



CITY OF LODI
COUNCIL COMMUNICATION

AGENDA TITLE: Adopt Resolution Authorizing the City Manager to Execute Amendment No. 1 to the Third Amended and Restated Northern California Power Agency Metered Subsystem Aggregator Agreement

MEETING DATE: May 7, 2014

PREPARED BY: Electric Utility Director

RECOMMENDED ACTION: Adopt a resolution authorizing the City Manager to execute Amendment No. 1 to the Third Amended and Restated Northern California Power Agency Metered Subsystem Aggregator Agreement.

BACKGROUND INFORMATION: The Northern California Power Agency (NCPA) Pool Members and the California Independent System Operator (CAISO) are signatories to the Third Amended and Restated NCPA Metered Subsystem Aggregator Agreement (MSSAA) which establishes the rules and requirements for how NCPA and the NCPA Pool Members, acting as load following metered subsystem entities, perform scheduling and settlement functions in the CAISO markets. The City of Lodi is an NCPA Pool Member and a signatory to the MSSAA.

In response to Federal Energy Regulatory Commission (FERC) Order 764, the CAISO is implementing a new Fifteen Minute Market (FMM) scheduling and settlement process. The FMM is slated to become active in May 2014. Among other changes, the FMM will replace the Hour Ahead Scheduling Process (HASP), thereby removing barriers to the integration of variable energy resources. As a result, various sections of the MSSAA that currently reference the HASP need to be updated to reference the FMM. Such changes will ensure the MSSAA remains consistent with current business practices and terminology used in the CAISO Tariff. It is also recommended that approval of future administrative changes such as these to the MSSAA be delegated to the Electric Utility Director with direction from the Risk Oversight Committee (ROC).

The ROC received a report on this agenda item and recommended City Council approval.

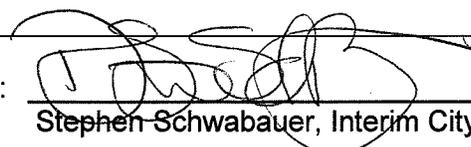
FISCAL IMPACT: Not applicable.

FUNDING AVAILABLE: Not applicable.


Elizabeth A. Kirkley
Electric Utility Director

PREPARED BY: Melissa Price, Rates & Resources Manager

EAK/MP/lst

APPROVED: 
Stephen Schwabauer, Interim City Manager

**CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION
AND
NORTHERN CALIFORNIA POWER AGENCY
AND
NORTHERN CALIFORNIA POWER AGENCY METERED SUBSYSTEM
AGGREGATOR AGREEMENT MEMBERS**

**Amendment No. 1 to the Third Amended and Restated
NCPA MSS Aggregator Agreement**

This Amendment No. 1 to the Third Amended and Restated NCPA MSS Aggregator Agreement ("Amendment No. 1") is dated this _____ day of _____, 2014 and is entered into, by and between:

- (1) **Northern California Power Agency**, a joint powers agency organized under the laws of the State of California, having its registered and principal place of business located at 651 Commerce Drive, Roseville, California 95678 ("NCPA");

and
- (2) **California Independent System Operator Corporation**, a California non-profit public benefit corporation having its principal place of business located in such place in the State of California as the CAISO Governing Board may from time to time designate, 250 Outcropping Way, Folsom, California 95630 (the "CAISO").

and
- (3) **NCPA MSSAA Members**, the subset of NCPA MSS Members that are listed in Schedule 18.

NCPA, the CAISO and the MSSAA Members are hereinafter referred to individually as "Party" or collectively as the "Parties."

Whereas:

- A. The Parties are signatories to the Third Amended and Restated NCPA MSS Aggregator Agreement ("MSSAA"), which was effective January 1, 2012. The Third Amended and Restated MSSAA replaced the original MSSAA effective September 1, 2002, the First Amended and Restated MSSAA which was effective January 1, 2005, and the Second Amended and Restated MSSAA which was effective March 31, 2009.

- B.** The Parties desire to amend the Third Amended and Restated MSSAA to align with the CAISO's Order 764 initiative: Fifteen Minute Market (FMM) at the interties to include amendments to: a) Section 12.8: Allocation of Net Real-Time Market (RTM) Bid Cost Uplift, b) Sections 12.9: Grid Management Charges Based on Market Services, 12.15: MSS Net Negative Uninstructed Deviation, and 12.17.3: Emission Costs to replace "HASP" with "FMM" Self Scheduled Energy, and c) Schedule 19: Load Following Deviation Energy Formula.
- C.** In all other respects, the Parties intend that the Third Amended and Restated MSSAA remain in full force and effect in accordance with its terms.

NOW THEREFORE, **THE PARTIES AGREE** as follows:

- 1. Effective Date.** This Amendment No. 1 shall be effective on the date accepted for filing and made effective by FERC.
- 2. Termination.** The provisions of this Amendment No. 1 shall remain in full force and effect, unless subsequently amended, until the termination of the Third Amended and Restated MSSAA.
- 3. Amendment to the Agreement.** The Third Amended and Restated MSSAA shall be amended as follows:
 - 3.1** Section 12.8 (Allocation of Net RTM Bid Cost Uplift) is deleted in its entirety and replaced with the following:

12.8 Allocation of Net RTM Bid Cost Uplift. The allocation of Net RTM Bid Cost Uplift is based on the MSS elections as specified in Section 4.9.13 of the CAISO Tariff. The hourly RTM Bid Cost Uplift is allocated to the Scheduling Coordinator for NCPA as the MSS Aggregator that has elected to not follow its Load and gross Settlement, in proportion to NCPA's MSS Measured Demand minus NCPA's Measured Demand served solely by means of valid and balanced TOR Self-Schedules for the Trading Hour. For the Scheduling Coordinator for NCPA as the MSS Aggregator that has elected not to follow its Load and net Settlement, the hourly RTM Bid Cost Uplift is allocated in proportion to NCPA's MSS Aggregation Net Measured Demand minus NCPA's Measured Demand served solely by means of valid and balanced TOR Self-Schedules. For the Scheduling Coordinator for NCPA as an MSS Aggregator that has elected to follow its Load, the hourly RTM Bid Cost Uplift is allocated in proportion to NCPA's MSS Net Negative Uninstructed Deviation with MSS Load Following Energy and FMM Self-Scheduled Energy from Load following resources identified in Schedule 14(a) of this Agreement and associated Operational Adjustments included in the netting, plus any FMM reductions not associated with valid and balanced ETC or TOR Self-

Schedules in the Day-Ahead Market and plus any FMM reductions not associated with the FMM Self-Scheduled Energy from Load following resources listed in Schedule 14(a) of this Agreement.

- 3.2** Section 12.9 (Grid Management Charges Based on Market Services) is deleted in its entirety and replaced with the following:

12.9 Grid Management Charges Based on Market Services. If the CAISO is charging Grid Management Charges for Market Services Charge, NCPA's Scheduling Coordinator will not be assessed Grid Management Charges for Market Services Charge associated with MSS Load Following Energy and FMM Self-Scheduled Energy from Load following resources identified in Schedule 14(a) of this Agreement and associated Operational Adjustments.

- 3.3** Section 12.15 (MSS Net Negative Uninstructed Deviation) is deleted in its entirety and replaced with the following:

12.15 MSS Net Negative Uninstructed Deviation. The calculation of MSS Net Negative Uninstructed Deviation must include MSS Load Following Energy and FMM Self-Scheduled Energy from Load following resources identified in Schedule 14(a) of this Agreement and associated Operational Adjustments as part of the calculation of Net Negative Uninstructed Deviation quantities when used for purposes of applicable CAISO Settlement allocation. MSS Load Following Energy and FMM Self-Scheduled Energy from Load following resources identified in Schedule 14(a) of this Agreement and associated Operational Adjustments shall be netted against Uninstructed Imbalance Energy to properly account for the actual quantity of Net Negative Uninstructed Deviation.

- 3.4** Section 12.17.3 (Emission Costs) is deleted in its entirety and replaced with the following:

12.17.3 If NCPA as MSS Aggregator elects to follow its Load, in accordance with Section 4.9.13 of the CAISO Tariff, and if NCPA as MSS Aggregator elects not to charge the CAISO for Emissions Costs of the Generating Units serving the Load of NCPA's System, then NCPA's Scheduling Coordinator shall bear its proportionate share of the total amount of those costs incurred by the CAISO based on NCPA as an MSS Aggregator's Net Negative Uninstructed Deviations with MSS Load Following Energy and FMM Self-Scheduled Energy from Load following resources identified in Schedule 14(a) of this Agreement and associated Operational Adjustments included in the netting.



- 3.5 Schedule 19 (MSSA Load Following Deviation Energy Formula) is deleted in its entirety and the Schedule 19 attached to this Amendment No. 1 is substituted in its place.
4. This Amendment No. 1 constitutes the complete and final agreement of the Parties with respect to the purpose of this Amendment No. 1 as described in the Recitals hereto and supersedes all prior understandings, whether written or oral, with respect to such subject matter.
5. Except as expressly modified in this Amendment No. 1, the Third Amended and Restated MSSAA shall remain in full force and effect in accordance with its terms, and the unmodified provisions of the Third Amended and Restated MSSAA shall apply to any new rights and/or obligations established by this Amendment No.1.
6. This Amendment No. 1 may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same agreement.



IN WITNESS WHEREOF, the Parties have caused this Amendment No. 1 to be duly executed by and through their respective authorized representatives as of the date hereinabove written.

CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

By: _____
Name: _____
Title: _____
Date: _____

NORTHERN CALIFORNIA POWER AGENCY

By: _____
Name: _____
Title: _____
Date: _____

CITY OF ALAMEDA

By: _____
Name: _____
Title: _____
Date: _____

CITY OF BIGGS

By: _____
Name: _____
Title: _____
Date: _____



CITY OF GRIDLEY

By: _____
Name: _____
Title: _____
Date: _____

CITY OF HEALDSBURG

By: _____
Name: _____
Title: _____
Date: _____

CITY OF LODI

By: _____
Name: STEPHEN SCHWABAUER
Title: Interim City Manager
Date: _____

ATTEST:

RANDI JOHL-OLSON
City Clerk

APPROVED AS TO FORM:
JANICE D. MAGDICH
Interm City Attorney

CITY OF LOMPOC

By: _____
Name: _____
Title: _____
Date: _____

By: _____




CITY OF PALO ALTO

By: _____
Name: _____
Title: _____
Date: _____

PLUMAS SIERRA RURAL ELECTRIC COOPERATIVE

By: _____
Name: _____
Title: _____
Date: _____

PORT OF OAKLAND

By: _____
Name: _____
Title: _____
Date: _____

CITY OF UKIAH

By: _____
Name: _____
Title: _____
Date: _____

Schedule 19

MSSA Load Following Deviation Energy Formula

[Sections 12.11 and 12.12]

All references in the MSSA Load Following Deviation Energy Formula to Scheduled MSS Demand and Metered MSS Demand includes all MSS Demand, both with a delivery point of the NCPA MSS LAP, and any Demand with a delivery point of one of the NCPA or SVP custom LAPs used to account for load served by ETC or TOR deliveries. Each of the NCPA and SVP custom LAPs are further described in Schedule 15 of this Agreement. The MSSA Load Following Deviation Energy Formula may be updated in the future as operational experience is gained, and necessary refinements are identified. Only those modifications to this Schedule 19 which are mutually acceptable to both NCPA and CAISO will be incorporated in to the MSSA Load Following Deviation Energy Formula, but any modification to Schedule 19 that may reflect a change in resources utilized by NCPA to serve MSS Demand will be incorporated in an expedited manner, and will not be arbitrarily withheld.

Load Following MSS Participation in Integrated Forward Market

NCPA, acting as MSS Aggregator, can bid a combination of resources that result in final Schedules that are greater or less than the amount of Energy required to balance its Demand obligations in the Day-Ahead market. The resulting difference represents the amount of Energy, which can be positive for a sale or negative for a purchase, that is considered sold or purchased with the CAISO in the Day-Ahead Integrated Forward Market. The resulting sale or purchase is obligated to be delivered to or from the CAISO in real-time. The following is a description of the formula used to derive this value:

DA CAISO Sale (+)/Purchase (-) for the operating hour (MW) = DA CAISO

Sale/Purchase must be calculated as:

Sum of Day-Ahead Final Market Energy Schedule for MSSA
Internal Generation * (1- Fixed Loss Factor)
+ Sum of Day-Ahead Final Market Energy Schedule for MSS
Internal Generation
- Sum of Day-Ahead Scheduled MSS Demand
+ Sum of Day-Ahead Preferred NCPA MSS Trade

Where:

DA Preferred NCPA MSS Trade =

DA Preferred NCPA MSS Trade must be
calculated as:

Sum of Non-Marble Day-Ahead Preferred
Import Energy to the MSS Aggregation * (1-

Fixed Loss Factor)
+ Sum of Marble Day-Ahead Preferred Import Energy to the MSS Aggregation
+ Sum of Day-Ahead Inter-SC Trade in to the MSS Aggregation
+ Sum of MSSA External Generation
+ Sum of Day-Ahead Preferred Bilateral Trade in to the MSS Aggregation
- Sum of Day-Ahead Preferred Export Energy out of the MSS Aggregation
- Sum of Day-Ahead Inter-SC Trade out of the MSS Aggregation
- Sum of MSSA External Demand
- Sum of Day-Ahead Preferred Bilateral Trade out of the MSS Aggregation

Where:

- MSSA Internal Generation means generation that is located outside the geographic boundary of a MSS but is contained within the MSS Aggregation.
- MSS Internal Generation means generation located either behind a City Gate Meter or contained within the geographic boundary of a MSS.
- City Gate Meter means a physical or logical meter(s) that records all power usage by a MSS located at the Points of MSS Interconnection. Each of the MSS Member City Gate Meter(s) is listed in Schedule 1.
- Fixed Loss Factor means the loss factor used to estimate the actual losses. This factor is negotiated between NCPA and the CAISO, which is currently set at two percent (2%).
- Day-Ahead Scheduled MSS Demand means the Load Self-Scheduled as submitted by NCPA, prior to any Day-Ahead adjustments applied by the CAISO Market software.
- MSS External Generation means the sum of all Scheduled Generation in the Day-Ahead Market using the NCPA SCID that is not in the MSS Aggregation.
- MSSA External Demand means the sum of all Scheduled Demand in the Day-Ahead Market using the NCPA SCID that is not in the MSS Aggregation.
- Day-Ahead Preferred Bilateral Trades in to and out of the MSS Aggregation are trades that are arranged by contract with a Third Party in the Day-Ahead time-frame and that are not Scheduled with the CAISO as an Inter-SC Trade.

- Day-Ahead Preferred Import Energy, Day-Ahead Preferred Export Energy, and Day-Ahead Inter-SC Trades in to and out of the MSS Aggregation are as submitted Day-Ahead to the CAISO.
- Marble Day-Ahead Preferred Import Energy in to the MSS Aggregation is scheduled using the Plumas-Sierra Rural Electric Cooperative Transmission Rights up to Marble Substation Intertie, as described in Schedule 13.
- Non-Marble Day-Ahead Preferred Import Energy in to the MSS Aggregation is all scheduled imports other than Marble Day-Ahead Preferred Import Energy in to the MSS Aggregation.

DA Preferred NCPA MSS Trade will be calculated by NCPA and provided to the CAISO. The CAISO will use this information in combination with the other data referenced in the DA CAISO Sale equation to calculate the DA CAISO Sale quantity. DA Preferred NCPA MSS Trade is referred to as preferred because all CAISO Scheduled values are based on the schedules and Bids as submitted by NCPA in to the Integrated Forward Market. Both DA CAISO Sale and DA Preferred NCPA MSS Trade are based on pre-schedules and are hourly values. The CAISO can request that DA Preferred NCPA MSS Trade be reported in MW's for the hour or by applicable Settlement Interval (e.g., five (5) minute basis). The DA CAISO Sale quantity is calculated by CAISO.

MSS Load Following Deviation Energy Formula (DOPD)

The Deviation Energy ("DOPD") represents the MSS Aggregation Imbalance Energy in MWh adjusted for Day-Ahead Sales or Purchases, as calculated above, and MSSA Expected RTD Instructed Imbalance Energy (RTD IIE), and Regulation Energy.

MSSA Expected RTD IIE is an amount calculated by the CAISO that represents the Energy dispatched by the CAISO to the MSSA that is required to be provided by the MSSA. MSSA Expected RTD IIE includes Energy from Energy Bids (including those associated with Spinning Reserve and Non-Spinning Reserve), Real-Time Energy from RMR Units, and Exceptional Dispatch Energy. MSSA Expected RTD IIE does not include energy associated with Load following instructions.

Deviation Energy (DOPD) for the Settlement Interval (MWh) = Deviation Energy must be calculated as:

- Metered MSS Gross Demand
- + Sum of Metered MSSA Internal Generation * (1 – Fixed Loss Factor)
- + Sum of Metered MSS Internal Generation
- + RT NCPA MSS Trade
- + Sum of Regulation Down Energy
- Sum of MSSA Expected RTD IIE
- Sum of Regulation Up Energy
- (DA CAISO Sale/Purchase)

Where:

RT NCPA MSS Trade = RT NCPA MSS Trade must be calculated as:

- + Sum of Non-Marble Final Imports in to the MSS Aggregation * (1 – Fixed Loss Factor)
- + Sum of Marble Final Imports in to the MSS Aggregation
- + Sum of Inter-SC Trades in to the MSS Aggregation
- + Sum of Bilateral Trades in to the MSS Aggregation
- + Sum of MSSA External Generation
- + Real-Time Grizzly Delivery
- Sum of Final Exports out of the MSS Aggregation
- Sum of Inter-SC Trades out of the MSS Aggregation
- Sum of Bilateral Trade out of the MSS Aggregation
- Sum of MSSA External Demand
- RT CAISO Sale (+)/Purchase (-)

Where:

- RT NCPA MSS Trade means the amount of energy Scheduled and or delivered between the MSS Aggregation and the CAISO Balancing Authority based on the transactions which are active in Real-Time.
- Metered MSS Gross Demand is the result of a logical meter calculation that adds Metered MSS Internal Generation back in to the Metered Load.
- Fixed Loss Factor means the loss factor used to estimate actual losses. This factor is negotiated between NCPA and the CAISO, which is currently set at two percent (2%).
- MSSA Expected RTD IIE is energy associated with those ADS instruction service types that represent a requirement for the delivery of energy to the CAISO that is incremental (or decremental) to the MSSA's Load-Following needs. The equation reflected above assumes that ADS will deliver instructions that will account for all differences between the Day-Ahead Schedule and the Real-Time operating target of the unit, in a way that accurately accounts for any MSS Load Following Energy, and differentiates that from MSSA Expected RTD IIE.
- Regulation Energy is the integrated expected energy which is calculated and provided in Real-Time due to CAISO Regulation Up and Regulation Down signals.
- Final Imports and Exports in to and out of the MSS Aggregation, including System Resources and Resource Specific System Resources listed in Schedule 14(a), are as Scheduled Day-Ahead or in FMM, or Operational Adjustments as Scheduled up to 30-minutes before the active hour pursuant to ETC and TOR scheduling rights as expressed in Schedule 13,

and includes all Operational Adjustments to System Resources and Resource Specific System Resources listed in Schedule 14(a).

- Marble Final Imports in to the MSS Aggregation are scheduled using the Plumas-Sierra Rural Electric Cooperative Transmission Rights up to Marble Substation Intertie, as described in Schedule 13.
- Non-Marble Final Imports in to the MSS Aggregation are all scheduled imports other than Marble Final Imports in to the MSS Aggregation.
- Inter-SC Trades in to and out of the MSS Aggregation are as Scheduled Day-Ahead or in FMM.
- Bilateral Trades are trades that are arranged by contract with a Third Party in the Day-Ahead or FMM time-frame that are not Scheduled with the CAISO as an Inter-SC Trade.
- MSSA External Generation and MSSA External Demand are Day-Ahead scheduled values only, as changes to these Schedules after the Day-Ahead market cannot be used to balance Gross MSS Demand, and as such are distinct and separate from Final Imports and Exports Scheduled in to and out of the MSS Aggregation.
- Real-Time Grizzly Delivery means the energy deliveries arranged after the close of FMM, but in accordance with the Grizzly Development and Mokelumne Settlement Agreement.
- RT CAISO Sale (+)/Purchase (-) means the quantity of Imbalance Energy purchased or sold in the CAISO Real-Time Market resulting from a Forced Outage of MSSA Internal Generation, MSS Internal Generation or MSS Demand in the MSS Aggregation. RT CAISO Sale (+)/Purchase (-) quantities are calculated and included in the RT NCPA MSS Trade for the minimum period of a) the duration of the Forced Outage of MSSA Internal Generation, MSS Internal Generation or MSSA Demand, or b) until NCPA acquires replacement supply, or restores demand, in or prior to the next available CAISO Day-Ahead Market. All Forced Outages on MSSA Internal and External Generation must be reported to the CAISO in accordance with Section 9 of the CAISO Tariff.

RT NCPA MSS Trade is calculated by NCPA and provided to the CAISO, and will be used by the CAISO in combination with the other data described in the Deviation Energy equation above to calculate Deviation Energy.

RESOLUTION NO. 2014-70

A RESOLUTION OF THE LODI CITY COUNCIL AUTHORIZING THE
CITY MANAGER TO EXECUTE AMENDMENT NO. 1 TO THE THIRD
AMENDED AND RESTATED NORTHERN CALIFORNIA POWER AGENCY
METERED SUBSYSTEM AGGREGATOR AGREEMENT

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WHEREAS, the Northern California Power Agency (NCPA) Pool Members and the California Independent System Operator (CAISO) are signatories to the Third Amended and Restated NCPA Metered Subsystem Aggregator Agreement (MSSAA), which establishes the rules and requirements for how NCPA and the NCPA Pool Members, acting as load following metered subsystem entities, perform scheduling and settlement functions in the CAISO markets, and the City of Lodi is an NCPA Pool Member and a signatory to the MSSAA; and

WHEREAS, in response to Federal Energy Regulatory Commission (FERC) Order 764, the CAISO is implementing a new Fifteen Minute Market (FMM) scheduling and settlement process, and the FMM is slated to become active in May 2014; and

WHEREAS, among other changes, the FMM will replace the Hour Ahead Scheduling Process (HASP), thereby removing barriers to the integration of variable energy resources; and

WHEREAS, as a result, various sections of the MSSAA that currently reference the HASP need to be updated to reference the FMM; and

WHEREAS, such changes will ensure the MSSAA remains consistent with current business practices and terminology used in the CAISO Tariff; and

WHEREAS, it is also recommended that approval of future administrative changes such as these to the MSSAA be delegated to the Electric Utility Director with direction from the Risk Oversight Committee (ROC); and

WHEREAS, the ROC received a report on this agenda item and recommends City Council approval.

NOW, THEREFORE, BE IT RESOLVED that the Lodi City Council does hereby authorize the City Manager to execute Amendment No. 1 to the Third Amended and Restated Northern California Power Agency Metered Subsystem Aggregator Agreement (MSSAA); and

BE IT FURTHER RESOLVED that the Lodi City Council hereby authorizes the Electric Utility Director to approve future administrative changes to the MSSAA with direction from the Risk Oversight Committee.

Dated: May 7, 2014

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I hereby certify that Resolution No. 2014-70 was passed and adopted by the City Council of the City of Lodi in a regular meeting held May 7, 2014, by the following vote:

- AYES: COUNCIL MEMBERS – Hansen, Johnson, Mounce, and Mayor Katzakian
- NOES: COUNCIL MEMBERS – None
- ABSENT: COUNCIL MEMBERS – Nakanishi
- ABSTAIN: COUNCIL MEMBERS – None


RANDI JOHL-OLSON
City Clerk