

July 22, 2024

The Honorable Debbie-Anne A. Reese
Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Re: *Southwest Power Pool, Inc.*, Docket No. ER24-____-000
Submission of Revisions to Attachment AE to Modify Make Whole Payments
During Order No. 831 Conditions

Dear Acting Secretary Reese:

Pursuant to Section 205 of the Federal Power Act¹ (“FPA”) and Part 35 of the Regulations of the Federal Energy Regulatory Commission (“Commission” or “FERC”),² Southwest Power Pool, Inc. (“SPP”), as authorized by its independent Board of Directors, submits revisions to Attachment AE of SPP’s Open Access Transmission Tariff (“Tariff”)³ to allow make whole payments for incremental Energy costs for Offers that fall under Order No. 831,⁴ regardless of the Resource’s reason for commitment.

SPP respectfully requests that the Commission accept the proposed revisions, find the revisions just and reasonable, and set an effective date of October 16, 2024. SPP requests that the Commission issue an order in this docket as soon as practicable, but not later than September 20, 2024, which is approximately sixty (60) days after

¹ 16 U.S.C. § 824d.

² 18 C.F.R. § 35.13.

³ Southwest Power Pool, Inc., Open Access Transmission Tariff, Sixth Revised Volume No. 1. References in this filing to “Tariff” refer to the version of SPP’s Tariff currently in effect. “Proposed Tariff” refers to a version reflecting the revisions proposed in this filing. All capitalized terms not otherwise defined in this filing shall have the definitions assigned by the Tariff.

⁴ *Offer Caps in Markets Operated by Reg'l Transmission Organizations & Indep. Sys. Operators*, Order No. 831, 157 FERC ¶ 61,115 (2016) (“Order No. 831”), *order on rehearing and clarification*, Order No. 831-A, 161 FERC ¶ 61,156 (2017).

submission of this filing, so that SPP can prepare for implementation of the proposed revisions prior to the requested effective date.

I. BACKGROUND

A. SPP

SPP is a Commission-approved Regional Transmission Organization (“RTO”).⁵ It is an Arkansas non-profit corporation with its principal place of business in Little Rock, Arkansas. SPP currently has 114 members including 16 investor-owned utilities, 13 municipal systems, 22 generation and transmission cooperatives, 6 state agencies, 22 independent power producers, 11 power marketers, 13 independent transmission companies, 1 federal agency, 4 large retail customers, 2 alternative power entities, and 4 public interest entities. As an RTO, SPP: (1) administers open access Transmission Service over approximately 72,000 miles of transmission lines, covering portions of Arkansas, Iowa, Kansas, Louisiana, Minnesota, Missouri, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, and Wyoming, across the facilities of SPP’s Transmission Owners;⁶ and (2) administers the Integrated Marketplace, a centralized day-ahead and real-time Energy and Operating Reserve market with locational marginal pricing and market-based congestion management.⁷

B. Integrated Marketplace

On February 29, 2012, SPP submitted to the Commission proposed revisions to its Tariff to transition from its Real-Time Energy Imbalance Service Market to the SPP Integrated Marketplace, which includes (among other things): Day-Ahead and Real-Time Energy and Operating Reserve Markets, a Transmission Congestion Rights market, a consolidated SPP Balancing Authority Area, and a market power monitoring and mitigation plan based on conduct and impact thresholds.⁸ The Commission

⁵ See *Sw. Power Pool, Inc.*, 109 FERC ¶ 61,009 (2004), *order on reh’g*, 110 FERC ¶ 61,137 (2005).

⁶ See *Sw. Power Pool, Inc.*, 89 FERC ¶ 61,084 (1999); *Sw. Power Pool, Inc.*, 86 FERC 61,090 (1999); *Sw. Power Pool, Inc.*, 82 FERC ¶ 61,267, *order on reh’g*, 85 FERC ¶ 61,031 (1998).

⁷ *Sw. Power Pool, Inc.*, 146 FERC ¶ 61,130 (2014) (order approving the start-up and operation of the Integrated Marketplace effective March 1, 2014).

⁸ Submission of Tariff Revisions to Implement SPP Integrated Marketplace of Southwest Power Pool, Inc., Docket No. ER12-1179-000 (February 29, 2012) (“Integrated Marketplace Filing”).

accepted the Integrated Marketplace proposal and subsequent compliance and amendatory filings in a series of orders issued October 18, 2012,⁹ September 20, 2013,¹⁰ January 29, 2014,¹¹ and June 19, 2014.¹² SPP commenced operation of the Integrated Marketplace on March 1, 2014.

C. Stakeholder Approval

The proposed revisions were reviewed and approved through the SPP stakeholder process, including meetings of the: (1) Market Working Group (“MWG”) on November 14, 2023,¹³ and May 21, 2024;¹⁴ (2) Regional Tariff Working Group

⁹ *Sw. Power Pool, Inc.*, 141 FERC ¶ 61,048, at P 2 (2012) (the “October 2012 Order”), *order on reh’g and clarification*, 142 FERC ¶ 61,205 (2013), *appeal dismissed sub nom. Neb. Pub. Power Dist. v. FERC*, No. 13-1181, 2014 U.S. App. LEXIS 10064 (D.C. Cir. April 15, 2014).

¹⁰ *Sw. Power Pool, Inc.*, 144 FERC ¶ 61,224, at P 20 (2013).

¹¹ *Sw. Power Pool, Inc.*, 146 FERC ¶ 61,050 (2014).

¹² *Sw. Power Pool, Inc.*, 147 FERC ¶ 61,212 (2014).

¹³ See MWG Meeting Minutes, dated November 14-15, 2023, at Agenda Item 10 posted at: <https://www.spp.org/documents/70601/mwg%20minutes%2020231114-15.pdf>. The MWG develops and oversees policies and procedures related to the Integrated Marketplace protocols that define SPP’s wholesale markets, including energy and operating reserve, congestion management, congestion hedging, demand response and market power mitigation. The MWG proposes changes to the Tariff and other governing documents to implement suggested market changes.

¹⁴ See MWG Meeting Minutes, dated May 21-22, 2024, at Agenda Item 13 posted at: <https://www.spp.org/documents/71695/mwg%20minutes%2020240521-22.pdf>.

(“RTWG”) on November 16, 2023,¹⁵ and June 27, 2024;¹⁶ and (3) Markets and Operations Policy Committee (“MOPC”) on January 16-17, 2024,¹⁷ and July 16-17, 2024.¹⁸ While SPP recognizes that stakeholder approval does not by itself cause a filing to be just and reasonable, SPP requests that the Commission extend appropriate deference to the wishes of SPP’s stakeholders, consistent with Commission precedent.¹⁹

¹⁵ See RTWG Minutes, dated November 16, 2023, at Agenda Item 15A posted at: <https://www.spp.org/documents/70603/rtwg%20minutes%2020231116.pdf>.

The RTWG develops, implements and oversees SPP’s Tariff. The RTWG provides input on regulatory or implementation issues not specifically covered by the tariff and issues where there may be conflicting or differing interpretations of the tariff.

¹⁶ See RTWG Minutes, dated June 27, 2024, at Agenda Item 14A posted at: <https://www.spp.org/documents/71975/rtwg%20minutes%20%2020240627.pdf>.

¹⁷ See MOPC Minutes, dated January 16-17, 2024, at Agenda Item 2.b.v posted at: <https://www.spp.org/documents/70957/2024-01-16%20mopc%20minutes.pdf>. The MOPC consists of a representative officer or employee from each SPP Member and reports to the SPP Board of Directors. Its responsibilities include recommending modifications to the Tariff. See Southwest Power Pool, Inc., Bylaws, First Revised Volume No. 4 (“Bylaws”) at Section 6.1.

¹⁸ See MOPC Minutes, dated July 16-17, 2024, at Agenda Item 2.b.i posted at: https://spp.org/documents/72016/mopc%20meeting%20minutes_20240716_combined%20file.pdf.

¹⁹ The Commission has previously recognized that provisions approved through RTO stakeholder processes are due deference. See *Sw. Power Pool, Inc.*, 127 FERC ¶ 61,283, at P 33 (2009) (noting that the Commission “accord[s] an appropriate degree of deference to RTO stakeholder processes”); *New Eng. Power Pool*, 105 FERC ¶ 61,300, at P 34 (2003) (Commission approval of transmission cost allocation proposal based upon an extensive and thorough stakeholder process); *Policy Statement Regarding Regional Transmission Groups*, 1991-1996 FERC Stats. & Regs., Regs. Preambles ¶ 30,976, at 30,872 (1993) (the Commission will afford the appropriate degree of deference to the stakeholder approval process). The Commission’s deference to RTO stakeholder processes has been upheld by the courts. See *Pub. Serv. Comm’n of Wis. v. FERC*, 545 F.3d 1058, 1062-63 (D.C. Cir. 2008) (noting that the Commission often gives weight to RTO proposals that reflect the position of the majority of the RTO’s stakeholders) (quoting *Am. Elec. Power Serv. Corp.*

II. PURPOSE AND JUSTIFICATION FOR PROPOSED TARIFF REVISIONS

During conditions in which Order No. 831 is in effect, the Locational Marginal Price (“LMP”) paid to a Resource might be less than the Resource’s verified incremental Energy costs. In certain instances, this same Resource is not eligible to receive uplift payments. More specifically, under the existing tariff language, such circumstances arise under the following conditions:

1. A Resource self-commits in the Day-Ahead Market. Subsequently, SPP clears the Resource in the Day-Ahead Market at an amount greater than the Resource’s self-commitment; or
2. A Resource either self-commits or is committed by SPP in the Day-Ahead Market, and the Resource is later dispatched in the Real-Time Balancing Market (“RTBM”) for more than its Day-Ahead Market commitment; or
3. A Resource self-commits in the Reliability Unit Commitment (“RUC”) process. The Resource is later committed in the RTBM for more than its RUC self-commitment.

In each of the above circumstances, the Resource’s Offer is either (1) above \$1,000/MWh and is not verified by the Market Monitor prior to market clearing; or (2) is above the \$2,000/MWh cap. Moreover, in each circumstance, there is the potential that a Resource’s verified, actual costs will exceed the applicable LMP.

As set forth in further detail below, SPP proposes revisions to its Tariff which will allow these Resources to be made whole when they may not otherwise be able to fully recover their verified actual costs. As the Tariff currently stands, Resources are not eligible for make whole payments when they self-commit,²⁰ and generally Resources are not eligible for make whole payments for Energy in excess of their Day-

v. Midwest Indep. Transmission Sys. Operator, Inc., 122 FERC ¶ 61, 083, at P 172 (2008)).

²⁰ See, e.g., Tariff, Attachment AE, Section 8.5.9 (“Day-Ahead Make Whole Payment Amount”) (applies to Resources “committed by the Transmission Provider”). That said, SPP recently revised its Tariff so that Resources committed by the Multi-Day Reliability Assessment, while in self-commit status, become eligible for make whole payments. Submission of Tariff Revisions to Attachment AE Concerning Multi-Day Reliability Assessment Design of Southwest Power Pool, Inc., Docket No. ER23-2927-000 (September 25, 2023).

Ahead Market commitments.²¹ This outcome, however, is inconsistent with Order No. 831, which aimed, in part, to “ensure that resources have an incentive to offer into RTO/ISO energy markets, and to ensure that resources are compensated for the service they provide.”²² Therefore, SPP proposes the revisions at hand. These proposed revisions do not apply unless Order No. 831 is in effect, *i.e.*, when a Resource’s incremental Energy Offer is higher than \$1,000.00. This is because price separation which occurs during Order No. 831 conditions is significant enough that, if Market Participants cannot be made whole under such conditions, they are less likely to offer their Resources into the market, a scenario which could defeat the purpose of Order No. 831.

A. Definition of “Desired Dispatch”

SPP proposes to add the definition of “Desired Dispatch” to the Tariff, as follows:

Desired Dispatch: A MW value calculated from a Resource’s RTBM Energy Offer Curve between the minimum operating limit and the maximum operating limit that first exceeds the DLMP²³ at the Resource. A Dispatchable Variable Energy Resource’s Desired Dispatch will be no greater than the Resource’s Real-Time Capability, if available, or the lesser of the maximum operating limit and the Transmission Provider output forecasted for that Resource.²⁴

Stated differently, a Market Participant’s Desired Dispatch is the Market Participant’s “economic operating point,” meaning the point where the Market Participant wants to be dispatched based on its Energy Offer Curve and the applicable LMP. Generally, Desired Dispatch only comes into play when SPP dispatches Resources based on reliability, rather than economics. The term “Desired Dispatch” is

²¹ See generally, Tariff, Attachment AE, Section 8 (“Post Operating Day and Settlement Activities.”).

²² Order No. 831 at P 146.

²³ “Dispatch Locational Marginal Price.” See Tariff, Attachment AE, Section 1.1 D.

²⁴ Proposed Tariff, Attachment AE, Section 1.1 D.

defined in SPP’s Integrated Marketplace Protocols.²⁵ SPP proposes to define “Desired Dispatch” in its Tariff because certain proposed revisions, set forth below, utilize the term.

B. Attachment AE, Section 8.5.31 (“Day-Ahead Self-Incremental Energy Make Whole Payment Amount”)

Section 8.5.31 of Attachment AE, entitled, “Day-Ahead Self-Incremental Energy Make Whole Payment Amount,” aims to make whole Market Participants who self-commit in the Day-Ahead Market.²⁶ More specifically, the proposed new section states:

...a Resource’s Day-Ahead incremental eligible costs are greater than the eligible Day-Ahead incremental revenues received during those hours when the Resource cleared in Day-Ahead Market above the Resource’s minimum operating limit. The make whole payment is equal to the difference between those incremental costs and revenues.²⁷

In other words, this proposed make whole payment amount applies under the following circumstances: (1) A Resource self-commits in the Day-Ahead Market at its minimum operating limit; (2) the Resource clears in the Day-Ahead Market above its minimum operating limit; (3) the SPP Marketing Monitoring Unit (“MMU”) does not verify an Offer greater than \$1,000/MWh prior to market clearing, or the Offer exceeds \$2,000/MWh; and (4) the Resource’s incremental eligible costs are greater than the eligible incremental revenues.

This outcome is contrary to the underlying intentions of Order No. 831, which aimed to remedy situations in which resources cannot recoup their short-run marginal costs, and to remove the potential for situations in which resources with short-run

²⁵ Southwest Power Pool, Inc., SPP Integrated Marketplace Market Protocols, at Section 1, *available at*: <https://www.spp.org/spp-documents-filings/?id=18162> (“Protocols”).

²⁶ As a result of this proposed new section, Section 8.5.10, entitled, “Day-Ahead Make Whole Distribution Amount” is slightly revised to add references to the new Section 8.5.31 to make clear that Day-Ahead Market system-wide and local charges will be calculated to fund payments under the existing Day-Ahead Make Whole Amount Section (Attachment AE, Section 8.5.9), as well as the new Section 8.5.31.

²⁷ Proposed Tariff, Attachment AE, Section 8.5.31(1).

marginal costs are discouraged from offering supply into the market, even when the market is willing to purchase that supply.²⁸ Additionally, providing a mechanism for Resources to recover their incremental dispatch costs is consistent with SPP’s initial purpose in incorporating make whole payments into its market, which was “to keep Resource owners indifferent to the commitment decisions of the Integrated Marketplace by ensuring they are compensated” for the periods that they are committed, to the extent market revenues are insufficient.²⁹

The proposed Day-Ahead self-incremental Energy cost is calculated by multiplying the Resource’s cleared Energy by the cost of such Energy,³⁰ determined by the Resource’s applicable Day-Ahead Energy Offer Curve, as verified by the Market Monitor.³¹ This is akin to how the Tariff currently calculates Day-Ahead Make Whole Payments in Section 8.5.9 of Attachment AE, except that here verification by the Market Monitor is required, because this new make whole payment amount applies only in the context of Order No. 831, which requires the Market Monitor to verify that an Offer is cost-based.³²

A Market Participant’s make whole payment revenue is equal to the sum of the Energy revenue associated with the Resource’s cleared Energy for all eligible hours.³³ The Resource’s cleared Energy is calculated by multiplying the Resource Energy above the minimum operating limit by the Day-Ahead LMP at that Resource Settlement Location.³⁴ These provisions are identical to those which already apply to an Asset Owner’s Day-Ahead Make Whole Payment Revenue Amount in Section 8.5.9(3)(b) of Attachment AE.³⁵

²⁸ Order No. 831.

²⁹ Integrated Marketplace Filing at 26.

³⁰ Including Market Storage Resources (“MSR”) providing a market service. *See* Proposed Tariff, Attachment AE, Section 8.5.31(3).

³¹ Proposed Tariff, Attachment AE, Section 8.5.31(3).

³² Order No. 831.

³³ Proposed Tariff, Attachment AE, Section 8.5.31(4).

³⁴ Proposed Tariff, Attachment AE, Section 8.5.31(4).

³⁵ Tariff, Attachment AE, Section 8.5.9(3)(b)

Revenue associated with a Resource's Day-Ahead Market cleared Energy³⁶ will be calculated by multiplying the Resource Energy above the minimum operating limit by the Day-Ahead LMP at that Resource's Settlement Location.³⁷ This proposed language is the same language which already exists for Day-Ahead Make Whole Payment Revenue Amount in the Protocols.³⁸

C. Attachment AE, Section 8.6.35 (“Real-Time Incremental Energy Make Whole Payment Amount”)

1. Generally

SPP proposes to add a new Section 8.6.35, entitled, “Real-Time Incremental Energy Make Whole Payment Amount,” which will compensate Market Participants, in the form of make whole payments, when:

a Resource's Real-Time incremental Energy costs are greater than the eligible Real-Time incremental revenues received during dispatch intervals when the Resource is dispatched in Real-Time above the Resource's Day-Ahead cleared Energy MW.³⁹

In other words, this proposed make whole payment amount applies under the following circumstances: (1) A Resource is committed in the Day-Ahead Market by SPP or a Resource self-commits; (2) the Resource produces more in the RTBM than its Day-Ahead Market commitment; (3) the MMU does not verify an Offer greater than \$1,000/MWh prior to market clearing, or the Offer exceeds \$2,000/MWh; and (4) the Resource's incremental eligible costs are greater than the eligible incremental revenues.

The same reasoning behind this make whole payment applies as above, including, for example, the purpose of ensuring that resources have the incentive to participate in the wholesale electricity market when their short-run marginal costs exceed certain thresholds.

³⁶ Including MSRs providing a market service. *See* Proposed Tariff, Attachment AE, Section 8.5.31(4).

³⁷ Proposed Tariff, Attachment AE, Section 8.5.31(4).

³⁸ Protocols, Section 4.5.8.12 (“Day-Ahead Make Whole Payment Amount).

³⁹ Proposed Tariff, Attachment AE, Section 8.6.35(1).

2. Costs and Revenues

The make whole payment amount is equal to the difference between the incremental costs and revenues, and the payment amount will be funded in the same manner as Reliability Unit Commitment Make Whole Payment Distribution Amounts under Section 8.6.7 of Attachment AE.⁴⁰

Here, the make whole payment cost is calculated by multiplying the actual Resource Energy (as communicated by the Transmission Provider in the RTBM results) by the cost of such Energy, as calculated from the Resource's Real-Time Energy Offer Curve (as verified by the Market Monitor).⁴¹

The make whole payment revenue amount, which uses the Real-Time dispatch MWs that exceed Day-Ahead cleared MWs, is calculated by multiplying Resource Energy above Day-Ahead cleared MWs by Real-Time LMP at the Resource Settlement Location.⁴²

3. Cost Disallowances

The proposed new section contains a "Cost Disallowances" subsection, which is identical to language already present in the "Reliability Unit Commitment Make Whole Payment Amount" section of the existing Tariff,⁴⁵ in that, in certain instances, make whole payment provisions do not apply, *i.e.*, costs are "disallowed." Under the proposed revisions, cost disallowances are calculated using the costs associated with Resource's Real-Time Dispatch Interval Energy Offer Curve.

If a Resource is injecting into the grid, and if the Resource's Desired Dispatch is less than or equal to the Resource's actual injection, then there is no incurred cost disallowance. If the Resource's Desired Dispatch is greater than the Resource's actual injection, then the cost disallowance is equal to the cost associated with the Real-Time Dispatch Interval Energy Offer Curve between the following MW values: (i) the lesser of 0 MW, Desired Dispatch, and the Day-Ahead cleared quantity; and (ii) the Resource's actual injection.

If a Resource is withdrawing from the grid, and if the Resource's Desired Dispatch is greater than or equal to the Resource's actual withdrawal, then there is no incurred cost disallowance. If the Resource's Desired Dispatch is less than the

⁴⁰ *Id.*

⁴¹ Proposed Tariff, Attachment AE, Section 8.6.35(3),

⁴² Proposed Tariff, Attachment AE, Section 8.6.35(4).

Resource's actual withdrawal, then the cost disallowance is equal to the cost associated with the Real-Time Dispatch Interval Energy Offer Curve between the following MW values: (i) the greater of 0 MW, Desired Dispatch, and the Day-Ahead cleared quantity; and (ii) the Resource's actual withdrawal.

This section describes four instances where a Market Participant's Real-Time Incremental Energy Make Whole Payment Amount will be disallowed or reduced:

- (1) A Resource deviates a certain amount outside of its Operating Tolerance, also known as "Uninstructed Resource Deviation," or "URD." In such instances, any cost outside of the Resource's Desired Dispatch is not eligible for recovery for that Dispatch Interval where such cost is calculated.⁴³
- (2) A Resource becomes non-dispatchable. In this case, any cost associated with the Energy injection or withdrawal above the Resource's Desired Dispatch is not eligible for recovery for that Dispatch Interval where such cost is calculated.⁴⁴
- (3) A Resource increases its operating limit above the limit used to make the commitment decision. In this case, any cost associated with Energy injection or withdrawal above the Resource's Desired Dispatch is not eligible for recovery for that Dispatch Interval where such cost is calculated.⁴⁵
- (4) A Resource modifies its originally submitted limits subsequent to commitment.⁴⁶ Any cost associated with Energy output above the Resource's Desired Dispatch is not eligible for recovery for the Dispatch Interval for which such cost is calculated.⁴⁷

Again, cost disallowances are not new to make whole payments—Attachment AE already accounts for similar cost disallowances in the context of the RUC Make Whole Payment Amount.⁴⁸ Moreover, these cost disallowances are just and reasonable because they prevent a Resource from being made whole for costs which do not reflect

⁴³ Proposed Tariff, Attachment AE, Section 8.6.35(3)(a)(i).

⁴⁴ Proposed Tariff, Attachment AE, Section 8.6.35(3)(a)(ii).

⁴⁵ Proposed Tariff, Attachment AE, Section 8.6.35(3)(a)(iii).

⁴⁶ Proposed Tariff, Attachment AE, Section 8.6.35(3)(a)(iv).

⁴⁷ Proposed Tariff, Attachment AE, Section 8.6.35(3)(a)(iv). This provision is specifically meant for MSRs. For example, an MSR could switch its limits to signify injection instead of withdrawal.

⁴⁸ Tariff, Attachment AE, Section 8.6.5 ("RUC Make Whole Payment Amount").

its actual output, and for actions which potentially cause the market to incur additional costs.

D. Attachment AE, Section 8.6.36 (“Reliability Unit Commitment Self-Incremental Make Whole Payment”)⁴⁹

1. Generally

SPP proposes to add a new Section 8.6.36, entitled, “Reliability Unit Commitment Self-Incremental Energy Make Whole Payment Amount,” which will compensate Market Participants, in the form of make whole payments, when:

a Resource’s RUC incremental eligible costs are greater than the eligible RUC incremental revenues received during those dispatch intervals where the Resource’s actual output is above the Resource’s RUC as committed minimum operating limit.⁵⁰

In summary, this make whole payment amount (which is equal to the difference between the Resource’s incremental costs and the RUC incremental revenues)⁵¹ is meant for Resources whose actual output in the RTBM is above their self-committed minimum operating limits in the RUC.⁵² Moreover, such payments apply only when (1) the Market Monitor has not verified a Resource’s Offer prior to the RTBM clearing if the Resource’s Offer exceeds \$1,000/MWh; or (2) the Resource Offer exceeds \$2,000/MWh.⁵³

⁴⁹ As a result of proposed Sections 8.6.35 and 8.6.36, Section 8.6.7, entitled, “Reliability Unit Commitment Make Whole Payment Distribution Amount” is slightly revised to add references to the new Sections 8.5.35 and 8.5.36 to make clear that RTBM system-wide and local charges will be calculated to fund payments under the existing Day-Ahead Make Whole Amount Section (Attachment AE, Section 8.5.9), as well as the new Sections 8.5.35 and 8.5.36.

⁵⁰ Proposed Tariff, Attachment AE, Section 8.6.36(1)-(2).

⁵¹ *Id.*

⁵² *Id.*

⁵³ Proposed Tariff, Attachment AE, Section 8.6.36(2).

2. Costs and Revenues

The make whole payment cost is the Energy cost associated with the Resource's cleared Energy in the RTBM is calculated by multiplying the Resource's actual Energy by the cost of such Energy.⁵⁴ The cost of such Energy is determined by looking to the Resource's Energy Offer Curve in the RTBM (as verified by the Market Monitor).⁵⁵

The revenue associated with the Resource's RTBM cleared Energy is calculated by multiplying the Energy above the Resource's minimum operating limit by the Real-Time LMP at that Resource Settlement Location.⁵⁶ This is very similar to the way that the Tariff currently calculates the revenue amount for other make whole payments, such as the Day-Ahead Make Whole Payment Revenue Amount.⁵⁷ The reason for using the Resource minimum operating limit is because the RUC self-incremental Energy make whole payment applies only to the Resource's actual output above its RUC-committed minimum operating limit.⁵⁸

3. Cost Disallowances

The proposed new section contains a "Cost Disallowances" subsection, which is identical to language already present in the "Reliability Unit Commitment Make Whole Payment Amount" section of the existing Tariff,⁵⁹ except SPP uses the defined term "Desired Dispatch" instead of "economic operating point" when referring to the point where a Market Participant wants to be dispatched based on its Energy Offer Curve and the applicable LMP.⁶⁰ This section contains the same four (4) instances for costs disallowances as those for Real-Time Incremental Energy Make Whole Payment Amount. The same reasoning for these cost allowances applies here: Resources should not be made whole for under- or over-performance.

⁵⁴ Proposed Tariff, Attachment AE, Section 8.6.36(3).

⁵⁵ *Id.*

⁵⁶ *Id.*

⁵⁷ Tariff, Attachment AE, Section 8.5.9(3)(b).

⁵⁸ Proposed Tariff, Attachment AE, Section 8.6.36(1).

⁵⁹ Tariff, Attachment AE, Section 8.6.5.

⁶⁰ Tariff, Attachment AE, Section 8.6.5(3)(a)(ii)(c); Protocols, Section 4.5.9.8 ("RUC Make Whole Payment Amount").

For the reasons set forth above, SPP’s proposed revisions to its Tariff are just and reasonable, and not unduly discriminatory or preferential, and SPP requests that the Commission accept the proposed revisions. As the Commission noted in Order No. 831, “such uplift payments are necessary given the challenges associated with the verification processes, to ensure that resources have an incentive to offer into RTO/ISO energy markets, and to ensure that resources are compensated for the service they provide.”⁶¹

III. DESCRIPTION OF TARIFF REVISIONS

A. New Definition

SPP proposes to add the following new definition to Attachment AE of the Tariff:

Desired Dispatch: A MW value calculated from a Resource’s RTBM Energy Offer Curve between the minimum operating limit and the maximum operating limit that first exceeds the DLMP at the Resource. A Dispatchable Variable Energy Resource’s Desired Dispatch will be no greater than the Resource’s Real-Time Capability, if available, or the lesser of the maximum operating limit and the Transmission Provider output forecasted for that Resource.⁶²

B. Attachment AE, Section 8.5.31

SPP proposes to add new Section 8.5.31 titled “Day-Ahead Self-Incremental Energy Make Whole Payment Amount,” which applies to Resource which self-commit in the Day-Ahead Market, as follows:

- (1) The Day-Ahead self-incremental Energy make whole payment amount is a payment to a Market Participant when a Resource’s Day-Ahead incremental eligible costs are greater than the eligible Day-Ahead incremental revenues received during those hours when the Resource cleared in Day-Ahead Market above the Resource’s minimum operating limit. The make whole payment is equal to the difference between those incremental costs and revenues.
- (2) Eligible costs and revenues for a Day-Ahead self-incremental Energy make whole payment are for Resources which cleared above their Day-Ahead minimum operating limit and when Market Monitoring has not verified the

⁶¹ Order No. 831 at P 146.

⁶² Proposed Tariff, Attachment AE, Section 1.1 D.

Resource Offers associated with Section 3.2(K) of Attachment AF of this Tariff prior to the approval of the Day-Ahead Market or the Resource Offer exceeds \$2,000.

- (3) The Day-Ahead self-incremental Energy make whole payment cost is the Energy cost associated with cleared Resource Energy, including MSRs providing a market service, from the Resource Energy Offer as described under Section 5.1.3 of this Attachment AE. This cost is calculated by multiplying the cleared Resource Energy by the cost of such Energy, determined from the Resource's applicable Energy Offer Curve.

The applicable Energy Offer Curve used to determine a Day-Ahead self-incremental market make whole payment amount for Energy above the Minimum Economic Capacity Operating Limit is the Day-Ahead Market Energy Offer Curve as verified by the Market Monitor.

- (4) Day-Ahead self-incremental Energy make whole payment revenue is calculated as follows:

A Market Participant's Day-Ahead Market self-committed incremental Energy make whole payment revenue amount for each eligible Resource that is committed by the Transmission Provider as specified in Section 4.1(10)(a) of this Attachment AE is equal to the sum of the Energy revenue associated with cleared Resource Energy for all eligible hours.

Energy revenue associated with cleared Resource Energy, including MSRs providing a market service, from Resource Energy Offers as described under Section 5.1.3 of this Attachment AE, is calculated by multiplying Resource Energy above the minimum operating limit by the Day-Ahead LMP at that Resource Settlement Location.⁶³

C. Attachment AE, Section 8.6.35

SPP proposes to add new Section 8.6.35 titled "Real-Time Incremental Energy Make Whole Payment Amount" as follows:

- (1) The Real-Time incremental Energy make whole payment amount is a payment to a Market Participant when a Resource's Real-Time incremental Energy costs are greater than the eligible Real-Time incremental revenues received during dispatch intervals when the Resource is dispatched in Real-Time above the Resource's Day-Ahead cleared Energy MW. The make whole payment is

⁶³ Proposed Tariff, Attachment AE, Section 8.5.31.

equal to the difference between the incremental costs and revenues. Recovery of such compensation will be collected in accordance with Section 8.6.7 of this Attachment AE.

- (2) Eligible costs and revenues for a Real-Time incremental Energy make whole payment are for Resources dispatched in Real-Time above a Resource's Day-Ahead cleared Energy MW and when the Market Monitor has not verified the Resource Offers associated with Section 3.2(K) of Attachment AF of this Tariff prior to the approval of RTBM or the Resource Offer exceeds \$2,000.
- (3) The Real-Time incremental Energy make whole payment cost is the Energy cost associated with actual Resource Energy, including MSRs providing a market service, from the Resource Energy Offer as described under Section 6.2.3 of this Attachment AE. This cost is calculated by multiplying actual Resource Energy by the cost of such Energy as calculated from the Resource's applicable Energy Offer Curve.

The applicable Energy Offer Curve used to determine a Real-Time incremental make whole payment amount for Energy above Day-Ahead cleared MW is the Real-Time Energy Offer Curve as verified by the Market Monitor.

(a) Cost Disallowances:

A Market Participant's Uninstructed Resource Deviation Cost Disallowance, Non-Dispatchable Cost Disallowance, or Minimum Limit Cost Disallowance is calculated as the cost associated with the Resource's current Real-Time Dispatch Interval Energy Offer Curve between the following limits: 1) for Resources that are injecting; if the Desired Dispatch is less than or equal to the Resource's actual injection, this limit will equal the Resource's actual injection. Otherwise the limit will equal the least of zero MW, Desired Dispatch, and the Day-Ahead cleared quantity, for Resource's that are withdrawing, if the Desired Dispatch is greater than or equal to the Resource's actual withdrawal, this limit will equal the Resource's actual withdrawal otherwise it will equal the greatest of zero MW, Desired Dispatch and the Day-Ahead cleared quantity; 2) the Resource's actual injection or withdrawal.

- (i) If a Resource has operated outside of its Operating Tolerance in any Dispatch Interval, any cost associated with Energy injection or withdrawal above the Resource's Desired Dispatch is not eligible for recovery for that Dispatch Interval where such cost is calculated.

- (ii) If a Resource becomes non-dispatchable in any Dispatch Interval, any cost associated with Energy injection or withdrawal above the Resource's Desired Dispatch is not eligible for recovery for that Dispatch Interval where such cost is calculated.
 - (iii) If a Resource's minimum operating limit is increased above the Resource's minimum operating limit that was used to make the commitment decision, the increase is greater than the Resource's Operating Tolerance and the Resource remains dispatchable in any Dispatch Interval, any cost associated with Energy injection or withdrawal above the Resource's Desired Dispatch is not eligible for recovery for that Dispatch Interval where such cost is calculated, or;
 - (iv) If a Resource is committed, and, subsequent to that commitment, the Resource's originally submitted limits are modified such that the Resource's availability switches from injection to withdrawal or from withdrawal to injection, any cost associated with Energy output above the Resource's Desired Dispatch is not eligible for recovery for the Dispatch Interval for which such cost is calculated.
- (4) Real-Time incremental Energy make whole payment revenue is calculated as follows:

A Market Participant's Real-Time incremental Energy make whole payment revenue amount for each eligible Resource for Real-Time dispatched MWs that exceed Day-Ahead cleared MW for each Dispatch Interval within the commitment period is the following.

Energy revenue associated with Resource billing meter quantity, including MSRs providing a market service, from Resource Energy Offers as described under Section 6.2.3 of this Attachment AE, is calculated by multiplying Resource Energy above Day-Ahead cleared MW by Real-Time LMP at that Resource Settlement Location.

D. Attachment AE, Section 8.6.36

SPP proposes to add new Section 8.6.36 titled "Reliability Unit Commitment Self-Incremental Energy Make Whole Payment Amount" as follows:

- (1) The RUC self-incremental Energy make whole payment amount is a payment to a Market Participant when a Resource's RUC incremental eligible costs are greater than the eligible RUC incremental revenues received during those dispatch intervals where the Resource's actual output is above the Resource's

RUC as committed minimum operating limit. The make whole payment is equal to the difference between the incremental costs and revenues.

- (2) Eligible costs and revenue for a RUC self-incremental Energy make whole payment are for Resources where actual output is above the Resource's RUC as committed minimum operating limit and when the Market Monitor has not verified the Resource Offers associated with Section 3.2(K) of Attachment AF of this Tariff prior to the approval of the RTBM or the Resource Offer exceeds \$2,000.
- (3) The RUC self-incremental Energy make whole payment cost is the Energy cost associated with cleared Resource Energy, including MSRs providing a market service, from the Resource Energy Offer as described under Section 6.2.3 of this Attachment AE. This cost is calculated by multiplying actual Resource Energy by the cost of such Energy determined from the Resource's applicable RTBM as dispatched Energy Offer Curve.

The Energy Offer Curve used to determine a RUC self-incremental make whole payment amount for Energy above the Minimum Economic Capacity Operating Limit is the RTBM as Dispatched Energy Offer Curve as verified by the Market Monitor.

(a) Cost Disallowances:

A Market Participant's Uninstructed Resource Deviation Cost Disallowance, Non-Dispatchable Cost Disallowance, or Minimum Limit Cost Disallowance is equal to the positive difference between the Resource's Energy cost at actual injection or withdrawal as calculated from the Resource's current Dispatch Interval Energy Offer Curve and the Resource's Energy cost at the Resource's economic operating point as calculated from the Resource's current Dispatch Interval Energy Offer Curve. A Resource's economic operating point is the MW injection or withdrawal where the cost on the Resource's current Dispatch Interval Energy Offer Curve first exceeds the Real-Time LMP for that Resource.

- (i) If a Resource has operated outside of its Operating Tolerance in any Dispatch Interval, any cost associated with Energy injection or withdrawal above the Resource's Desired Dispatch is not eligible for recovery for that Dispatch Interval where such cost is calculated.
- (ii) If a Resource becomes non-dispatchable in any Dispatch Interval, any cost associated with Energy injection or withdrawal above the

Resource's Desired Dispatch is not eligible for recovery for that Dispatch Interval where such cost is calculated.

- (iii) If a Resource's minimum operating limit is increased above the Resource's minimum operating limit that was used to make the commitment decision, the increase is greater than the Resource's Operating Tolerance and the Resource remains dispatchable in any Dispatch Interval, any cost associated with energy injection or withdrawal above the Resource's Desired Dispatch is not eligible for recovery for that Dispatch Interval where such cost is calculated, or;
- (iv) If a Resource is committed, and, subsequent to that commitment, the Resource's originally submitted limits are modified such that the Resource's availability switches from injection to withdrawal or from withdrawal to injection, any cost associated with Energy output above the Resource's Desired Dispatch is not eligible for recovery for the Dispatch Interval for which such cost is calculated.

- (4) RUC self-incremental Energy make whole payment revenue is calculated as follows:

A Market Participant's RUC self-incremental Energy make whole payment revenue amount for each eligible Resource that is committed by SPP as specified in Section 4.1(10)(a) of this Attachment AE for each Dispatch Interval within the commitment period is the following.

Energy revenue associated with Resource billing meter quantity, including MSRs providing a market service, from Resource Energy Offers as described under Section 6.2.3 of this Attachment AE, calculated by multiplying Resource Energy above Resources minimum operating limit by Real-Time LMP at that Resource Settlement Location.⁶⁴

E. Other Revisions

SPP proposes minor revisions to Attachment AE, Section 8.5.10 to reference new Section 8.5.31 of Attachment AE in two locations. SPP also proposes minor revisions to Attachment AE, Section 8.6.7 to reference new Sections 8.6.35 and 8.6.36 of Attachment AE in two locations.

⁶⁴ Proposed Tariff, Attachment AE, Section 8.6.36.

IV. EFFECTIVE DATE

SPP requests that the Commission accept the proposed revisions to the Tariff as just and reasonable to become effective October 16, 2024, which is not less than 60 days, and not more than 120 days, after submission of this filing, as required by the Commission.⁶⁵ SPP requests the Commission issue an order by September 20, 2024, to allow SPP sufficient time to make the necessary software changes prior to implementation.

V. ADDITIONAL INFORMATION

A. Information Provided Per Commission Regulations⁶⁶

1. Documents submitted with this filing:

In addition to this Transmittal Letter, Clean and Redlined Tariff revisions under the Sixth Revised Volume No. 1.⁶⁷

2. Service:

SPP has electronically served a copy of this filing on all its Members, Transmission Customers, and Market Participants. A complete copy of this filing will be posted on the SPP web site, www.spp.org, and is also being served on all affected state commissions.

3. Requisite agreements:

Not Applicable.

⁶⁵ 18 C.F.R. § 35.3(a)(1).

⁶⁶ Because the revisions to the Tariff submitted herein do not involve any changes in rates, the use of the abbreviated filing procedures set forth in 18 C.F.R. § 35.13(a)(2)(iii) is appropriate.

⁶⁷ Attachment AE Integrated Marketplace contained in this filing includes language in italics indicating language pending before the Commission in Docket No. ER24-2343-000, and language accepted in Docket No. ER24-1754-000 which does not yet have an established effective date. Sections 8.5.10 and 8.6.7 of Attachment AE includes language in italics indicating language pending before the Commission in Docket No. ER24-2343-000.

B. Communications

Correspondence and communications regarding this filing should be sent to, and SPP requests that the Secretary include on the official service list, the following:

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VI. CONCLUSION

For all of the foregoing reasons, SPP respectfully requests that the Commission issue an order as soon as practicable accepting the Tariff revisions proposed herein as just and reasonable and as effective October 16, 2024.

Respectfully submitted,

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**ATTACHMENT AE
INTEGRATED MARKETPLACE**

Attachment AE
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1.1 Definitions D

Data Error

A data error shall be the following:

- (i) Data received by the Transmission Provider from an independent source, including data produced by a system or submitted by a third party, that is inaccurately modified by the Transmission Provider during the execution of a market function; or
- (ii) Data received by the Transmission Provider from an independent source, including data produced by a system or submitted by a third party, that is patently incorrect and is used by the Transmission Provider during the execution of a market function; or
- (iii) Incorrect data produced and used by the Transmission Provider during the execution of a market function.

Day-Ahead

The time period starting at 0001 and ending at 2400 on the day prior to the Operating Day.

Day-Ahead Market

As defined in Section 1 of the Tariff.

Day-Ahead Market Commitment Period

The contiguous period of time between a Resource's Day-Ahead Market Commit Time and Day-Ahead Market De-Commit Time.

Day-Ahead Reliability Unit Commitment ("Day-Ahead RUC")

The process performed by the Transmission Provider following the close of the Day-Ahead Market and prior to the Operating Day to assess Resource and Operating Reserve adequacy for the Day-Ahead period and the remainder of the current Operating Day, commit or de-commit Resources as necessary, and communicate commitment or de-commitment of Resources to the appropriate Market Participants as necessary.

De-Commit Time

The time specified by the Transmission Provider or a local transmission operator in a Commitment Instruction at which a Resource is to begin de-synchronization procedures.

Demand Bid

A proposal by a Market Participant associated with a physical load to purchase a fixed or price sensitive amount of Energy at a specified location and period of time in the Day-Ahead Market.

Demand Bid Curve

A Demand Bid specified as Megawatt and dollars per Megawatt hour with up to ten (10) price/quantity pairs.

Demand Curve

A series of quantity/price points used to set Locational Marginal Prices and Market Clearing Prices when there is a shortage of Energy or Operating Reserve.

Demand Response Load

A registered measurable load that is capable of being reduced at the instruction of the Transmission Provider and subsequently may be increased at the instruction of the Transmission Provider.

Demand Response Resource

A Dispatchable Demand Response Resource or a Block Demand Response Resource.

Designated Resource

As defined in Section 1 of the Tariff.

Discrete Delivery Point

An injection point or withdrawal point connected to the Transmission System at which Locational Marginal Prices are calculated.

Desired Dispatch: A MW value calculated from a Resource's RTBM Energy Offer Curve between the minimum operating limit and the maximum operating limit that first exceeds the DLMP at the Resource. A Dispatchable Variable Energy Resource's Desired Dispatch will be no greater than the Resource's Real-Time Capability, if available, or the lesser of the maximum operating limit and the Transmission Provider output forecasted for that Resource.

Dispatch Interval

The five (5) minute interval for which the Transmission Provider issues Dispatch Instructions for Energy and clears Operating Reserve in the Real-Time Balancing Market.

Dispatch Instruction

The communicated Resource target Energy Megawatt output level at the end of the Dispatch Interval.

Dispatch Locational Marginal Price ("DLMP")

The price for Energy at a given Price Node, which is equivalent to the marginal cost of serving demand at the Price Node while meeting the Transmission Provider Operating Reserve requirements, that results from the dispatch function in SCED as described under Section 3.3.1 of this Attachment AE.

Dispatchable Demand Response Load Settlement Location

A registered load Settlement Location that contains the Demand Response Load associated with a Dispatchable Demand Response Resource.

Dispatchable Demand Response Resource

A Resource created to model Demand Response Load reduction associated with controllable load or a Behind-The-Meter generator that is dispatchable on a five (5) minute basis.

Dispatchable Resource

A Resource for which an Energy Offer Curve has been submitted and that is available for dispatch by the Transmission Provider on a Dispatch Interval basis.

Dispatchable Variable Energy Resource

A Variable Energy Resource registered in the Integrated Marketplace that is capable of being incrementally dispatched by the Transmission Provider.

8.5.10 Day-Ahead Make Whole Payment Distribution Amount

A Day-Ahead Market system-wide and local charge will be calculated at each Settlement Location for each Asset Owner for each hour in order to fund the payments made under Sections 8.5.9 and 8.5.31 of this Attachment AE. The system-wide amount will be determined by multiplying an Asset Owner's system-wide distribution volume by a daily system-wide Day-Ahead Market make whole payment rate as described in this Section 8.5.10. The local amount for each Local Settlement Area impacted by a Local Reliability Issue will be determined as described in Section 8.6.44(1) of this Attachment AE.

The Day-Ahead System-Wide Make Whole Payment Distribution Amount shall be calculated as follows:

Day-Ahead System-Wide Make Whole Payment Distribution Amount =
(Day-Ahead SPP System-Wide Make Whole Payment Distribution Rate) * (Day-Ahead System-Wide Make Whole Payment Distribution Quantity)

- (1) The Day-Ahead SPP System-Wide Make Whole Payment Distribution Rate is the sum of all make whole payments for the Operating Day as calculated under Sections 8.5.9 and 8.5.31 of this Attachment AE, excluding make whole payments made to Resources committed to address a Local Reliability Issue or a Local Emergency Condition, divided by the sum of all Asset Owners' Day-Ahead System-Wide Make Whole Payment Distribution Quantities for all Settlement Locations for the entire Operating Day.
- (2) An Asset Owner's Day-Ahead System-Wide Make Whole Payment Distribution Quantity at a Settlement Location for an hour is equal to that Asset Owner's cleared Energy withdrawals at that Settlement Location for that hour. An Asset Owner's Energy withdrawal at a Settlement Location is calculated as the sum of cleared Demand Bids, cleared Self-Charging MSR Offers, Export Interchange Transaction Bids and Virtual Energy Bids at that Settlement Location.

8.5.31 Day-Ahead Self-Incremental Energy Make Whole Payment Amount

- (1) The Day-Ahead self-incremental Energy make whole payment amount is a payment to a Market Participant when a Resource's Day-Ahead incremental eligible costs are greater than the eligible Day-Ahead incremental revenues received during those hours when the Resource cleared in Day-Ahead Market above the Resource's minimum operating limit. The make whole payment is equal to the difference between those incremental costs and revenues.
- (2) Eligible costs and revenues for a Day-Ahead self-incremental Energy make whole payment are for Resources which cleared above their Day-Ahead minimum operating limit and when Market Monitoring has not verified the Resource Offers associated with Section 3.2(K) of Attachment AF of this Tariff prior to the approval of the Day-Ahead Market or the Resource Offer exceeds \$2,000.
- (3) The Day-Ahead self-incremental Energy make whole payment cost is the Energy cost associated with cleared Resource Energy, including MSRs providing a market service, from the Resource Energy Offer as described under Section 5.1.3 of this Attachment AE. This cost is calculated by multiplying the cleared Resource Energy by the cost of such Energy, determined from the Resource's applicable Energy Offer Curve.

The applicable Energy Offer Curve used to determine a Day-Ahead self-incremental market make whole payment amount for Energy above the Minimum Economic Capacity Operating Limit is the Day-Ahead Market Energy Offer Curve as verified by the Market Monitor.

- (4) Day-Ahead self-incremental Energy make whole payment revenue is calculated as follows:

A Market Participant's Day-Ahead Market self-committed incremental Energy make whole payment revenue amount for each eligible Resource that is committed by the Transmission Provider as specified in Section 4.1(10)(a) of this Attachment AE is equal to the sum of the Energy revenue associated with cleared Resource Energy for all eligible hours.

Energy revenue associated with cleared Resource Energy, including MSRs providing a market service, from Resource Energy Offers as described under Section 5.1.3 of this Attachment AE, is calculated by multiplying Resource Energy above the minimum operating limit by the Day-Ahead LMP at that Resource Settlement Location.

8.6.7 Reliability Unit Commitment Make Whole Payment Distribution Amount

An RTBM system-wide charge will be calculated at each Settlement Location for each Asset Owner for each hour in order to fund the payments made under Sections 8.6.5, 8.6.35, and 8.6.36 of this Attachment AE. The system-wide amount will be determined by multiplying an Asset Owner's system-wide distribution volume by a daily system-wide RUC make whole payment rate as described in Section 8.6.7(A) of this Attachment AE. The local amount for each Local Settlement Area impacted by a Local Reliability Issue will be determined by multiplying an Asset Owner's Local Settlement Area distribution volume by the Local Settlement Area Make Whole Payment Distribution Rate as described in Section 8.6.44(1) of this Attachment AE.

A. The RUC System-Wide Make Whole Payment Distribution Amount shall be calculated as follows:

The RUC System-Wide Make Whole Payment Distribution Amount =
[(RUC System-Wide Make Whole Payment Distribution Rate) *
(RUC System-Wide Make Whole Payment Distribution Volume)]

(1) The RUC System-Wide Make Whole Payment Distribution Rate is the sum of all make whole payments for the Operating Day as calculated under Sections 8.6.5, 8.6.35, and 8.6.36 of this Attachment AE excluding make whole payments made to Resources committed to address a Local Reliability Issue by the Transmission Provider at the request of a local transmission operator or committed by a local transmission operator to address a Local Emergency Condition, divided by the sum of Asset Owners' RUC System-Wide Make Whole Payment Distribution Volumes for all Settlement Locations for the entire Operating Day.

(2) An Asset Owner's RUC System-Wide Make Whole Payment Distribution Volume at a Settlement Location for an hour is equal to the sum of following values that are calculated for each Dispatch Interval within the hour:

(a) The absolute value of the sum of actual Real-Time Settlement Location deviations from Day-Ahead Market cleared amounts for load, cleared Self-Charging MSR Offers, virtual offer transactions

and interchange transactions except that, during any Dispatch Interval in which the Transmission Provider has declared an Emergency Condition due to a capacity shortage, Real-Time actual load deviations from Day-Ahead Market cleared amounts shall be limited to deviations associated with actual Real-Time load and actual Real-Time Self-Charging MSRs in excess of amounts cleared in the Day-Ahead Market;

- (b) For Resources cleared in the Day-Ahead Market, except MCRs with an RTBM Resource Offer commitment status as defined under Section 4.1(10)(b) or (c) of this Attachment AE, that have been transitioned in Real-Time by the Transmission Provider or local transmission operator into a Real-Time configuration with a higher applicable minimum capacity operating limit than the Day-Ahead Market committed configuration, (a) the positive difference between the RTBM Resource applicable minimum limits and Day-Ahead Market Resource cleared Energy quantity; or (b) if the Resource has cleared regulation in the RTBM and has not cleared regulation in the Day-Ahead Market, the positive difference between (1) the RTBM Resource regulation minimum limit and (2) the greater of the Day-Ahead Market Resource cleared Energy quantity or the Resource's Day-Ahead Market regulation minimum limit, provided that:
- (i) The applicable RTBM Resource minimum limit is greater than the comparable Day-Ahead Market Resource minimum limit by more than the Resource's Operating Tolerance; and
 - (ii) The applicable RTBM Resource minimum limit is greater than the Day-Ahead Market cleared Energy amount; and
 - (iii) The Resource received a Dispatch Instruction less than or equal to the RTBM applicable minimum limit for at least one Dispatch Interval in the hour.

- (c) For Resources cleared in the Day-Ahead Market, except combined cycle Resources with an RTBM Resource Offer commitment status as defined under Section 4.1(10)(b) or (c) of this Attachment AE that have been transitioned in Real-Time by the Transmission Provider or local transmission operator into a Real-Time configuration with a lower applicable maximum capacity operating limit than the Day-Ahead Market committed configuration, (a) the positive difference between the Resource Day-Ahead Market cleared Energy quantity and the RTBM Resource applicable maximum limit or (b) if the Resource has cleared regulation in the RTBM and has not cleared regulation in the Day-Ahead Market, the positive difference between (1) the lesser of the Resource's RTBM regulation maximum limit or the Resource's Day-Ahead Market Resource cleared Energy quantity and (2) the Resource's RTBM regulation maximum limit, provided that:
- (i) The applicable RTBM Resource maximum limit is less than the comparable Resource maximum limit submitted for use in the Day-Ahead Market by more than the Resource's Operating Tolerance; and
 - (ii) The applicable RTBM Resource maximum limit is less than the Day-Ahead Market cleared Energy amount; and
 - (iii) The Resource received a Dispatch Instruction greater than or equal to the RTBM applicable maximum limit for at least one Dispatch Interval in the hour.
- (d) For Resources cleared in the Day-Ahead Market, the Resource's Day-Ahead Market cleared amount if that Resource is off-line in the RTBM and if the Resource has not been de-committed or dispatched to zero by the Transmission Provider;
- (e) For Resources that cleared in the Day-Ahead Market that are not able to follow Dispatch Instructions, including an MCR that is not in its committed configuration, the absolute value of the difference

between a Resource's actual injection or withdrawal and the Resource's economic operating point. The Resource's economic operating point is calculated as described under Section 8.6.5(4)(e) of this Attachment AE;

- (f) For Resources that were not offered in the Day-Ahead Market and that self-committed following the close of the Day-Ahead Market, and for Resources that were offered and not cleared in the Day-Ahead Market and that self-committed following the close of the Day-Ahead RUC, the actual Resource injection or withdrawal if the Resource received a Dispatch Instruction with an absolute value less than or equal to the RTBM applicable minimum charge or discharge limit for at least one Dispatch Interval in the hour;
- (g) A Resource's economic operating point, as calculated as described under Section 8.6.5(4)(e) of this Attachment AE, for Resource or MCR configuration that was committed following the close of the Day-Ahead Market if that Resource is off-line in the RTBM and that Resource was not de-committed by the Transmission Provider including, for an MCR, the amount of the incremental MWs from Day-Ahead Market cleared Energy to Real-Time economic operating point; and
- (h) The absolute value of a Resource's URD if that Resource operated outside of its Operating Tolerance and the Resource has not been exempted from URD as described under Section 6.4.1.1 of this Attachment AE.

8.6.35 Real-Time Incremental Energy Make Whole Payment Amount

- (1) The Real-Time incremental Energy make whole payment amount is a payment to a Market Participant when a Resource's Real-Time incremental Energy costs are greater than the eligible Real-Time incremental revenues received during dispatch intervals when the Resource is dispatched in Real-Time above the Resource's Day-Ahead cleared Energy MW. The make whole payment is equal to the difference between the incremental costs and revenues. Recovery of such compensation will be collected in accordance with Section 8.6.7 of this Attachment AE.
- (2) Eligible costs and revenues for a Real-Time incremental Energy make whole payment are for Resources dispatched in Real-Time above a Resource's Day-Ahead cleared Energy MW and when the Market Monitor has not verified the Resource Offers associated with Section 3.2(K) of Attachment AF of this Tariff prior to the approval of RTBM or the Resource Offer exceeds \$2,000.
- (3) The Real-Time incremental Energy make whole payment cost is the Energy cost associated with actual Resource Energy, including MSRs providing a market service, from the Resource Energy Offer as described under Section 6.2.3 of this Attachment AE. This cost is calculated by multiplying actual Resource Energy by the cost of such Energy as calculated from the Resource's applicable Energy Offer Curve.

The applicable Energy Offer Curve used to determine a Real-Time incremental make whole payment amount for Energy above Day-Ahead cleared MW is the Real-Time Energy Offer Curve as verified by the Market Monitor.

(a) Cost Disallowances:

A Market Participant's Uninstructed Resource Deviation Cost Disallowance, Non-Dispatchable Cost Disallowance, or Minimum Limit Cost Disallowance is calculated as the cost associated with the Resource's current Real-Time Dispatch Interval Energy Offer Curve between the following limits: 1) for Resources that are injecting; if the Desired Dispatch is less than or equal to the Resource's actual injection, this limit will equal the Resource's actual injection. Otherwise the limit

will equal the least of zero MW, Desired Dispatch, and the Day-Ahead cleared quantity, for Resource's that are withdrawing, if the Desired Dispatch is greater than or equal to the Resource's actual withdrawal, this limit will equal the Resource's actual withdrawal otherwise it will equal the greatest of zero MW, Desired Dispatch, and the Day-Ahead cleared quantity; 2) the Resource's actual injection or withdrawal.

- (i) If a Resource has operated outside of its Operating Tolerance in any Dispatch Interval, any cost associated with Energy injection or withdrawal above the Resource's Desired Dispatch is not eligible for recovery for that Dispatch Interval where such cost is calculated.
- (ii) If a Resource becomes non-dispatchable in any Dispatch Interval, any cost associated with Energy injection or withdrawal above the Resource's Desired Dispatch is not eligible for recovery for that Dispatch Interval where such cost is calculated.
- (iii) If a Resource's minimum operating limit is increased above the Resource's minimum operating limit that was used to make the commitment decision, the increase is greater than the Resource's Operating Tolerance and the Resource remains dispatchable in any Dispatch Interval, any cost associated with Energy injection or withdrawal above the Resource's Desired Dispatch is not eligible for recovery for that Dispatch Interval where such cost is calculated, or;
- (iv) If a Resource is committed, and, subsequent to that commitment, the Resource's originally submitted limits are modified such that the Resource's availability switches from injection to withdrawal or from withdrawal to injection, any cost associated with Energy output above the Resource's Desired Dispatch is not eligible for recovery for the Dispatch Interval for which such cost is calculated.

(4) Real-Time incremental Energy make whole payment revenue is calculated as follows:

A Market Participant's Real-Time incremental Energy make whole payment revenue amount for each eligible Resource for Real-Time dispatched MWs that exceed Day-Ahead cleared MW for each Dispatch Interval within the commitment period is the following.

Energy revenue associated with Resource billing meter quantity, including MSRs providing a market service, from Resource Energy Offers as described under Section 6.2.3 of this Attachment AE, is calculated by multiplying Resource Energy above Day-Ahead cleared MW by Real-Time LMP at that Resource Settlement Location.

8.6.36 Reliability Unit Commitment Self-Incremental Energy Make Whole Payment Amount

- (1) The RUC self-incremental Energy make whole payment amount is a payment to a Market Participant when a Resource's RUC incremental eligible costs are greater than the eligible RUC incremental revenues received during those dispatch intervals where the Resource's actual output is above the Resource's RUC as committed minimum operating limit. The make whole payment is equal to the difference between the incremental costs and revenues.
- (2) Eligible costs and revenue for a RUC self-incremental Energy make whole payment are for Resources where actual output is above the Resource's RUC as committed minimum operating limit and when the Market Monitor has not verified the Resource Offers associated with Section 3.2(K) of Attachment AF of this Tariff prior to the approval of the RTBM or the Resource Offer exceeds \$2,000.
- (3) The RUC self-incremental Energy make whole payment cost is the Energy cost associated with cleared Resource Energy, including MSRs providing a market service, from the Resource Energy Offer as described under Section 6.2.3 of this Attachment AE. This cost is calculated by multiplying actual Resource Energy by the cost of such Energy determined from the Resource's applicable RTBM as dispatched Energy Offer Curve.

The Energy Offer Curve used to determine a RUC self-incremental make whole payment amount for Energy above the Minimum Economic Capacity Operating Limit is the RTBM as Dispatched Energy Offer Curve as verified by the Market Monitor.

(a) Cost Disallowances:

A Market Participant's Uninstructed Resource Deviation Cost Disallowance, Non-Dispatchable Cost Disallowance, or Minimum Limit Cost Disallowance is equal to the positive difference between the Resource's Energy cost at actual injection or withdrawal as calculated from the Resource's current Dispatch Interval Energy Offer Curve and the Resource's Energy cost at the Resource's

economic operating point as calculated from the Resource's current Dispatch Interval Energy Offer Curve. A Resource's economic operating point is the MW injection or withdrawal where the cost on the Resource's current Dispatch Interval Energy Offer Curve first exceeds the Real-Time LMP for that Resource.

- (i) If a Resource has operated outside of its Operating Tolerance in any Dispatch Interval, any cost associated with Energy injection or withdrawal above the Resource's Desired Dispatch is not eligible for recovery for that Dispatch Interval where such cost is calculated.
 - (ii) If a Resource becomes non-dispatchable in any Dispatch Interval, any cost associated with Energy injection or withdrawal above the Resource's Desired Dispatch is not eligible for recovery for that Dispatch Interval where such cost is calculated.
 - (iii) If a Resource's minimum operating limit is increased above the Resource's minimum operating limit that was used to make the commitment decision, the increase is greater than the Resource's Operating Tolerance and the Resource remains dispatchable in any Dispatch Interval, any cost associated with energy injection or withdrawal above the Resource's Desired Dispatch is not eligible for recovery for that Dispatch Interval where such cost is calculated, or;
 - (iv) If a Resource is committed, and, subsequent to that commitment, the Resource's originally submitted limits are modified such that the Resource's availability switches from injection to withdrawal or from withdrawal to injection, any cost associated with Energy output above the Resource's Desired Dispatch is not eligible for recovery for the Dispatch Interval for which such cost is calculated.
- (4) RUC self-incremental Energy make whole payment revenue is calculated as follows:

A Market Participant's RUC self-incremental Energy make whole payment revenue amount for each eligible Resource that is committed by SPP as specified

in Section 4.1(10)(a) of this Attachment AE for each Dispatch Interval within the commitment period is the following.

Energy revenue associated with Resource billing meter quantity, including MSRs providing a market service, from Resource Energy Offers as described under Section 6.2.3 of this Attachment AE, calculated by multiplying Resource Energy above Resources minimum operating limit by Real-Time LMP at that Resource Settlement Location.

**ATTACHMENT AE
INTEGRATED MARKETPLACE**

Attachment AE
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1.1 Definitions D

Data Error

A data error shall be the following:

- (i) Data received by the Transmission Provider from an independent source, including data produced by a system or submitted by a third party, that is inaccurately modified by the Transmission Provider during the execution of a market function; or
- (ii) Data received by the Transmission Provider from an independent source, including data produced by a system or submitted by a third party, that is patently incorrect and is used by the Transmission Provider during the execution of a market function; or
- (iii) Incorrect data produced and used by the Transmission Provider during the execution of a market function.

Day-Ahead

The time period starting at 0001 and ending at 2400 on the day prior to the Operating Day.

Day-Ahead Market

As defined in Section 1 of the Tariff.

Day-Ahead Market Commitment Period

The contiguous period of time between a Resource's Day-Ahead Market Commit Time and Day-Ahead Market De-Commit Time.

Day-Ahead Reliability Unit Commitment ("Day-Ahead RUC")

The process performed by the Transmission Provider following the close of the Day-Ahead Market and prior to the Operating Day to assess Resource and Operating Reserve adequacy for the Day-Ahead period and the remainder of the current Operating Day, commit or de-commit Resources as necessary, and communicate commitment or de-commitment of Resources to the appropriate Market Participants as necessary.

De-Commit Time

The time specified by the Transmission Provider or a local transmission operator in a Commitment Instruction at which a Resource is to begin de-synchronization procedures.

Demand Bid

A proposal by a Market Participant associated with a physical load to purchase a fixed or price sensitive amount of Energy at a specified location and period of time in the Day-Ahead Market.

Demand Bid Curve

A Demand Bid specified as Megawatt and dollars per Megawatt hour with up to ten (10) price/quantity pairs.

Demand Curve

A series of quantity/price points used to set Locational Marginal Prices and Market Clearing Prices when there is a shortage of Energy or Operating Reserve.

Demand Response Load

A registered measurable load that is capable of being reduced at the instruction of the Transmission Provider and subsequently may be increased at the instruction of the Transmission Provider.

Demand Response Resource

A Dispatchable Demand Response Resource or a Block Demand Response Resource.

Designated Resource

As defined in Section 1 of the Tariff.

Discrete Delivery Point

An injection point or withdrawal point connected to the Transmission System at which Locational Marginal Prices are calculated.

Desired Dispatch: A MW value calculated from a Resource's RTBM Energy Offer Curve between the minimum operating limit and the maximum operating limit that first exceeds the DLMP at the Resource. A Dispatchable Variable Energy Resource's Desired Dispatch will be no greater than the Resource's Real-Time Capability, if available, or the lesser of the maximum operating limit and the Transmission Provider output forecasted for that Resource.

Dispatch Interval

The five (5) minute interval for which the Transmission Provider issues Dispatch Instructions for Energy and clears Operating Reserve in the Real-Time Balancing Market.

Dispatch Instruction

The communicated Resource target Energy Megawatt output level at the end of the Dispatch Interval.

Dispatch Locational Marginal Price ("DLMP")

The price for Energy at a given Price Node, which is equivalent to the marginal cost of serving demand at the Price Node while meeting the Transmission Provider Operating Reserve requirements, that results from the dispatch function in SCED as described under Section 3.3.1 of this Attachment AE.

Dispatchable Demand Response Load Settlement Location

A registered load Settlement Location that contains the Demand Response Load associated with a Dispatchable Demand Response Resource.

Dispatchable Demand Response Resource

A Resource created to model Demand Response Load reduction associated with controllable load or a Behind-The-Meter generator that is dispatchable on a five (5) minute basis.

Dispatchable Resource

A Resource for which an Energy Offer Curve has been submitted and that is available for dispatch by the Transmission Provider on a Dispatch Interval basis.

Dispatchable Variable Energy Resource

A Variable Energy Resource registered in the Integrated Marketplace that is capable of being incrementally dispatched by the Transmission Provider.

8.5.10 Day-Ahead Make Whole Payment Distribution Amount

A Day-Ahead Market system-wide and local charge will be calculated at each Settlement Location for each Asset Owner for each hour in order to fund the payments made under Sections 8.5.9 and 8.5.31 of this Attachment AE. The system-wide amount will be determined by multiplying an Asset Owner's system-wide distribution volume by a daily system-wide Day-Ahead Market make whole payment rate as described in this Section 8.5.10. The local amount for each Local Settlement Area impacted by a Local Reliability Issue will be determined as described in Section 8.6.44(1) of this Attachment AE.

The Day-Ahead System-Wide Make Whole Payment Distribution Amount shall be calculated as follows:

Day-Ahead System-Wide Make Whole Payment Distribution Amount =
(Day-Ahead SPP System-Wide Make Whole Payment Distribution Rate) * (Day-Ahead System-Wide Make Whole Payment Distribution Quantity)

- (1) The Day-Ahead SPP System-Wide Make Whole Payment Distribution Rate is the sum of all make whole payments for the Operating Day as calculated under Sections 8.5.9 and 8.5.31 of this Attachment AE, excluding make whole payments made to Resources committed to address a Local Reliability Issue or a Local Emergency Condition, divided by the sum of all Asset Owners' Day-Ahead System-Wide Make Whole Payment Distribution Quantities for all Settlement Locations for the entire Operating Day.
- (2) An Asset Owner's Day-Ahead System-Wide Make Whole Payment Distribution Quantity at a Settlement Location for an hour is equal to that Asset Owner's cleared Energy withdrawals at that Settlement Location for that hour. An Asset Owner's Energy withdrawal at a Settlement Location is calculated as the sum of cleared Demand Bids, cleared Self-Charging MSR Offers, Export Interchange Transaction Bids and Virtual Energy Bids at that Settlement Location.

8.5.31 Day-Ahead Self-Incremental Energy Make Whole Payment Amount

(1) The Day-Ahead self-incremental Energy make whole payment amount is a payment to a Market Participant when a Resource's Day-Ahead incremental eligible costs are greater than the eligible Day-Ahead incremental revenues received during those hours when the Resource cleared in Day-Ahead Market above the Resource's minimum operating limit. The make whole payment is equal to the difference between those incremental costs and revenues.

(2) Eligible costs and revenues for a Day-Ahead self-incremental Energy make whole payment are for Resources which cleared above their Day-Ahead minimum operating limit and when Market Monitoring has not verified the Resource Offers associated with Section 3.2(K) of Attachment AF of this Tariff prior to the approval of the Day-Ahead Market or the Resource Offer exceeds \$2,000.

(3) The Day-Ahead self-incremental Energy make whole payment cost is the Energy cost associated with cleared Resource Energy, including MSRs providing a market service, from the Resource Energy Offer as described under Section 5.1.3 of this Attachment AE. This cost is calculated by multiplying the cleared Resource Energy by the cost of such Energy, determined from the Resource's applicable Energy Offer Curve.

The applicable Energy Offer Curve used to determine a Day-Ahead self-incremental market make whole payment amount for Energy above the Minimum Economic Capacity Operating Limit is the Day-Ahead Market Energy Offer Curve as verified by the Market Monitor.

(4) Day-Ahead self-incremental Energy make whole payment revenue is calculated as follows:

A Market Participant's Day-Ahead Market self-committed incremental Energy make whole payment revenue amount for each eligible Resource that is committed by the Transmission Provider as specified in Section 4.1(10)(a) of this Attachment AE is equal to the sum of the Energy revenue associated with cleared Resource Energy for all eligible hours.

Energy revenue associated with cleared Resource Energy, including MSRs providing a market service, from Resource Energy Offers as described under Section 5.1.3 of this Attachment AE, is calculated by multiplying Resource Energy above the minimum operating limit by the Day-Ahead LMP at that Resource Settlement Location.

8.6.7 Reliability Unit Commitment Make Whole Payment Distribution Amount

An RTBM system-wide charge will be calculated at each Settlement Location for each Asset Owner for each hour in order to fund the payments made under Sections [8.6.5](#), [8.6.35](#), and [8.6.36 of this Attachment AE](#). The system-wide amount will be determined by multiplying an Asset Owner's system-wide distribution volume by a daily system-wide RUC make whole payment rate as described in Section 8.6.7(A) of this Attachment AE. The local amount for each Local Settlement Area impacted by a Local Reliability Issue will be determined by multiplying an Asset Owner's Local Settlement Area distribution volume by the Local Settlement Area Make Whole Payment Distribution Rate as described in Section [8.6.44\(1\)](#) of this Attachment AE.

A. The RUC System-Wide Make Whole Payment Distribution Amount shall be calculated as follows:

The RUC System-Wide Make Whole Payment Distribution Amount =
[(RUC System-Wide Make Whole Payment Distribution Rate) *
(RUC System-Wide Make Whole Payment Distribution Volume)]

(1) The RUC System-Wide Make Whole Payment Distribution Rate is the sum of all make whole payments for the Operating Day as calculated under Sections [8.6.5](#), [8.6.35](#), and [8.6.36 of this Attachment AE](#) excluding make whole payments made to Resources committed to address a Local Reliability Issue by the Transmission Provider at the request of a local transmission operator or committed by a local transmission operator to address a Local Emergency Condition, divided by the sum of Asset Owners' RUC System-Wide Make Whole Payment Distribution Volumes for all Settlement Locations for the entire Operating Day.

(2) An Asset Owner's RUC System-Wide Make Whole Payment Distribution Volume at a Settlement Location for an hour is equal to the sum of following values that are calculated for each Dispatch Interval within the hour:

(a) The absolute value of the sum of actual Real-Time Settlement Location deviations from Day-Ahead Market cleared amounts for load, cleared Self-Charging MSR Offers, virtual offer transactions

and interchange transactions except that, during any Dispatch Interval in which the Transmission Provider has declared an Emergency Condition due to a capacity shortage, Real-Time actual load deviations from Day-Ahead Market cleared amounts shall be limited to deviations associated with actual Real-Time load and actual Real-Time Self-Charging MSRs in excess of amounts cleared in the Day-Ahead Market;

- (b) For Resources cleared in the Day-Ahead Market, except MCRs with an RTBM Resource Offer commitment status as defined under Section 4.1(10)(b) or (c) of this Attachment AE, that have been transitioned in Real-Time by the Transmission Provider or local transmission operator into a Real-Time configuration with a higher applicable minimum capacity operating limit than the Day-Ahead Market committed configuration, (a) the positive difference between the RTBM Resource applicable minimum limits and Day-Ahead Market Resource cleared Energy quantity; or (b) if the Resource has cleared regulation in the RTBM and has not cleared regulation in the Day-Ahead Market, the positive difference between (1) the RTBM Resource regulation minimum limit and (2) the greater of the Day-Ahead Market Resource cleared Energy quantity or the Resource's Day-Ahead Market regulation minimum limit, provided that:
 - (i) The applicable RTBM Resource minimum limit is greater than the comparable Day-Ahead Market Resource minimum limit by more than the Resource's Operating Tolerance; and
 - (ii) The applicable RTBM Resource minimum limit is greater than the Day-Ahead Market cleared Energy amount; and
 - (iii) The Resource received a Dispatch Instruction less than or equal to the RTBM applicable minimum limit for at least one Dispatch Interval in the hour.

- (c) For Resources cleared in the Day-Ahead Market, except combined cycle Resources with an RTBM Resource Offer commitment status as defined under Section 4.1(10)(b) or (c) of this Attachment AE that have been transitioned in Real-Time by the Transmission Provider or local transmission operator into a Real-Time configuration with a lower applicable maximum capacity operating limit than the Day-Ahead Market committed configuration, (a) the positive difference between the Resource Day-Ahead Market cleared Energy quantity and the RTBM Resource applicable maximum limit or (b) if the Resource has cleared regulation in the RTBM and has not cleared regulation in the Day-Ahead Market, the positive difference between (1) the lesser of the Resource's RTBM regulation maximum limit or the Resource's Day-Ahead Market Resource cleared Energy quantity and (2) the Resource's RTBM regulation maximum limit, provided that:
- (i) The applicable RTBM Resource maximum limit is less than the comparable Resource maximum limit submitted for use in the Day-Ahead Market by more than the Resource's Operating Tolerance; and
 - (ii) The applicable RTBM Resource maximum limit is less than the Day-Ahead Market cleared Energy amount; and
 - (iii) The Resource received a Dispatch Instruction greater than or equal to the RTBM applicable maximum limit for at least one Dispatch Interval in the hour.
- (d) For Resources cleared in the Day-Ahead Market, the Resource's Day-Ahead Market cleared amount if that Resource is off-line in the RTBM and if the Resource has not been de-committed or dispatched to zero by the Transmission Provider;
- (e) For Resources that cleared in the Day-Ahead Market that are not able to follow Dispatch Instructions, including an MCR that is not in its committed configuration, the absolute value of the difference

between a Resource's actual injection or withdrawal and the Resource's economic operating point. The Resource's economic operating point is calculated as described under Section 8.6.5(4)(e) of this Attachment AE;

- (f) For Resources that were not offered in the Day-Ahead Market and that self-committed following the close of the Day-Ahead Market, and for Resources that were offered and not cleared in the Day-Ahead Market and that self-committed following the close of the Day-Ahead RUC, the actual Resource injection or withdrawal if the Resource received a Dispatch Instruction with an absolute value less than or equal to the RTBM applicable minimum charge or discharge limit for at least one Dispatch Interval in the hour;
- (g) A Resource's economic operating point, as calculated as described under Section 8.6.5(4)(e) of this Attachment AE, for Resource or MCR configuration that was committed following the close of the Day-Ahead Market if that Resource is off-line in the RTBM and that Resource was not de-committed by the Transmission Provider including, for an MCR, the amount of the incremental MWs from Day-Ahead Market cleared Energy to Real-Time economic operating point; and
- (h) The absolute value of a Resource's URD if that Resource operated outside of its Operating Tolerance and the Resource has not been exempted from URD as described under Section 6.4.1.1 of this Attachment AE.

8.6.35 Real-Time Incremental Energy Make Whole Payment Amount

- (1) The Real-Time incremental Energy make whole payment amount is a payment to a Market Participant when a Resource's Real-Time incremental Energy costs are greater than the eligible Real-Time incremental revenues received during dispatch intervals when the Resource is dispatched in Real-Time above the Resource's Day-Ahead cleared Energy MW. The make whole payment is equal to the difference between the incremental costs and revenues. Recovery of such compensation will be collected in accordance with Section 8.6.7 of this Attachment AE.
- (2) Eligible costs and revenues for a Real-Time incremental Energy make whole payment are for Resources dispatched in Real-Time above a Resource's Day-Ahead cleared Energy MW and when the Market Monitor has not verified the Resource Offers associated with Section 3.2(K) of Attachment AF of this Tariff prior to the approval of RTBM or the Resource Offer exceeds \$2,000.
- (3) The Real-Time incremental Energy make whole payment cost is the Energy cost associated with actual Resource Energy, including MSRs providing a market service, from the Resource Energy Offer as described under Section 6.2.3 of this Attachment AE. This cost is calculated by multiplying actual Resource Energy by the cost of such Energy as calculated from the Resource's applicable Energy Offer Curve.

The applicable Energy Offer Curve used to determine a Real-Time incremental make whole payment amount for Energy above Day-Ahead cleared MW is the Real-Time Energy Offer Curve as verified by the Market Monitor.

(a) Cost Disallowances:

A Market Participant's Uninstructed Resource Deviation Cost Disallowance, Non-Dispatchable Cost Disallowance, or Minimum Limit Cost Disallowance is calculated as the cost associated with the Resource's current Real-Time Dispatch Interval Energy Offer Curve between the following limits: 1) for Resources that are injecting; if the Desired Dispatch is less than or equal to the Resource's actual injection, this limit will equal the Resource's actual injection. Otherwise the limit

will equal the least of zero MW, Desired Dispatch, and the Day-Ahead cleared quantity, for Resource's that are withdrawing, if the Desired Dispatch is greater than or equal to the Resource's actual withdrawal, this limit will equal the Resource's actual withdrawal otherwise it will equal the greatest of zero MW, Desired Dispatch, and the Day-Ahead cleared quantity; 2) the Resource's actual injection or withdrawal.

(i) If a Resource has operated outside of its Operating Tolerance in any Dispatch Interval, any cost associated with Energy injection or withdrawal above the Resource's Desired Dispatch is not eligible for recovery for that Dispatch Interval where such cost is calculated.

(ii) If a Resource becomes non-dispatchable in any Dispatch Interval, any cost associated with Energy injection or withdrawal above the Resource's Desired Dispatch is not eligible for recovery for that Dispatch Interval where such cost is calculated.

(iii) If a Resource's minimum operating limit is increased above the Resource's minimum operating limit that was used to make the commitment decision, the increase is greater than the Resource's Operating Tolerance and the Resource remains dispatchable in any Dispatch Interval, any cost associated with Energy injection or withdrawal above the Resource's Desired Dispatch is not eligible for recovery for that Dispatch Interval where such cost is calculated, or;

(iv) If a Resource is committed, and, subsequent to that commitment, the Resource's originally submitted limits are modified such that the Resource's availability switches from injection to withdrawal or from withdrawal to injection, any cost associated with Energy output above the Resource's Desired Dispatch is not eligible for recovery for the Dispatch Interval for which such cost is calculated.

(4) Real-Time incremental Energy make whole payment revenue is calculated as follows:

A Market Participant's Real-Time incremental Energy make whole payment revenue amount for each eligible Resource for Real-Time dispatched MWs that exceed Day-Ahead cleared MW for each Dispatch Interval within the commitment period is the following.

Energy revenue associated with Resource billing meter quantity, including MSRs providing a market service, from Resource Energy Offers as described under Section 6.2.3 of this Attachment AE, is calculated by multiplying Resource Energy above Day-Ahead cleared MW by Real-Time LMP at that Resource Settlement Location.

8.6.36 Reliability Unit Commitment Self-Incremental Energy Make Whole Payment Amount

- (1) The RUC self-incremental Energy make whole payment amount is a payment to a Market Participant when a Resource's RUC incremental eligible costs are greater than the eligible RUC incremental revenues received during those dispatch intervals where the Resource's actual output is above the Resource's RUC as committed minimum operating limit. The make whole payment is equal to the difference between the incremental costs and revenues.
- (2) Eligible costs and revenue for a RUC self-incremental Energy make whole payment are for Resources where actual output is above the Resource's RUC as committed minimum operating limit and when the Market Monitor has not verified the Resource Offers associated with Section 3.2(K) of Attachment AF of this Tariff prior to the approval of the RTBM or the Resource Offer exceeds \$2,000.
- (3) The RUC self-incremental Energy make whole payment cost is the Energy cost associated with cleared Resource Energy, including MSRs providing a market service, from the Resource Energy Offer as described under Section 6.2.3 of this Attachment AE. This cost is calculated by multiplying actual Resource Energy by the cost of such Energy determined from the Resource's applicable RTBM as dispatched Energy Offer Curve.

The Energy Offer Curve used to determine a RUC self-incremental make whole payment amount for Energy above the Minimum Economic Capacity Operating Limit is the RTBM as Dispatched Energy Offer Curve as verified by the Market Monitor.

(a) Cost Disallowances:

A Market Participant's Uninstructed Resource Deviation Cost Disallowance, Non-Dispatchable Cost Disallowance, or Minimum Limit Cost Disallowance is equal to the positive difference between the Resource's Energy cost at actual injection or withdrawal as calculated from the Resource's current Dispatch Interval Energy Offer Curve and the Resource's Energy cost at the Resource's

economic operating point as calculated from the Resource's current Dispatch Interval Energy Offer Curve. A Resource's economic operating point is the MW injection or withdrawal where the cost on the Resource's current Dispatch Interval Energy Offer Curve first exceeds the Real-Time LMP for that Resource.

(i) If a Resource has operated outside of its Operating Tolerance in any Dispatch Interval, any cost associated with Energy injection or withdrawal above the Resource's Desired Dispatch is not eligible for recovery for that Dispatch Interval where such cost is calculated.

(ii) If a Resource becomes non-dispatchable in any Dispatch Interval, any cost associated with Energy injection or withdrawal above the Resource's Desired Dispatch is not eligible for recovery for that Dispatch Interval where such cost is calculated.

(iii) If a Resource's minimum operating limit is increased above the Resource's minimum operating limit that was used to make the commitment decision, the increase is greater than the Resource's Operating Tolerance and the Resource remains dispatchable in any Dispatch Interval, any cost associated with energy injection or withdrawal above the Resource's Desired Dispatch is not eligible for recovery for that Dispatch Interval where such cost is calculated, or;

(iv) If a Resource is committed, and, subsequent to that commitment, the Resource's originally submitted limits are modified such that the Resource's availability switches from injection to withdrawal or from withdrawal to injection, any cost associated with Energy output above the Resource's Desired Dispatch is not eligible for recovery for the Dispatch Interval for which such cost is calculated.

(4) RUC self-incremental Energy make whole payment revenue is calculated as follows:

A Market Participant's RUC self-incremental Energy make whole payment revenue amount for each eligible Resource that is committed by SPP as specified

in Section 4.1(10)(a) of this Attachment AE for each Dispatch Interval within the commitment period is the following.

Energy revenue associated with Resource billing meter quantity, including MSRs providing a market service, from Resource Energy Offers as described under Section 6.2.3 of this Attachment AE, calculated by multiplying Resource Energy above Resources minimum operating limit by Real-Time LMP at that Resource Settlement Location.