SCHEDULE 43K

**Allocation of SSR Costs Associated with Rush Island Units 1 & 2,
For the Period Beginning September 1, 2022**

In order to allocate the costs that result from Support Resource ("SSR") designation of Rush Island Units 1 & 2, such compensation provided for a period of service beginning on September 1, 2022, the monthly charges and credits shall be determined for LSE(s) that benefit(s) from the operation of the SSR Unit(s) as specified in this rate schedule. The monthly charges and credits shall be netted and summed for each Month and uplifted to the benefiting LSE(s).

In order to determine the LSE(s) that benefit(s) from the operation of the SSR Unit(s), the Transmission Provider conducted studies specific to the SSR Unit(s) that are consistent with the corresponding Attachment Y Reliability Study. The studies are used to: 1) identify impacted load buses and associated Elemental Pricing Nodes, 2) determine the impacted Load Zone Commercial Pricing Nodes, 3) identify the coincident peak Actual Energy Withdrawal for the billing Month for impacted Load Zone Commercial Pricing Nodes, 4) determine the portion of the Load Zone Commercial Pricing Node benefiting from the SSR for the billing Month, 5) determine the cost share for the Load Zone Commercial Pricing Node, 6) sum the Load Zone Commercial Pricing Node shares by LSE, and 7) determine the net charge or credit assigned to each LSE.

Step One: Identify Impacted Load Buses and Associated Elemental Pricing Nodes

a. For each thermal constraint identified in the Attachment Y Reliability Study Report, the load distribution factor (*i.e.* the amount of change in flow on a facility that results

from an incremental change in the amount of energy injection or load withdrawal[1]) for load buses is calculated as follows:

i. Using the quarterly MISO market Network Model, the load distribution factors on the constraint ($DF_{CONSTRAINT}$) relative to all market generation in the MISO footprint are calculated for all load buses;

ii. Load buses with load distribution factors above the one percent minimum threshold are selected and mapped to Elemental Pricing Nodes using the currently effective Commercial Model;

b. For each voltage violation or voltage constraint identified in the Attachment Y Reliability Study Report, the boundary of the voltage constrained area is determined as follows:

i. Using the MISO planning model, any buses with voltage violations are identified;

ii. Using the MISO planning model, a voltage stability analysis (P-V analysis) is performed for voltage instability conditions to determine the point of instability and to identify buses participating in voltage collapse using modal analysis;

iii. From the set of buses having voltage violations or participating in voltage collapse, the boundary of the voltage constrained area is determined and the

[1] Load distribution factors are used by MISO to determine the contribution of loading on a constraint caused by the individual load buses. Distribution factors are linear sensitivities calculated from the analysis of the electrical network, and represent the amount of change in flow on an electrical element that results from an incremental change in amount of energy injection or withdrawal. The amount of flow on a particular element of the transmission system is a function of the transmission line impedance relative to that of the rest of the transmission system. A mathematical model is used to calculate the load distribution factor for each load as a linear function of this relationship.

Using commercially available analysis software, MISO calculates these load distribution factors for each load bus in the MISO footprint relative to the MISO market generation that replaces the power that would otherwise be supplied by the SSR Unit. MISO computes these factors on a quarterly basis using the latest available Market Network Model that reflects the most up to date topology of the network represented under normal system conditions. The Market Network Model elements correspond to the Commercial Model data that define the Commercial Pricing Nodes associated with the modeled loads and the Market Generation Resources and permits the identification of the LSEs that benefit from operation of the SSR Unit.

corresponding transmission interface elements are identified to fully enclose the area;

iv. Using the identified transmission elements as a defined voltage proxy constraint, the load distribution factors on the proxy constraint ($DF_{CONSTRAINT}$) relative to the MISO generation reference are calculated for all load buses;

v. All load buses in a voltage constrained area (load distribution factor equal to or nearly equal to 1.0) are selected and mapped to Elemental Pricing Nodes using the currently effective Commercial Model.

Step Two: Determine the Impacted Load Zone Commercial Pricing Nodes

a. Using the currently effective Commercial Model, the Elemental Pricing Nodes that are associated with the impacted load buses are used to identify the Load Zone Commercial Pricing Nodes for the current billing Month.

Step Three: Identify the coincident peak Actual Energy Withdrawal for the Billing Month

for Impacted Load Zone Commercial Pricing Nodes

a. For each Load Zone Commercial Pricing Node identified in the previous step, the Transmission Provider determines the Monthly_PEAK $_{CP\ NODE}$, which is the hourly Actual Energy Withdrawal volume during the billing Month based on the coincident peak hour across all Impacted Load Zone Commercial Pricing Nodes.

Step Four: Determine the portion of the Load Zone Commercial Pricing Node benefiting

from the SSR for the billing Month

a. To determine the Elemental Pricing Node Volume (EPN _MW), using the Peak Hour in the billing Month for a Load Zone Commercial Pricing Node, the Daily Load Weighting Factor (DLWF)[2] for each Elemental Pricing Node associated with the Load Zone Commercial Pricing Node is multiplied by the Monthly_PEAK.

$$EPN\_MW = Monthly\_PEAK_{CP\ NODE} \times DLWF_{EP\ NODE}$$

[2] The Daily Load Weighting Factor is a daily calculation of the ratio of the EPNode load to the total load for the parent CPNode load as determined by real time data, and is used to estimate the EPNode fraction for the purpose of settling the prices in the market settlements process. This calculation is performed seven days prior to the market day from data supplied by the State Estimator, which is "[a] software program used by the Transmission Provider to create a real time assessment of the condition of the Transmission Provider Region." Tariff Section 1.S.

b. For each impacted load EPNode, the distribution factors are summed for all constraints identified by the Transmission Provider to determine the aggregate load distribution factor (EPN_LDF).

$EPN\_LDF = \Sigma\ DF_{CONSTRAINT}$

c. The Elemental Pricing Node Volume is multiplied by the aggregate load distribution factor (EPN_LDF) for each Elemental Pricing Node, to determine the Elemental Node Impact Volume (EPN_IMP_MW).

$EPN\_IMP\_MW = EPN\_MW \times EPN\_LDF$

d. The EPN_IMP_MW is summed for all Elemental Pricing Nodes for the Load Zone Commercial Pricing Node for a total Load Zone Commercial Pricing Node Impact Volume (IMP_MW).

$IMP\_MW_{CP\ NODE} = \Sigma\ EPN\_IMP\_MW$

Step Five: Determine the Cost Share for the Load Zone Commercial Pricing Node

a. A Commercial Pricing Node's percentage Share (CPN_SHARE) for a SSR Agreement is equal to the IMP_MW for that Load Zone Commercial Pricing Node divided by the total IMP_MW for all Load Zone Commercial Pricing Nodes that benefit from the SSR Unit(s).

$CPN\_SHARE_{SSR} = IMP\_MW_{CP\ NODE} / \Sigma\ IMP\_MW_{CP\ NODE}$

Step Six: Sum the Load Zone Commercial Pricing Node shares by LSE

a. Sum the CPN_SHARE by Asset Owner, which represents the LSE, to determine the total LSE percentage Share (LSE_SHARE) for the SSR Agreement.

$LSE\_SHARE_{SSR} = \Sigma\ CPN\_SHARE_{SSR}$

Step Seven: Determine the Net Charge or Credit Assigned to Each LSE

a. The net charge or credit for each LSE (SSR_AMT_{LSE}) is obtained by multiplying the LSE_SHARE_{SSR} by the net charge or credit calculated for the SSR Agreement ($TOTAL\_AMT_{SSR}$).

$SSR\_AMT_{LSE} = LSE\_SHARE_{SSR} \times TOTAL\_AMT_{SSR}$