

# Frequently Asked Questions

## Excess Behind the Meter Production

Document Version: **1.1**

Date Created: **4/6/2020**

### Revision History

Date	Version	Description
4/6/2020	1.0	Initial documentation. ISO responds to some of the questions received by market participants regarding the Excess Behind the Meter Production initiative.
<u>4/16/2020</u>	<u>1.1</u>	<p><u>Question 4: Clarify that EBTMP activation date is 1/1/2021 to coincide with the Market Settlement Timeline Transformation implementation. This keep meter data submission deadlines consistent from the start of implementation.</u></p> <p><u>Question 5: Clarified no XSD changes will occur for SubmitMeterData or RetrieveMeterData payloads. This is because no data enumeration is defined for the existing XSD (which accommodates multiple measurement types). Technical specifications will still provide the defined “EBTMP” and “LOAD” measurement types to be used for meter data submission to MRI-S. A sample XML is displayed. Do not submit EBTMP meter data for trade dates prior to 1/1/2021 or ineligible resources (EIM, MSS, or ISO-Polled).</u></p> <p><u>Question 6: Clarified EBTMP activation is 1/1/2021. SCME (re-)submission of meter data for trade dates prior to 1/1/2021 should not include EBTMP, even when performed after the activation calendar date.</u></p> <p><u>Appendix A: Spreadsheet formula error discovered. Red font values were corrected. Spreadsheet will be provided separately so formula is visible.</u></p>

 <b>California ISO</b>	<b>Technology</b>	<b>Template Version:</b>	<b>1.1</b>
		<b>Document Version:</b>	<b>1</b>
<b>Excess Behind the Meter Production ISO External Market Simulation Plan</b>		<b>Date Created:</b>	<b>4/6/2020</b>

# 1. Introduction

The following are frequently asked questions regarding the Fall 2020 Release’s Excess Behind the Meter Production initiative. This initiative requires Scheduling Coordinator Meter Entities (SCMEs) to use a consistent methodology when reporting Load (i.e. “Gross Load”, as defined as the amount of energy withdrawn from transmission to distribution systems) and a new Excess Behind the Meter Production measurement type (which is defined as the amount of excess production behind the meter injected from the distribution to the transmission system). As with the final draft proposal, an example of how the SCME should report the Gross Load (with Gross Up) measurements by including a distribution loss factor in its calculation. This document also raises awareness that the settlement meter submission deadline will shift from today’s current date to a new settlement timeline planned for Fall 2020 Release.

## 1.1 Frequently Asked Questions

**Question 1: Per the BRS (version 1.0), there is a note on the bottom of page 5 that states: “Note: Excess Behind the Meter Production will be reported at the same DLAP as load.” Does this mean the SCME would report Excess Behind the Meter Production using the same load resource ID (e.g. DLAP) as it does today?**

There will be a few changes to how SCMEs perform load meter data submissions:

- Load must now uniformly be determined by all SCMEs as “Gross Load” is defined in accordance with the revised tariff, where Gross Load considers the amount of energy withdrawn from the ISO grid through the meter.
- In instances where energy flows through the meter to the ISO grid, where excess production behind the meter exists, the excess behind the meter production must be separately metered and reported to the ISO under a new “EBTMP” (Excess Behind the Meter Production) measurement type.
- For the Gross Load value, the SCME (Scheduling Coordinator Meter Entity) may include the meter’s Distribution Loss Factor (DLF) and Gross Up the Gross Load to account for losses between the transmission and distribution interface (see example below)

What will not change:

- SCMEs will continue to submit meter data through their same Load Resource ID as before (e.g. DLAP)
- ISO Polled metering will not report the Excess Behind the Meter Production values, as the ISO-polling meters typically refers to generators (not load) and have no visibility for distribution system loss for DLF determination. No changes.
- Although the Load meter value (MEASUREMENT TYPE = ‘Load’) may be calculated differently than today by the SCME (as it is the objective of this initiative to have a consistent basis for reporting both Gross Load and Excess Production across all ISO participants), the meter data submission mechanism to MRI-S for Gross Load will not change (MEASUREMENT\_TYPE still is “LOAD”).

 <b>California ISO</b>	<b>Technology</b>	<b>Template Version:</b>	<b>1.1</b>
		<b>Document Version:</b>	<b>1</b>
<b>Excess Behind the Meter Production ISO External Market Simulation Plan</b>		<b>Date Created:</b>	<b>4/6/2020</b>

**Question 2: Please clarify if reporting the DLAP after Excess Behind the Meter Production initiative goes live, it will be similar to how it is reported today, as netted load (Load – excess generation)? If not, please send the proposed formula and example as how DLAP meter values would be reported.**

Load meter submission will not be “netted”, as Gross Load (“LOAD”) and Excess Behind the Meter Production (“EBTMP”) will both be reported separately to the ISO at all times, even if one or the other is zero. *As shown in the example below, Gross Load considers behind the meter production, but both are reported separately.*

*Please see the example in Appendix A how the Gross Load, Gross Load (with Gross Up), Excess Behind the Meter Production is determined.*

**Question 3: Will the ISO calculate the net load information for settlements?**

No. The SCME will need to perform the Gross Up calculation, reflect submitted load meter data as “Gross Load” under the revised tariff definition, as well as submit the new EBtMP measurement type for each hourly settlement interval.

*Please see the example in Appendix A to view how the calculations are performed.*

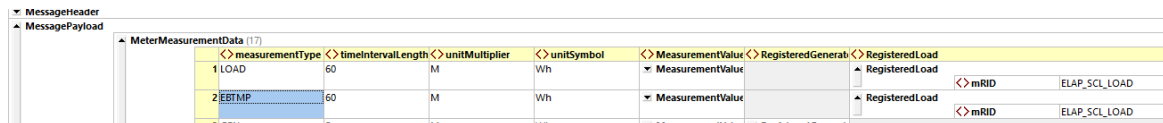
**Question 4: Will submitted Load information be presented in MRI-S as today?**

Effective EBTMP Activation on 1/1/2021 Go Live, MRI-S will:

- Receive both measurement types (“LOAD”, “EBTMP”) through its display upload feature as well as its API.
- Support retrieval of both measurement types from its API
- Display both Gross Load and EBTMP measurement types as separate values


**Question 5: Please provide an xml submission example.**

*Sample XML will be provided with publication of the technical specifications, XSD, and WSDL artifacts. Below is an example of what a SubmitMeterData payload would look like for an SCME submitting both “LOAD” and “EBTMP” measurement types.*



measurementType	timeIntervalLength	unitMultiplier	unitSymbol	MeasurementValue	RegisteredGeneration	RegisteredLoad
1 LOAD	60	M	Wh			
2 EBTMP	60	M	Wh			

*No changes to the current SubmitMeterData and RetrieveMeterData API payloads will occur. The technical specifications will require a new submission of the “EBTMP” measurement type to be provided for load resources for trade dates before 1/1/2021. Additionally, ISO systems will not support meter data submission of the “EBTMP”*

 <b>California ISO</b>	<b>Technology</b>	<b>Template Version:</b>	<b>1.1</b>
		<b>Document Version:</b>	<b>1</b>
<b>Excess Behind the Meter Production ISO External Market Simulation Plan</b>		<b>Date Created:</b>	<b>4/6/2020</b>

measurement type for ineligible load resources (e.g. EIM, MSS, and ISO-Polled) once activation occurs.

The major difference from today will be the addition of an 'EBtMP' MEASUREMENT TYPE data element ~~to the payload schema definition~~, which will complement the existing "LOAD" MEASUREMENT TYPE data element for each load metering interval. If no EBtMP occurs during a given hour/interval (e.g. behind the meter production is less than the full load behind the meter), the SCME would submit a value of zero for the 'EBtMP' MEASUREMENT TYPE.

**Question 6: In reviewing Excess Behind the Meter Production initiative's BRS, we notice the final meter data timeline is still state as "T+48B", which is correct as of now. However, this will be outdated when come to 1/1/2021, the Settlement Timeline Transformation initiative goes live.**

The Excess Behind the Meter Production BRS will be updated to clarify the transition of the meter data submission deadline from T+48B to T+52B, effective 1/1/2021, per the Market Settlements Timeline Transformation initiative. The EBtMP requirement and ISO system changes will activate on 1/1/2021. EBtMP Performance reporting will initiate after the meter submission deadline passes for the first impacted trade date (i.e. 1/1/2021).

SCMEs performing meter data (re-)submissions for trade dates prior to 1/1/2021 should not provide the EBtMP measurement type. Perform submissions for trade dates prior to 1/1/2021 as you would prior to EBtMP initiative.

As a reminder, OASIS will only report EBtMP meter data values (as aggregated by TAC Area) as a snapshot at the meter data submission deadline date. If settlement meter corrections are applied after this date, they will be reflected in a Settlement Re-Calc Statement, but the OASIS report will not be updated. As such, the OASIS report should not be considered as settlement data. Instead, shadow settlements should be based on the new 'EBtMP' Bill Determinant.

Market Simulation for EBtMP will be performed as scheduled for Fall 2020 Release.

**Question 7: Please provide an example for how the SCME would determine Gross Load, Gross Load (with Gross Up) by using the distribution loss factor, Excess Behind the Meter Production metering values.**

*Please see the example in Appendix A how the Gross Load, Gross Load (with Gross Up), Excess Behind the Meter Production is determined.*

 <b>California ISO</b>	<b>Technology</b>	<b>Template Version:</b>	<b>1.1</b>
		<b>Document Version:</b>	<b>1</b>
<b>Excess Behind the Meter Production ISO External Market Simulation Plan</b>		<b>Date Created:</b>	<b>4/6/2020</b>

## Appendix A: Gross Load (with Gross Up), EBTMP Meter Data Submission Example

In the example below, assume a simple DLAP (or similar load resource ID) has three separate meter locations. Each location has its own distribution location (i.e. its own distribution loss factor), both behind the meter load and production are present, and metering polling at 5-min intervals (simplified for the example, may be different in actual practice).

Behind the meter, conditions for both actual load and production is shown in the table below. A common example would be a house or facility pulling energy from the grid, but simultaneously producing energy from locally installed solar panels. Full load represents the total energy consumption of the customer.

At the meter, however, load is now defined as “gross load” under the tariff and considers only the energy that passes through the meter from the grid (full load – production). In cases where behind the meter production exceeds the full load, gross load is reported as zero and the excess amount (production – full load) is reported to MRI-S under a new EBTMP measurement type. Otherwise, EBTMP is reported as zero. The load and meter production are not “netted” in this sense. Both measurement types are reported separately at all times.

For Gross Load, a gross up calculation may be performed using the DLF (distribution loss factor) to consider losses between from the transmission to distribution interface, as well as the avoided losses due to any excess production at the meter. The formula establishes Gross Load (with Gross Up) = Max [ (Gross Load \* (1+DLF)) - (EBtMP\*DLF), 0 ] for the hourly meter values. The Max() function ensures negative gross load is not reported. In this example, hour-ending 13’s Gross Load (with Gross Up) and EBTMP is determined. No loss calculations should be performed for the EBTMP measurement value.

Within the meter data submission deadline, the DLAP meter data is aggregated for the settlement hour, and submitted to MRI-S under the respective “LOAD” and “EBTMP” measurement types by the SCME. The EBTMP data snapshot at the meter data submission deadline is reported in OASIS. If meter data corrections are subsequently performed, the OASIS report will not be updated. Therefore, this report is not settlement quality data.

Also, please note that ISO-pollled metering does not apply to this example or the excess behind the meter production initiative.

**Figure E.1 Example of Gross Load (with Gross Up), Excess Behind the Meter Production Meter Data Calculation, Submission.**

Meter Location	Meter Polling Time Interval	Behind the Meter		At the Meter		Hourly Meter Value		Distribution Loss Factor (DLF)	Losses from Gross Load (ie. Gross Load * DLF)	Avoided Losses from EBtMP (ie. EBtMP * DLF)	MEASUREMENT TYPE (MRI-S)	
		Full Load (MWh)	Production, e.g. Solar (MWh)	Gross Load (MWh)	Excess Behind the Meter Production (MWh)	Gross Load (MWh)	EBTMP (MWh)				LOAD (MWh)	EBTMP (MWh)
1	12:05	5	2	3	0	25	3	0.10	2.5	0.30	27.2	3
	12:10	5	2	3	0							
	12:15	5	2	3	0							
	12:20	5	2	3	0							
	12:25	5	2	3	0							
	12:30	5	6	0	1							
	12:35	5	6	0	1							
	12:40	5	6	0	1							
	12:45	5	4	1	0							
	12:50	5	2	3	0							
	12:55	5	2	3	0							
13:00	5	2	3	0								
2	12:05	1	2	0	1	0	22	0.03	0	0.66	0	22
	12:10	1	2	0	1							
	12:15	1	2	0	1							
	12:20	1	2	0	1							
	12:25	0	2	0	2							
	12:30	0	2	0	2							
	12:35	0	3	0	3							
	12:40	0	3	0	3							
	12:45	0	3	0	3							
	12:50	0	3	0	3							
	12:55	1	2	0	1							
13:00	1	2	0	1								
3	12:05	6	0	6	0	75	5	0.02	1.5	0.1	76.4	5
	12:10	6	0	6	0							
	12:15	7	0	7	0							
	12:20	8	0	8	0							
	12:25	9	0	9	0							
	12:30	10	0	10	0							
	12:35	10	0	10	0							
	12:40	10	0	10	0							
	12:45	9	0	9	0							
	12:50	0	1	0	1							
	12:55	0	2	0	2							
13:00	1	3	0	2								
<b>DLAP TOTAL, HE-13</b>											<b>103.6</b>	<b>30</b>

Note: A formula error occurred in FAQ v1.0 with the red-font values which has been corrected in v1.1. A spreadsheet version is also provided to view formula.