147 FERC ¶ 61,001
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Cheryl A. LaFleur, Acting Chairman;
Philip D. Moeller, John R. Norris,
and Tony Clark.

Southwest Power Pool, Inc. Docket No. ER12-1179-016

ORDER CONDITIONALLY ACCEPTING COMPLIANCE FILING

(Issued April 1, 2014)

1. On January 22, 2014, Southwest Power Pool, Inc. (SPP) submitted revisions to its Open Access Transmission Tariff (Tariff) (January 2014 Filing) in compliance with a directive in the Commission's order on SPP's Integrated Marketplace proposal[1] and also as part of its overall Order No. 745[2] compliance efforts. In this order, we conditionally accept SPP's January 2014 Filing,[3] effective March 1, 2014, as requested, subject to an additional compliance filing.

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[1] As part of its Integrated Marketplace reforms, SPP implemented day-ahead and real-time energy markets and an operating reserve market on March 1, 2014. SPP submitted its initial Integrated Marketplace proposal on February 29, 2012 in Docket No. ER12-1179-000, which the Commission conditionally accepted in an order issued on October 18, 2012, subject to further compliance. *Southwest Power Pool, Inc.*, 141 FERC ¶ 61,048 (2012) (Integrated Marketplace Order), *order on reh'g*, 142 FERC ¶ 61,205, *order on compliance*, 144 FERC ¶ 61,224 (2013), *order on compliance*, 146 FERC ¶ 61,050 (2014).

[2] *Demand Response Compensation in Organized Wholesale Energy Markets*, Order No. 745, FERC Stats. & Regs. ¶ 31,322 (2011), *order on reh'g*, Order No. 745-A, 137 FERC ¶ 61,215 (2011), *reh'g denied*, Order No. 745-B, 138 FERC ¶ 61,148 (2012) (Order No. 745).

[3] *See* Appendix for eTariff designations.

I. Background

A. Order No. 745

2. On March 15, 2011, the Commission issued Order No. 745, which required each Regional Transmission Organization (RTO) and Independent System Operator (ISO) to pay demand response resources the market price for energy, i.e., the locational marginal price, when two conditions are met. First, the demand response resource must have the capability to balance supply and demand as an alternative to a generation resource. Second, it must be cost-effective (as determined by a net benefits test[4] in accordance with Order No. 745) for the RTO or ISO to dispatch the demand response resource. In order to implement the net benefits test, the Commission directed each RTO and ISO to develop a mechanism to approximate the price level at which dispatching demand response resources will be cost-effective (i.e., the cost-effectiveness threshold).[5]

3. Additionally, the Commission determined that it was just and reasonable to allocate the costs associated with demand response compensation proportionally to all entities that purchase from the relevant energy market in the area(s) where the demand response reduces the market prices for energy at the time the demand response resource is committed or dispatched. The Commission required each RTO and ISO to make a compliance filing that either (1) demonstrated that its current demand response cost allocation methodology appropriately allocated costs to those that benefit from the demand reduction, or (2) proposed revised tariff provisions that conformed to this requirement.[6]

4. Finally, Order No. 745 required RTOs and ISOs to make an assessment of their demand response measurement and verification protocols and propose any modifications to those protocols that may be necessary to ensure adequate baseline measurement and verification of demand response performance.[7]

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[4] As detailed in Order No. 745, a net benefits test ensures that the overall benefit of the reduced locational marginal price that results from dispatching demand response resources exceeds the costs of dispatching and paying the locational marginal price to those resources.

[5] Order No. 745, FERC Stats. & Regs. ¶ 31,322 at PP 79-80.

[6] *Id.* P 102.

[7] *Id.* P 94.

B. SPP's Order No. 745 Compliance Proceeding

5. On July 22, 2011, in Docket No. ER11-4105-000, SPP submitted its initial Order No. 745 compliance filing (July 2011 Compliance Filing), applicable to its real-time Energy Imbalance Service Market (EIS Market). The Commission rejected this filing in a January 12, 2012 order (January 2012 Order)[8] and required SPP to submit a proposal compliant with Order No. 745. SPP submitted its compliance filing to the January 2012 Order on May 2, 2012 (May 2012 Compliance Filing) in Docket No. ER11-4105-001. On December 13, 2012, the Commission requested additional information regarding the May 2012 Compliance Filing. On January 18, 2013, SPP submitted its response to the Commission's request for additional information (January 2013 Deficiency Response). On December 20, 2013, the Commission issued a letter order accepting the May 2012 Compliance Filing (December 2013 Letter Order).[9]

1. Net Benefits Test

6. In its July 2011 Compliance Filing, SPP maintained it did not need to propose a net benefits test because it paid the locational imbalance price[10] to demand response resources during all hours. In the January 2012 Order, the Commission limited its analysis to net benefits hours (i.e., at or above the cost-effectiveness threshold). Thus, the Commission did not rule on demand response compensation below the threshold.[11] However, the Commission ruled that SPP must still perform a net benefits test because the test serves multiple functions, including facilitating the implementation of Order No. 745's demand response cost allocation requirements. The Commission directed SPP to propose a demand response net benefits test or demonstrate that it satisfied the net benefits requirement based on the characteristics of its system and market.[12]

7. In its May 2012 Compliance Filing, SPP proposed a six-step net benefits test methodology and provided further information in its January 2013 Deficiency Response

[8] *Southwest Power Pool, Inc.,* 138 FERC ¶ 61,041 (2012).

[9] *Southwest Power Pool, Inc.,* Docket No. ER11-4105-001 (Dec. 20, 2013) (unpublished letter order).

[10] The locational imbalance price is equivalent to the locational marginal price in the EIS Market. The Integrated Marketplace employs locational marginal pricing to reflect market prices.

[11] January 2012 Order, 138 FERC ¶ 61,041 at P 19, n.22.

[12] *Id.* P 19.

for why this methodology was appropriate for its EIS Market. The Commission accepted this methodology for the EIS Market in the December 2013 Letter Order.

2. Cost Allocation

8. In its July 2011 Compliance Filing, SPP proposed using a "gross-up" methodology, wherein it calculated the total load at the settlement location where demand response occurred as if the demand response did not occur. It then billed market participants at the settlement location for the adjusted load value. In the January 2012 Order, the Commission found that SPP's gross-up methodology allocated to the host load-serving entity the entire cost of the revenue shortfall caused by demand response purchases and was thus not compliant with Order No. 745. The Commission required SPP to articulate a cost allocation proposal consistent with the requirements of Order No. 745.[13]

9. In its May 2012 Compliance Filing, SPP proposed a regional, system-wide cost allocation mechanism. SPP proposed including the cost of committing and dispatching demand response in cost-effective hours as uplift, to be included as part of the EIS Market revenue neutrality uplift charge. SPP explained that EIS Market participants would be allocated demand response costs through this charge, which SPP based on each market participant's net generation and reported load at each settlement location. SPP provided additional evidence in its January 2013 Deficiency Response for why a system-wide cost allocation approach was appropriate for the SPP region. The Commission accepted this cost allocation mechanism for the EIS Market in the December 2013 Letter Order.

3. Measurement and Verification

10. In its July 2011 Compliance Filing, SPP did not propose changes to the demand response measurement and verification methodologies proposed in its ongoing Order No. 719[14] compliance proceeding. In the January 2012 Order, the Commission required SPP to explain how its measurement and verification proposal in the ongoing Order No. 719 compliance proceeding, as amended and discussed in its December 5, 2011 Order No. 719 compliance filing, complied with Order No. 745's measurement and verification provisions.[15] SPP provided this explanation and proposed clarifying

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[13] *Id.* PP 29-30.

[14] *Wholesale Competition in Regions with Organized Electric Markets*, Order No. 719, FERC Stats. & Regs. ¶ 31,281 (2008), *order on reh'g*, Order No. 719-A, FERC Stats. & Regs. ¶ 31,292 (2009), *order denying reh'g*, Order No. 719-B, 129 FERC ¶ 61,252 (2009).

[15] January 2012 Order, 138 FERC ¶ 61,041 at P 22.

revisions to its Tariff in its May 2012 Compliance Filing. The Commission accepted SPP's explanation and Tariff revisions in the December 2013 Letter Order.

C. Integrated Marketplace Order

11. In the Integrated Marketplace Order, the Commission directed SPP to submit a filing to incorporate any Tariff revisions applicable to the Integrated Marketplace required by SPP's ongoing Order No. 745 compliance proceeding within 30 days of the final order accepting provisions for SPP's EIS Market.[16]

II. SPP's Filing

12. In the Integrated Marketplace, SPP proposes utilizing net benefits test and cost allocation methodologies similar to the ones accepted by the Commission for use in its EIS Market. In the instant filing, SPP requests a March 1, 2014 effective date for all proposed Tariff revisions, to coincide with the commencement date of the Integrated Marketplace.

A. Net Benefits Test

13. SPP proposes a new section 3.9 within Attachment AE of its Tariff that details the demand response net benefits test methodology it will use in the Integrated Marketplace. The first step of this methodology involves SPP retrieving historical EIS Market offers for peak hours of each day from the same calendar month of the prior calendar year. Next, SPP will adjust offers for changes in fuel prices, using published, benchmark indices for natural gas, oil, and coal in the SPP region. SPP will then combine offers to make an hourly supply curve for each daily peak hour in the period. Next, SPP will use a non-linear regression formula to smooth each supply curve individually.[17] SPP then will compute the price elasticity of each individual, smoothed supply curve at each MW point to find the threshold price where elasticity falls below one for the duration of the curve. Finally, SPP will determine the overall cost-effectiveness threshold price for the month, termed the Net Benefits Threshold,[18] by averaging the threshold prices determined for the

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[16] Integrated Marketplace Order, 141 FERC ¶ 61,048 at P 62. The final order accepting provisions for SPP's EIS Market was the December 2013 Letter Order.

[17] SPP stated that its proposed formula yielded the best fit for its EIS Market data in most circumstances. May 2012 Compliance Filing at 6.

[18] The Net Benefits Threshold is defined as the "price on a supply curve, representative of economic conditions expected for that month, at which the benefits of dispatching Demand Response Load exceed the costs of the load reductions to other loads." SPP Proposed Tariff, Attachment AE § 1.1, Definitions N.

individual supply curves. Under proposed section 3.9, SPP will update and post on its website the net benefits test results and analysis for a calendar month no later than the 15th day of the preceding month. Additionally, SPP proposes defining the term "Net Benefits Test" within section 1.1 of Attachment AE.[19]

14. SPP asserts that, out of necessity, it must use EIS Market data until March 2015 because Order No. 745 requires use of historical data from the prior year to conduct the test and establish the Net Benefits Threshold.[20] SPP explains that the use of EIS Market data during the first year of market operations continues to make certain aspects of its net benefits test methodology just and reasonable. For example, SPP asserts that analyzing peak load hours is appropriate because these hours present the set of offers that best represent true market supply when using EIS Market data. Similarly, SPP asserts that smoothing daily supply curves individually, rather than first averaging the fuel-adjusted curves then smoothing the average curve, best represents the full potential supply available when using EIS Market data.[21] SPP states that, after accumulating Integrated Marketplace data, it will make any necessary adjustments to its net benefits test methodology and file any changes with the Commission, to be effective in March of 2015.[22]

B. Cost Allocation

15. SPP proposes to continue allocating the costs of paying demand response resources on a region-wide basis, although it will no longer use revenue neutrality uplift as the cost allocation mechanism. SPP states that it has developed separate hourly charges, the Day-Ahead Demand Reduction Distribution Amount and the Real-Time Demand Reduction Distribution Amount, to accomplish region-wide cost allocation in the Integrated Marketplace.[23] SPP asserts that these charge types are just and reasonable because they regionally allocate costs on an hourly basis to load, based on each asset owner's net energy withdrawals at each settlement location. SPP contends that, in this

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[19] SPP states that its proposed definition is identical to the definition accepted by the Commission for its EIS Market, with the exception of the term "Controllable Load" replacing "Demand Response Load," consistent with terminology used in the Integrated Marketplace. January 2014 Filing at 8.

[20] *Id.* at 7 (citing Order No. 745, FERC Stats. & Regs. ¶ 31,322 at PP 79-80).

[21] *Id.* at n.39 (citing May 2012 Compliance Filing at 6, January 2013 Deficiency Response at 5-7).

[22] *Id.* at 7.

[23] *See* SPP Proposed Tariff, Attachment AE §§ 8.5.24, 8.5.25, 8.6.21, and 8.6.22.

manner, the costs of demand response are allocated to each entity that benefits from a lower locational marginal price in proportion to that entity's benefit (i.e., entities with larger withdrawals will benefit more from a reduced locational marginal price than will entities with smaller withdrawals), which SPP asserts is consistent with Order No. 745.[24]

16. SPP argues that it continues to be just and reasonable to allocate demand response costs regionally because, as demonstrated in its January 2013 Deficiency Response, the effect of dispatching a demand response resource on energy prices is regionally distributed within SPP. SPP points to evidence it presented in its January 2013 Deficiency Response showing that the congestion component in the locational imbalance price (in the EIS Market) was generally small in comparison to the SPP system marginal price. Thus, SPP reasons that the effect of demand response dispatch is largely regional within SPP because the effect of the system marginal price is regional whereas the congestion component is locational.[25] SPP also points to an EIS Market analysis presented in its January 2013 Deficiency Response in which it randomly selected 20 hours when the cost-effectiveness threshold was exceeded at a registered demand response resource and then analyzed the effect of dispatching that resource. SPP asserts that the results of this analysis demonstrated that the average change caused by dispatching the demand response resource on the locational imbalance price was roughly the same across zones in the SPP region.[26] Additionally, SPP notes that demand response participation in the SPP region has been and continues to be limited, which it attributes to lack of state authorization for participation in wholesale demand response programs.[27] SPP reiterates its commitment to monitor the impact of allocating the cost of demand response compensation regionally, further asserting that it will propose any necessary changes after commencement of the Integrated Marketplace.[28]

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[24] January 2014 Filing at 10 (citing Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 102).

[25] *Id.* at 8 (citing January 2013 Deficiency Response at 2-3).

[26] *Id.* at 9 (citing January 2013 Deficiency Response at 4-5).

[27] SPP states that, currently, there are 48 MW of load-reducing demand response resources registered for participation in the Integrated Marketplace. As noted in its January 2013 Deficiency Response, SPP states that the bulk of demand response resources in SPP facilitate their demand response through behind-the-meter generation. However, SPP states that these on-site generators typically participate directly in the market by offering their generation as a resource rather than as load reduction. SPP states that it expects this trend to continue in its Integrated Marketplace. *Id.* at 9-10, n.50 (citing January 2013 Deficiency Response at 12, n.29).

[28] *Id.* at 10-11.

III. Notice of Filing

17. Notice of SPP's January 22, 2014 filing was published in the *Federal Register*, 79 Fed. Reg. 5395 (2014), with interventions and protests due on or before February 12, 2014. No interventions or protests were filed.

IV. Discussion

A. Net Benefits Test

18. We conditionally accept SPP's net benefits test methodology effective March 1, 2014, subject to an additional compliance filing. Given the necessity of using historical data—in SPP's case, EIS Market data—to develop a cost-effectiveness threshold for demand response, we find that it is reasonable for SPP to continue using a net benefits test methodology similar to the one it used in its EIS Market at market start. However, once SPP has acquired Integrated Marketplace data that can be used in the determination of a cost-effectiveness threshold, this methodology, tailored to its EIS Market, will likely no longer be necessary or appropriate. For example, limiting analysis to peak hours will no longer yield the sole representation of available supply in a day-2 market with day-ahead and real-time must-offer requirements. As such, selecting only peak hours for use in the net benefits test would result in the exclusion of daily supply curves that could be important in the accurate determination of the cost-effectiveness threshold price. Additionally, smoothing supply curves individually, prior to averaging them together, may affect the outcome of the net benefits test, and such an approach has not been supported by SPP in a context in which there are more complete supply curves available for every hour of the day. For these reasons, we will require SPP to reevaluate its net benefits test methodology, using Integrated Marketplace data, and propose any necessary changes to make its methodology compliant with Order No. 745 in a compliance filing due nine months after commencement of the Integrated Marketplace, to be effective one year after market start.[29]

B. Cost Allocation

19. We conditionally accept SPP's demand response cost allocation proposal for its Integrated Marketplace, subject to an additional compliance filing. We find it reasonable at market start for SPP to continue with the system-wide allocation of costs associated with demand response compensation. The evidence presented in SPP's January 2013 Deficiency Response, based on EIS Market data, suggests that a system-wide approach

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[29] This compliance requirement is consistent with SPP's stated commitment that, after accumulating Integrated Marketplace data, it will make any necessary adjustments to its proposed net benefits test methodology and file changes with the Commission, to be effective in March of 2015. *See* January 2014 Filing at 7.

allocates costs proportionally to all entities that purchase from the relevant energy market in the area(s) where the demand response reduces the market prices for energy at the time the demand response resource is committed or dispatched, consistent with Order No. 745. With the commencement of the Integrated Marketplace, we expect that a similar demand response cost allocation strategy should help with the transition from the EIS Market to the Integrated Marketplace. However, we will require SPP to reevaluate the appropriateness of its system-wide demand response cost allocation mechanism, and whether it continues to be compliant with Order No. 745, in a compliance filing due nine months after commencement of the Integrated Marketplace, using data from the Integrated Marketplace in its analysis.[30]

C. Measurement and Verification

20. The demand response measurement and verification methodologies that the Commission accepted in SPP's Order No. 719 compliance proceeding—the Submitted[31] and Calculated[32] Methodologies—became effective at the start of the Integrated Marketplace. In that proceeding, the Commission stated that, after SPP had gained a year of experience using the methodologies, SPP must include, as part of its informational

[30] This compliance requirement is consistent with SPP's stated commitment to reevaluate its demand response cost allocation mechanism after commencement of the Integrated Marketplace. *See* January 2014 Filing at 11.

[31] In the Integrated Marketplace, the Submitted Methodology (or Submitted Resource production option) is described in section 4.1.2.1(1)(a) of Attachment AE in SPP's Tariff. Under the Submitted Methodology, the demand response resource output is sent directly to SPP by the market participant via telemetering for real-time operational purposes, and the meter agent submits either five minute or hourly actual output values to SPP for use in settlements.

[32] In the Integrated Marketplace, the Calculated Methodology (or Calculated Resource production option) is described in section 4.1.2.1(1)(b) of Attachment AE in SPP's Tariff. Under the Calculated Methodology, for each dispatch interval in each hour in which the demand response resource has been committed, the demand response resource output for real-time operational purposes is calculated by SPP as the greater of zero or the difference between: (1) the lesser of (a) the real-time consumption of the demand response load associated with the demand response resource in the dispatch interval immediately preceding initial deployment of the demand response resource or (b) the hourly baseline for the hour; and (2) the actual value of the associated demand response load received via telemetering.

report due 15 months after launch of the Integrated Marketplace,[33] a discussion of: (1) the extent to which market participants have utilized the Submitted Methodology; (2) the extent to which market participants have utilized the Calculated Methodology; (3) whether any market participants have found that the Calculated Methodology has not produced an accurate estimation of their demand reduction; (4) whether SPP and its stakeholders have considered developing a third, customized baseline calculation and measurement methodology in cases where the Calculated Methodology has produced inaccurate estimates; and (5) whether SPP has encountered any other problems implementing or applying the methodologies. The Commission stated that it was requiring these additional reporting requirements because they would provide useful information to SPP's stakeholders and the Commission regarding the implementation of SPP's demand response measurement and verification methodologies.[34]

21. We will require that SPP's 15-month Integrated Marketplace informational report also include an explanation of how the Submitted and Calculated Methodologies continue to ensure that appropriate baselines are set and that demand response continues to be adequately measured and verified as necessary to ensure demand response resource performance consistent with Order No. 745.

<u>The Commission orders</u>:

(A) SPP's January 2014 Filing is hereby conditionally accepted for filing, to be effective March 1, 2014, as discussed in the body of this order.

(B) SPP is hereby directed to submit a compliance filing nine months after the commencement date of the Integrated Marketplace, as discussed in the body of this order.

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[33] *See* Integrated Marketplace Order, 141 FERC ¶ 61,048 at P 50, n.58. The Commission noted that this report should utilize 12 months of market data following commencement of the Integrated Marketplace.

[34] *Southwest Power Pool, Inc.*, 144 FERC ¶ 61,032, at P 18 (2013).

(C) SPP is hereby directed to include in its 15-month informational report the explanation on the continued adequacy of baselines, as discussed in the body of this order.

By the Commission. Commissioners Clark and Moeller are concurring with a joint separate statement attached.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.

Appendix

Southwest Power Pool, Inc.
FERC FPA Electric Tariff
Open Access Transmission Tariff, Sixth Revised Volume No. 1

Attachment AE (MPL), Attachment AE Integrated Marketplace, 0.5.0

Att. AE (MPL) 1.1 N, Attachment AE (MPL) Section 1.1 N, 0.2.0

Att. AE (MPL) 3.9, Attachment AE (MPL) Section 3.9, 0.0.0

Att. AE (MPL) 8.5.24, Attachment AE (MPL) Section 8.5.24, 0.0.0

Att. AE (MPL) 8.5.25, Attachment AE (MPL) Section 8.5.25, 0.0.0

Att. AE (MPL) 8.6.21, Attachment AE (MPL) Section 8.6.21, 0.0.0

Att. AE (MPL) 8.6.22, Attachment AE (MPL) Section 8.6.22, 0.0.0

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Southwest Power Pool, Inc. Docket No. ER12-1179-016

(Issued March 31, 2013)

CLARK, Commissioner, and MOELLER, Commissioner, *concurring*:

While we agree with the decisions made in today's order, we write separately to highlight our disagreement with the underlying decision in Order No. 745 to require RTOs/ISOs to overcompensate demand response resources by paying them the full market price for energy.[1]

Tony Clark
Commissioner

Philip D. Moeller
Commissioner

[1] For further analysis, see *Midwest Independent Transmission System Operator, Inc.*, 143 FERC ¶ 61,145 (2013) (Clark, Comm'r, Dissenting in Part). *See also Demand Response Compensation in Organized Wholesale Energy Markets*, Order No. 745, FERC Stats. & Regs. ¶ 31,322 (2011) (Moeller, Comm'r, Dissenting).