California ISO

Excess BTM Production

Straw Proposal

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1. Executive Summary

The frequency and magnitude of excess behind the meter (BTM) production, periods when a customer's behind the meter resources generate output above host load, is increasing as more behind the meter resources are integrated into the system. The treatment of this energy directly impacts load figures submitted to the ISO and the ISO calculation for Unaccounted for Energy (UFE) values. The treatment of excess behind the meter production energy in Gross Load data submissions has direct impacts on a large number of downstream settlement allocations based upon these Gross Load figures. Because of these impacts, it is critical that Gross Load values are reported to the ISO in a consistent manner.

Recently the ISO observed inconsistencies between how Gross Load figures were submitted. In some cases Gross Load was reported after netting excess behind the meter production and in others, Gross Load was reported without netting excess behind the meter production. When excess behind the meter production is not netted from Gross Load, the values are captured in unaccounted for energy values. When Gross Load is reported inconsistently, it results in disproportionate allocations for all load based charge codes, which includes the allocation of the Transmission Access Charge (TAC).[1] Additionally, entities also incur additional charges and credits related to unaccounted for energy. Finally because excess behind the meter production values are included in either Gross Load or unaccounted for energy, the ISO has no visibility into these values, despite availability from most entities submitting load.

Through this initiative, the ISO intends to address the following items:

1. Ensure consistent reporting of Gross Load by clarifying the tariff definition
2. Create a clear tariff definition for excess behind the meter production
3. Specify how excess behind the meter production will be reported to the ISO and settled

This straw proposal outlines an updated definition for Gross Load. This definition specifically states that Gross Load should not have any excess behind the meter production included in the figures that are reported to the ISO. These values should be roughly equal to the aggregate consumption measured by retail meters.

This straw proposal also includes details on a new tariff term called "Excess Behind the Meter Production." Values for excess behind the meter production will also need to be reported to the ISO, by applicable entities, in a similar fashion to Gross Load. This figure is intended to capture a summation of the energy sent to the grid during periods when a customer's behind the meter resource generates output above the host load.

Finally, this straw proposal outlines how excess behind the meter production will be treated by the ISO. In this straw proposal, the ISO is not proposing any changes to the way the Gross Load is currently treated. All existing charge codes settled on Gross Load will continue to be

[1] Load based charge codes are included in Appendix A for reference.

settled on those values. The ISO proposes that excess behind the meter production will be reported and settled as negative load. It will be paid at the locational prices where the data is being submitted.

By implementing these three primary changes proposed under this initiative the ISO strives to eliminate inconsistent reporting for Gross Load occurring across entities and establish reporting of excess behind the meter production values to the ISO. Making these changes and including a measure for excess behind the meter production will result in more accurate settlement figures that are more representative of true market conditions.

2. Plan for Stakeholder Engagement

This stakeholder initiative is organized to allow time for the careful consideration of issues surrounding excess behind the meter production. The ISO intends to present its draft final proposal to its Board of Governors during Q1 2019. The currently planned schedule for this initiative is shown below.

Table 1 – Stakeholder initiative schedule

Milestone	Date
Post Issue Paper	6/28/2018
Stakeholder Call	7/10/2018
Stakeholder Written Comments Due	7/18/2018
Post Straw Proposal	9/4/2018
Stakeholder Call	9/12/2018
Stakeholder Written Comments Due	9/26/2018
Revised Straw Proposal Posted	10/15/2018
Draft Final Proposal Posted	12/17/2018
Stakeholder Call	Q1 2019
Stakeholder Written Comments Due	Q1 2019
Board of Governors Meeting	May 16-17, 2019

3. Background and Issue

The proliferation of distributed energy resources, particularly behind the meter rooftop solar, increased rapidly throughout the ISO balancing area during the last decade. The ISO expects the continued expansion of behind the meter resources in the future. There are currently about 6,200 MW of non-utility behind the meter rooftop solar installed in the ISO balancing area, with over 2,500 MW installed since 2016.[2] Because of the recent and vigorous adoption of these resources, a number of potential issues related to their impact on various aspects of the ISO markets and operations have become more relevant and now require addressing.

The ISO observed inconsistencies in how Gross Load data was submitted to the ISO, where some data was submitted with excess behind the meter production netted from totals and some where it was not netted. In response to these findings, the ISO began this initiative to determine what parts of the tariff should be clarified, and how excess behind the meter production should be treated for resources in the ISO.

Excess behind the meter production refers to energy generated by behind the meter resources above host customers' load. This occurs during periods when a household or customer site with a behind the meter resource produces more energy than the household or customer site is consuming. Any excess behind the meter production is injected back onto the grid and consumed by other customers.

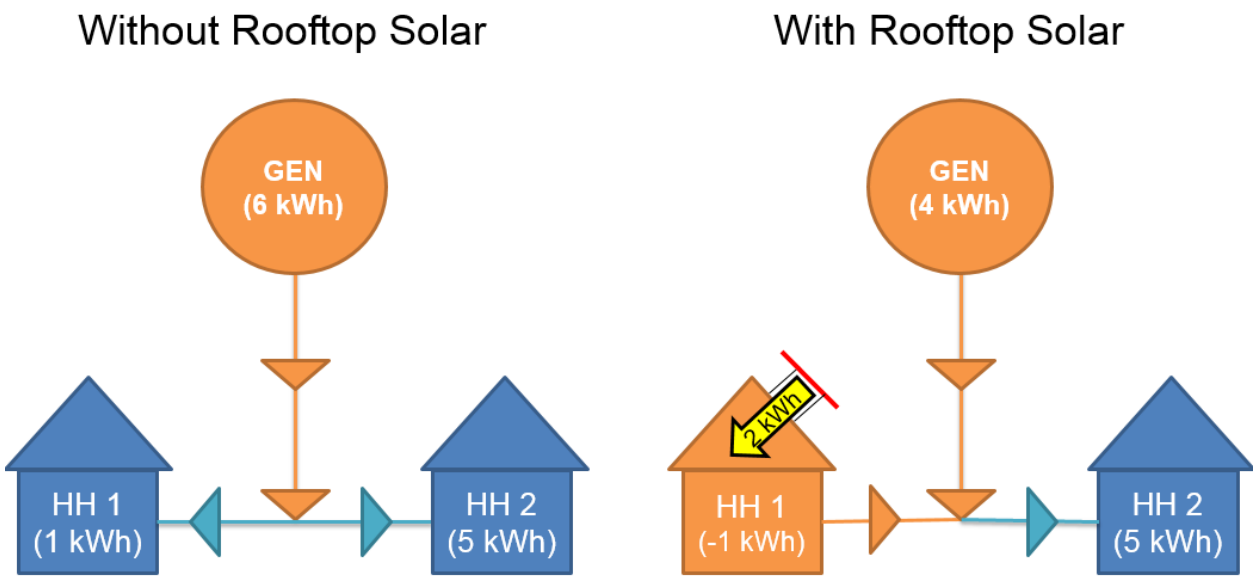
To help illustrate these concepts, we provide the following example to illustrate excess behind the meter production. This example assumes a snapshot in time to demonstrate periods that display occurrences of excess behind the meter production. In this example we can imagine a set of two households. The second household consumes 5 kWh of energy, while the first household consumes 1 kWh of energy, but has a rooftop solar panel capable of generating 2 kWh of energy when the sun is out. Figure 1 is a simplified line diagram representing the two households with the left half depicting energy flows without sun and the right half depicting energy flows when the sun is shining and household 1 is generating solar energy.

There are a few key takeaways from Figure 1 worth noting, which are listed below:

- Both households consume the same amount of energy with and without solar generation
- With solar generation household 1 injects 1 kWh of energy back onto the grid, which reduces the generation from the traditional generator from 6 kWh to 4 kWh
- **Excess behind the meter production** with solar generation is 1 kWh, or the amount of energy exported by household 1
- The **Gross Load** with solar generation is 5 kWh, or the amount of energy consumed by household 2

[2] https://www.californiadgstats.ca.gov.

Figure 1 – Example with simple line diagram



The ISO also provides the following descriptions and tables to further describe and clarify these examples. Table 2 summarizes the same information outlined in Figure 1 when the sun is shining. In this table row [A] represents the total energy consumed by each household, and row [B] represents the total amount of solar output from each of the households. Generally, for households with rooftop solar generation, these amounts may be unknown because energy measured at the household meter are reported as the summation of solar generation and host load. This means, when the sun is shining the meter on household 1 reads 1 kWh on the export channel, and 0 kWh on the load channel. Table 2 also shows these observed meter values in row [C] and row [D]. In this case, household 1 has a meter reading of 1 kWh on the export channel, while household 2 shows a meter reading of 5 kWh on the load channel of the meter.

Table 3 illustrates additional useful calculations for this example. Row 1 [E] simply sums the actual consumption for both household 1 and 2. As mentioned above, this value may not be known, because each meter reports the summation of energy at the household level – either the total amount consumed or the total injected back onto the grid – rather than both numbers. In this example the total consumption is 6 kWh, or 1 kWh from household 1 and 5 kWh from household 2. Row [F] sums the total of the load channels from both households, in this case 5 kWh. Row [G] calculates the difference between the total consumption at each household less the total solar generation, or the net consumption at each household. In this example the total is 4 kWh.

On the lower half of Table 3, we show additional calculations including how Gross Load could be calculated and reported if excess behind the meter production was netted (in row [H]) from these values, how Gross Load could be reported if excess behind the meter production was not

netted from these values (row [I]), and finally the total unaccounted for energy that would appear if Gross Load were reported without netting excess behind the meter production.

Table 2 – Gross Load reporting approach impacts example inputs

		Reported/observed value (kWhs)	
		Household 1	**Household 2**
Load	[A]	1 kWh	5 kWh
Rooftop Solar Output	[B]	2 kWh	0 kWh
Instantaneous Meter Read Load Channel	[C]	0 kWh	5 kWh
Instantaneous Meter Read Export Channel	[D]	1 kWh	0 kWh

Table 3 - Gross Load reporting approach example settlement impacts outputs

			Reported/observed value (kWhs)
Σ Load	[E]	[A1 + A2]	1 kWh + 5 kWh = 6 kWh
Metered Load (Σ load channels)	[F]	[C1 + C2]	0 kWh + 5 kWh = 5 kWh
Σ of Load - Σ of Rooftop Solar Output	[G]	[(A1 + A2) - (B1 + B2)]	6 kWh – 2 kWh = 4 kWh
Gross Load with “netting excess BTM production”	[H]	[(C1 + C2) – (D1 + D2)]	5 kWh – 1 kWh = 4 kWh
Gross Load with “non-netting of excess BTM production”	[I]	[C1 + C2]	0 kWh + 5 kWh = 5 kWh

When Gross Loads are reported to the ISO with excess behind the meter production netted from submissions, the ISO does not receive any data about the amount of excess behind the meter production. In the example above, if loads were reported to the ISO net of excess behind the meter production, the ISO would receive load values of 4 kWh, or the sum of all load less excess behind the meter production, without insight into the magnitude of the latter component.

If instead, loads were reported to the ISO without netting excess behind the meter production, the load values received would be 5 kWh, and 1 kWh would be captured as unaccounted for energy. In actual market scenarios, these unaccounted for energy values would be indistinguishable from other unaccounted for energy, and offer little insight into the actual amount of excess behind the meter production.

Finally, if both Gross Load (either with or without netting excess behind the meter production) and excess behind the meter production are reported to the ISO, both 5 kWh of total energy from summing the load channel energy and the 1 kWh of total excess behind the meter production from summing the generation channel are reported, it will provide load and excess behind the meter production visibility to the ISO.

In addition to issues of incomplete data, when some scheduling coordinators report loads that are net of excess behind the meter production and others report loads that are not net of excess behind the meter production, additional settlement issues can arise. Again, referencing the example above, suppose that 2 scheduling coordinators are reporting load, with the first reporting load net of excess behind the meter production, and the second reporting load without netting excess behind the meter production. The first would report a total load of 4 kWh, while the second would report a total of 5 kWh. In this simple example, charges, such as the transmission access charge, would be disproportionately allocated to load between the two entities, while actual system conditions would be identical. Additionally, the second scheduling coordinator would also incur additional charges and credits related to unaccounted for energy, where the first would not. This impact results in cost shifting among reporting areas.

The impacts of reporting load data differently as illustrated in this simple example demonstrate the need to clarify the definition of Gross Load so that it is reported consistently and uniformly to the ISO in all cases, as well as the need to clarify how excess behind the meter production is reported to the ISO.

4. Scope

The scope of this initiative has been carefully considered to address the issues outlined below, and does not include items addressed in other ongoing stakeholder initiatives (particularly the transmission access charge initiative) or ancillary topics.

Issues to be included in scope of this initiative:

The ISO proposes the scope of this initiative will include the following items:

1. Clarify a standard reporting practice for Gross Load
    - Specifically establish that these values should be consistently reported across the ISO and should not be reported net of excess behind the meter production
2. Establish a new tariff definition for excess behind the meter production
3. Establish how excess behind the meter production will be reported and settled
    - Excess behind the meter production will be paid the locational price where it is reported
    - Excess behind the meter production will not be subject to losses
4. Determine appropriate practice for representation of excess behind the meter production in ISO market processes
5. Explore potential impacts of the reporting of Gross Load and excess behind the meter production on Scheduling Coordinators that submit meter data to the ISO

Issues not in scope of this initiative:

This initiative will not address the following items:

1. Telemetry for the excess behind the meter production and the transmission access charge will not be addressed in this initiative
2. Collecting actual generation values from residential rooftop solar units, or any other residential or retail behind the meter resources. The focus of this effort is to clarify and receive accurate gross load data submissions only on those metering values currently available at household meters, such as channel 1 and channel 4.
3. Modifications to any generation or load involving distributed energy resource aggregations, demand response resources, wholesale Qualified Facilities and co-generation or combined heat and power (CHP) resources, or any other resources participating in ISO markets.
4. How excess behind the meter production energy impacts ISO short-term load forecasting processes or setting operating reserve requirements. The ISO notes that these processes and requirements utilize real-time data. Metering and settlements data is not utilized for the development of short term load forecasts or operating reserve requirements. However, pending the developments under this initiative, these processes may be informed by some of the resulting market changes and settlements data – *i.e.*, could be used to improve some aspects of load forecasting and setting reserve requirements through other future efforts.

5. Straw Proposal

As discussed above, it is important that load data is accurately and consistently reported to the ISO. Below, in Section 6.1, the ISO discusses the proposed clarifications to the tariff definition for Gross Load. Section 6.2 introduces an outline for the tariff term “Excess Behind the Meter Production”, and Section 6.3 discusses how the reported excess behind the meter production figures will be treated in the ISO settlement process.

5.1. Clarification to the Gross Load definition

A key issue central to a number of items addressed in this initiative is the inconsistent interpretation of the Gross Load definition in the ISO tariff. As noted above, the ISO recently became aware of inconsistencies in how excess behind the meter production was being reported to the ISO in Gross Load data submittals.

The ISO will clarify the Tariff definition of Gross Load through this initiative to specify that any excess behind the meter production should not be included in Gross Load (*i.e.*, behind the meter production will not be netted from Gross Load data submittals). It is not appropriate to net excess behind the meter production from Gross Load because such treatment would ignore a portion of the customer’s consumption that benefits from having access to, and use of, the transmission system. The ISO believes that distributed energy resource (DER) energy production should not be netted from the Gross Load values used for allocation of transmission access charges because the transmission system provides reliability and capacity services to all loads and supports the delivery of local generation.

The current definition of Gross Load is found in Appendix A to the ISO tariff:

> For the purposes of calculating the transmission Access Charge, Gross Load is all Energy (adjusted for distribution losses) delivered for the supply of End-Use Customer Loads directly connected to the transmission facilities or directly connected to the Distribution System of a Utility Distribution Company or MSS Operator located in a PTO Service Territory. Gross Load shall exclude (1) Load with respect to which the Wheeling Access Charge is payable; (2) Load that is exempt from the Access Charge pursuant to Section 4.1 of Appendix I; and (3) the portion of the Load of an individual retail customer of a Utility Distribution Company, Small Utility Distribution Company, or MSS Operator that is served by a Generating Unit that: (a) is located on the customer’s site or provides service to the customer’s site through arrangements as authorized by Section 218 of the California Public Utilities Code; (b) is a qualifying small power production facility or qualifying cogeneration facility, as those terms are defined in the FERC's regulations implementing Section 201 of the Public Utility Regulatory Policies Act of 1978; and (c) secures Standby Service from a Participating TO under terms approved by a Local Regulatory Authority or FERC, as applicable, or can be curtailed concurrently with an Outage of the Generating Unit serving the Load.

Gross Load forecasts consistent with filed Transmission Revenue Requirements will be provided by each Participating TO to the CAISO.[3]

The ISO proposes the following tariff revisions to the definition of Gross Load to help clarify the issues discussed herein:

~~For the purposes of calculating the transmission Access Charge, Gross Load is all Energy~~ Demand (adjusted for distribution losses) ~~delivered for the supply~~ of End-Use Customer Loads directly connected to the transmission facilities or directly connected to the Distribution System of a Utility Distribution Company or MSS Operator located in a PTO Service Territory. Gross Load includes Load served by Excess Behind the Meter Production. Gross Load ~~shall~~ excludes:

(1) Load with respect to which the Wheeling Access Charge is payable;

(2) Load that is exempt from the Access Charge pursuant to Section 4.1 of Appendix I; ~~and~~

(3) ~~the portion of the~~ Load of an individual retail customer served by its own onsite Generating Unit or energy storage device, or as authorized by Section 218 of the California Public Utilities Code;

~~of a Utility Distribution Company, Small Utility Distribution Company, or MSS Operator that is served by a Generating Unit that: (a) is located on the customer's site or provides service to the customer's site through arrangements as authorized by Section 218 of the California Public Utilities Code;~~

(4~~b~~) Onsite Load served by ~~is~~ a qualifying small power production facility or qualifying cogeneration facility, as those terms are defined in the FERC's regulations implementing Section 201 of the Public Utility Regulatory Policies Act of 1978; and

(5~~c~~) Load secured~~s~~ by Standby Service from a Participating TO under terms approved by a Local Regulatory Authority or FERC, as applicable, or can be curtailed concurrently with an Outage of the Generating Unit serving the Load.

Gross Load forecasts consistent with filed Transmission Revenue Requirements will be provided by each Participating TO to the CAISO. For purposes of this definition, Generating Units, storage devices, and Loads will be considered onsite where they share, or are sub-metered behind, the same meter.

[3] http://www.caiso.com/Documents/AppendixA_MasterDefinitionSupplement_asof_Mar16_2018.pdf

These revisions are intended to do the following:

- Remove the introductory clause stating that this definition is for purposes of calculating the TAC, which implies that this definition is *only* relevant to the TAC. As discussed herein, Gross Load impacts a number of settlement charges, independent of the TAC settlement calculation.
- Clarify that "Gross Load" does not actually refer to Energy, which is "the electrical energy produced, flowing or supplied by generation, transmission or distribution facilities, being the integral with respect to time of the instantaneous power," but a measured subset of Demand, which is the instantaneous amount of energy that is delivered to Loads and Scheduling Points by generation, transmission or distribution facilities. This allows the removal of additional language that is both superfluous and confusing.
- Include an express provision that Gross Load includes Load served by Excess Behind the Meter Production, as defined below. This provision provides unambiguous direction on the treatment of such load.
- Re-format the definition to list each exclusion clearly, rather than having a list of exclusions with its own list of inclusions. This also allows the removal of the reiteration of locations in the third exclusion.
- For entities in the definition outlined above, specify how loads and resources—now expressly including storage—must be co-located, or "onsite," which the ISO defines as sharing or being sub-metered behind the same meter. The Generating Unit and the load must be electrically connected at the same point provided that the Generating Unit is on-line. The ISO seeks to avoid confusion regarding sub-metered load or generation behind a customer facility meter. Such loads should continue to be treated as onsite and therefore excluded from Gross Load.

5.2. Introduce the term Excess Behind the Meter Production

A critical goal for this initiative is to establish a clear and concise standard for reporting the excess behind the meter production quantities to ensure a uniform reporting practice going forward. The ISO proposes the introduction of a new term to the tariff called: Excess Behind the Meter Production. This term will be used to represent the amount of generation that exceeds host consumption. This value will be reported to the ISO in a similar fashion as load figures, and will not require applying adjustments for losses.[4]

The ISO proposes to define Excess Behind the Meter Production as: "Energy from an End-Use Customer in excess of its onsite Demand."

[4] It is anticipated that a majority of this generation will come from behind the meter rooftop residential solar, and that this energy will likely be consumed at the local level, will not travel long distances, and will not be transformed to different voltages. Therefore it will not be required that these values include losses or otherwise incorporate any adjustment for losses.

5.3. Excess Behind the Meter Production Settlement

In addition to introducing the new term, Excess Behind the Meter Production, to the tariff the ISO proposes that these values be treated by the ISO settlement system similar to negative load. Scheduling Coordinators that currently report load to the ISO will be required to report both Gross Load and Excess Behind the Meter Production values to the ISO going forward.[5] These values would be subject to load prices at the location where they are reported to the ISO.

5.4. Unaccounted for Energy determination

As described above, today excess behind the meter production is not explicitly reported to the ISO and is instead captured in Gross Load or Unaccounted For Energy values reported to the ISO. Therefore, in addition to updating the definition of Gross Load to expressly not include excess behind the meter production, the determination for Unaccounted For Energy will also need to be updated.

Current determination for UFE BY UDC:

UFE QUANTITY = GENERATION METER + INTERTIE IMPORT METER – (LOAD METER + EXPORT INTERTIE METER + RTD LOSS MW)

Updated determination for UFE BY UDC:

UFE QUANTITY = GENERATION METER + INTERTIE IMPORT METER – ((GROSS LOAD METER – EXCESS BTM PRODUCTION METER) + EXPORT INTERTIE METER + RTD LOSS MW)

6. Comments

The ISO received comments from a number of stakeholders on the issue paper for this initiative. Many of the comments asked for additional clarification on specific topics that were discussed in the issue paper. Where possible, the ISO has attempted to incorporate this feedback and supply additional clarity in this straw proposal. A brief summary of key questions and concerns from market participant comments are highlighted below. These are accompanied by responses provided to address stakeholder comments and concerns.

A complete set of all stakeholder comments received can be found on the ISO website here:

http://www.caiso.com/informed/Pages/StakeholderProcesses/ExcessBehindTheMeterProduction.aspx

1. (CAC) the definition of “excess behind the meter production” should be more precise

[5] This proposed modification would not apply to certain entities that may have preexisting metering arrangements with the ISO, such as some smaller POUs and certain MSS entities, for which load figures are calculated at a citygate from various inputs.

2. (CAC) The ISO proposes to "clarify the tariff definition of Gross Load to state that excess BTM production should not be netted from Gross Load." This would create a clear conflict with the treatment of industrial customers with behind the meter generation.

Additional language to clarify this was added to the background and example, in Section 3, to outline how the calculation for excess behind the meter production should theoretically work. Additional details were added to the straw proposal, Section 5.2, that specifically discuss the outline of the tariff definition for excess behind the meter production. As stated, the ISO intends for excess behind the meter production to capture behind the meter generation in excess of host demand (as metered through channel 4 on most residential meters). This straw proposal also clarifies that energy generated and scheduled into the ISO as a resource would not be subject to any change proposed in this initiative.

3. (Glen Perez) not all Load in the ISO market is "reported" or submitted by the UDCs

The ISO has updated the terminology throughout this straw proposal to address this stakeholder comment, and to align with how the ISO believes this issue should be addressed. The ISO seeks stakeholder feedback on the updated terminology used in this straw proposal for areas that may need additional clarity.

4. (Glen Perez) Clarifying, maybe in the Metering BPM, of the practice of submittal of Load for the SC MEs needs to address

The ISO agrees with this suggestion, and plans to make related specification as part of this initiative.

5. (Glen Perez) For CAISO MEs…there is no visibility into the excess BTM production, the Load value calculated and used for market settlements represents the netted Load value and not the Gross Load value discussed in this Issue Paper

This is addressed in footnote 3, where the straw proposal describes that these modifications will not apply to certain entities with preexisting arrangements, such as CAISO metered entities (MEs), including some Metered Sub-System (MSS) entities and publicly owned utility (POU) that have load figures calculated at a citygate.

6. (CPUC) The costs associated with accounting for excess BTM production as generation or negative load were not discussed either in the Excess BTM Production Issue Paper or the Stakeholder Presentation

The ISO does not have visibility into the costs that reporting entities may incur for related system changes. This straw proposal attempts to outline a process where Gross Load and excess behind the meter production are accurately reported from existing data that is available and collected from automated metering infrastructure (AMI) smart meters today. We anticipate that some system changes for market participants and the ISO will be necessary to aggregate, submit, and apply settlement to these values. However, the ISO does not believe the proposal would result in an overly burdensome collection of a new data, such as the actual amount of generation from residential rooftop solar panels.

7. (PG&E) differentiate the treatment of Load and Load meter values as they relate to (a) TAC charges, (b) Market Participant Load settlements, and (c) the Allocation of Settlement Uplift and Neutrality charges to Metered Load and/or Measured Demand.
8. (PG&E) PG&E believes that clarifying the definition of "Gross Load" (as an objective of this initiative) should be limited to the application of the transmission access charge (TAC).

The ISO believes that the definition of Gross Load should be clarified, in that it will expressly include excess behind the meter production. As specified in this proposal, allocation for settlement charge codes will not change going forward. The ISO currently believes that allocating these load based charges on net load will result in inappropriate cost shifting. The proposal continues to align with principles outlined in the ISO's Cost Allocation Guiding Principles.[6]

9. (PG&E) clarify and elaborate on whether the correct term and stakeholder affected by this initiative should be the Load Serving Entities (LSE) as opposed to the Utility Distribution Companies (UDC).

Please see response to Comment 3 above.

10. (SDG&E) clarify what the LSEs are to report

Language in this straw proposal has been updated to clarify what values should be reported to the ISO for Gross Load and for Excess Behind the Meter Production.

11. (SDG&E) clarify how it proposes to treat distribution losses

In Section 5.2 the ISO specifies that adjustment for losses will not need to be applied for excess behind the meter production values submitted to the ISO.

12. (Six Cities) it would not be reasonable to impose requirements for extensive retrofitting of metering arrangements for existing BTM resources

This is addressed in footnote 3, where the straw proposal describes that these modifications will not apply to certain entities with preexisting arrangements for load calculation determined at the citygate, such as the Six Cities.

7. EIM Designation

For this initiative, the ISO plans to seek approval from the ISO Board only. The ISO believes this initiative falls outside the scope of the EIM Governing Body's advisory role, because the initiative does not propose changes to either real-time market rules or rules that govern all ISO markets. This proposal is limited to addressing load metering for cost allocation purposes, and

[6] http://www.caiso.com/Documents/DraftFinalProposal-CostAllocationGuidingPrinciples.pdf.

therefore should not affect real-time market rules. The ISO seeks stakeholder feedback on this proposed decisional classification for the initiative.

8. Next Steps

The ISO will discuss this straw proposal with stakeholders during a call on September 12, 2018. Stakeholders are asked to submit written comments by September 26, 2018 to initiativecomments@caiso.com.

9. Appendix A

Below is a table listing the charge codes that are currently allocated according to load. This table is included to show the downstream charge codes that are impacted by Gross Load. No specific changes are intended during this initiative for how the allocation methodology for these charge codes is performed. As indicated in the straw proposal, the determination – rather than the allocation – for unaccounted for energy will be updated.

Table A1 – Charge codes that are allocated based on Gross Load

372	High Voltage Access Charge Allocation
525	FERC Fee Over / Under Recovery
550	FERC Fee Settlement due Monthly
551	FERC Fee Settlement due Annually
591	Emissions Cost Recovery
1302	Long Term Voltage Support Allocation
1303	Supplemental Reactive Energy Allocation
1353	Black Start Energy Allocation
1487	Emergency Energy Exchange Program Neutrality Adjustment
4561	GMC System Operations Charge
4989	Daily Rounding Adjustment
4999	Monthly Rounding Adjustment
6011	Day Ahead Energy, Congestion, Loss Settlement
6046	UnderScheduling and Over Scheduling Allocation
6090	Ancillary Service Upward Neutrality Allocation
6194	Spinning Reserve Obligation Settlement
6196	Spinning Reserve Neutrality Allocation
6294	Non-Spinning Reserve Obligation Settlement
6296	Non-Spinning Reserve Neutrality Allocation
6457	Interties Schedules Declined Allocation
6474	Real Time Unaccounted for Energy Settlement
6475	Real Time Uninstructed Imbalance Energy Settlement
6477	Real Time Imbalance Energy Offset
6478	Real Time Imbalance Energy Offset - System
6480	Excess Cost Neutrality Allocation
6486	Real Time Excess Cost for Instructed Energy Allocation
6490	NERC/WECC Reliability Charge
6594	Regulation Up Obligation Settlement
6596	Regulation Up Neutrality Allocation
6636	IFM Bid Cost Recovery Tier 1 Allocation
6637	IFM Bid Cost Recovery Tier 2 Allocation
6678	Real Time Bid Cost Recovery Allocation

6694	Regulation Down Obligation Settlement
6696	Regulation Down Neutrality Allocation
6774	Real Time Congestion Offset
6790	CRR Balancing Account
6791	CRRBA Accrued Interest Allocation
6806	Day Ahead Residual Unit Commitment (RUC) Tier 1 Allocation
6807	Day Ahead Residual Unit Commitment (RUC) Tier 2 Allocation
6947	IFM Marginal Losses Surplus Credit Allocation
6977	Allocation of Transmission Loss Obligation Charge for Real Time Schedules Under Control Agreements
6985	Real Time Marginal Losses Offset
7076	Flexible Ramp Forecast Movement Allocation
7077	Daily Flexible Ramp Up Uncertainty Award Allocation
7078	Monthly Flexible Ramp Up Uncertainty Award Allocation
7087	Daily Flexible Ramp Down Uncertainty Award Allocation
7088	Monthly Flexible Ramp Down Uncertainty Award Allocation
7256	Regulation Up Mileage Allocation
7266	Regulation Down Mileage Allocation
7597	Transferred Frequency Response Charge
7896	Monthly CPM Allocation
8835	Annual Resource Adequacy Availability Incentive Mechanism Neutrality
8989	Daily Neutrality Adjustment
8999	Monthly Neutrality Adjustment