based pricing algorithm does not reflect the costs of the marginal unit, and where the RTO/ISO relies on out-of-market dispatches to serve load, prices will be suppressed and investment and retirement signals will be distorted. The pricing algorithm in some of the RTO/ISOs, specifically in SPP, does not reflect the incremental costs of block-loaded units that are needed to serve load.

SPP's pricing methodology as described in the Report must offset the excess generation by backing down another more flexible unit. SPP is looking back and pricing the incremental megawatt at the cost of the unit that is being dispatched down. By including only the cost of the more flexible unit in the LMP, price suppression may occur. SPP should be including the cost of all units dispatched, including block-loaded units, to meet their expected load requirements. Importantly, even if the block-loaded unit provided enough megawatts to meet incremental load, SPP's pricing algorithm would still not incorporate the cost of that unit.

EPSA appreciates that SPP "believes that there are advantages to treating quick-start resources differently than traditional resources,"[8] but urges the Commission to direct SPP to continue to examine other successful ISO/RTO efforts on this issue, identify improvements that can be made, and require that SPP take steps to incorporate such improvements. For instance, all ISOs/RTOs should employ a dynamic approach to fast-start resource pricing based on convex hull pricing, which accommodates start-up and shut-down costs and no-

8 SPP Report at 7.

load costs, and respects the principle that offers from fast-start units committed to meet incremental load should be able to set prices at all times they are committed to meet demand -- not just during the short intervals upon their initial dispatch or when operators choose to log their commitment in a particular way.

As an example of a process which incorporates convex hull pricing logic to resolve these concerns, there are several components of MISO's Extended Locational Marginal Pricing ("ELMP") fast-start pricing logic that EPSA believes can be widely implemented across all ISO/RTO pricing mechanisms for fast-start resources, to the extent they have not already been considered.[9] MISO's ELMP approach sets up the appropriate guidelines for relaxing minimum operating limits – ELMP has the effect of relaxing minimum operating limits for eligible (*i.e.*, available and economic) block-loaded fast-start resources based on a fractional commitment algorithm that is dynamically determined based on market offers and system conditions. Other ISOs and RTOs including CAISO, ISO-NE, and NYISO are using varied partial commitment formulations which similarly appear to be appropriately relaxing minimum operating limits based on cost causation principles, rather than setting a default administrated EconMin while improvements even in MISO are needed, the ELMP approach appears to render favorable results, as to ensuring that (i) generators follow dispatch signals, (ii) the dispatch run fully acknowledges and respects the minimum operating limit offers

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[9] See, e.g., *Post-Technical Workshop Comments of the Electric Power Supply Association*, Attachment B, "Price Formation In ISOs and RTOs: Principles and Improvements," by Dr. Susan L. Pope, Managing Director, FTI Consulting, issued October 29, 2014, available at www.epsa.org. ("Pope Paper") (filed March 6, 2015, in the instant proceeding, Docket No. AD14-14-000), at 15-19.

submitted by block-loaded fast-start resources, (iii) that generators' minimum operating limits are satisfied in dispatch, and (iv) that the ELMP pricing algorithm does not affect MISO operations and its merit-order dispatch of resources because it only modifies the calculation of energy and ancillary service prices.

Along these lines, NYISO has also implemented a pricing mechanism that is to be commended for allowing online block-loaded units to be modeled as dispatchable to determine prices using actual generator costs to address constraints that only require a portion of a block-loaded unit's capability for resolution. NYISO's Hybrid GT Pricing mechanism is one of the approaches the ISO uses in the Real-Time Dispatch ("RTD") to set appropriate prices. This methodology, along with the NYISO's Offline GT pricing, allow RTD to develop prices using actual generator costs to address constraints that only require a portion of a block-loaded unit's capability to solve. The ISO notes, "When block-loaded GTs are committed, dispatching those units to their maximum output as their operational characteristics require, may displace more economic dispatchable units. The hybrid GT pricing logic allows online block-loaded units to be modeled as dispatchable to determine prices when their operation is needed to meet load, when the commitment displaces higher cost units, or to satisfy reserve requirements."[10]

To varying degrees, both the MISO and NYISO approaches are based on pricing logic that conforms to the principle of dispatch-based pricing advocated by EPSA, which works when all resources run by the system operator are

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[10] NYISO Report at 3.

reflected in the market-clearing price.[11] This minimizes uplift and provides efficient locational price signals. Under dispatch-based pricing the prices are suppressed whenever they are less than the offer costs of a fixed-block fast-start unit that is needed to serve load. While there may be some reasonable differences, SPP should be working on how it can incorporate out of market dispatches into their pricing algorithm to allow them to set market prices, including ensuring that start up and no load costs are included in the LMP.

B. Commitments to Manage Multiple Contingencies

EPSA appreciates SPP's efforts to manage for multiple contingencies and transmission constraints through its process of determining minimum and maximum limits. By modeling "multiple contingency constraints and modifying their market software to capture the impact these constraints may have on price,"[12] SPP is taking moves in the right direction. However, EPSA notes that how voltage limits are modeled does not receive much attention in the SPP response. As SPP's market develops, consideration of elements that more advanced markets have worked on such as reserves-like products to resolve constraints, triggers, and administrative prices and/or penalty factors, will improve SPP's management of multiple contingencies. The Commission should direct that SPP identify improvements to the market that will better incorporate out-of-market actions into the market clearing prices through new products, or other changes, within 2016 as development of such improvements should be undertaken in the near term.

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11 Pope Paper at 15-19.

12 SPP Report at 13.

C. Look-ahead Modeling

Akin to how SPP is handling its management of multiple contingencies is the ongoing effort regarding its Short-Term Intra Day Reliability Unit Commitment ("STRUC"), which is part of its look ahead modeling efforts. This initiative is designed to reduce make whole payments in the Reliability Unit Commitment ("RUC"), and is an initiative that EPSA supports. Based on the SPP Report, the ISO is willing to move in the right direction on modeling improvements, and EPSA urges SPP to strive to continually improve the quality of the input data for look ahead models, which thereby improve unit commitment processes and operational awareness. Additionally, look-ahead modeling in every ISO/RTO should accommodate the inclusion of critical pricing information, like residually committed generation, in the models used to schedule and price day-ahead unit commitments.

D. Uplift Allocation

Uplift allocation concerns are the byproduct of excess uplift, which is itself a symptom of the broader and more urgent market design and pricing problems FERC is addressing across energy and ancillary markets in this proceeding. The key in every market is that uplift is the signal; FERC should direct all system operators to look at uplift impacts and take actions that can reduce uplift by addressing its underlying causes. While SPP is a relatively nascent market at this time, it should equally strive to reduce uplift to de minimis levels. Thereby, the Commission should review future SPP proposals, such as Revision Request

106, to ensure such efforts are helpful to decreasing uplift. This in part can be supported by improving transparency around operator actions, in particular those which create uplift costs. EPSA encourage SPP efforts to increase data transparency with respect to providing information about uplift and operator actions, and support efforts on necessary market rule changes where necessary.

E. Transparency

Transparency around the frequency and source of out of market actions should provide necessary incentives for system operators to minimize actions that may result in significant uplift. To the extent that FERC requires regular reporting of the cause, duration, and amount of uplift from specific assets or units on a regular basis (e.g. monthly), this requirement should be implemented by each ISO and RTO, including SPP, on a comparable basis so that the reports can serve as an effective accountability tool to measure system operators' performance against each other. As such, EPSA believes the Commission should direct the ISOs/RTOs to use common benchmarks, metrics, and protocols for uplift reporting. EPSA's Price Formation Proceeding comments filed in this docket further discuss useful benchmarks and protocols, including the benefits of reporting mechanisms and practices used by the New York Independent System Operator.[13] Such practices should be considered in SPP's initial effort to address transparency enhancements, outlined in its Report.

[13] *Cf.*, *EPSA Price Formation Proceeding Comments* at 22.

II. Conclusion

Wherefore, EPSA respectfully requests that the Commission direct improvements as discussed in these comments on a clear timeline supported by a detailed work plan so that such initiatives are approved within 2016 and can be implemented expeditiously. In particular, the Commission must ensure that SPP continues its assessment and improvement of its Day 2 market design, operational for nearly two years.

EPSA also urges that the Commission continue to take additional steps to address market design and pricing concerns that are fundamental changes which must complement ISOs' and RTOs' individual efforts to improve fast-start resource pricing and dispatch policies, multiple commitment contingency management, look-ahead modeling, uplift allocation, and uplift reporting. For example, the Commission should ensure that removal or substantial revision to the default $1000/MWh offer cap occur in advance of winter 2016/2017 for all ISOs/RTOs, an effort which is currently pending before the Commission.

Respectfully Submitted,

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Nancy Bagot, Senior Vice President
Jack Cashin, Director of Regulatory Affairs
Electric Power Supply Association
1401 New York Avenue, NW, Suite 1230
Washington, DC 20005
(202) 628-8200
NancyB@epsa.org