



January 24, 2012

Via email

California Independent System Operator (CAISO)
dtretheway@caiso.com
Attn: Virginia Thompson
250 Outcropping Way
Folsom, CA 95630

Re: Comments on Revised Regulatory Must-Take Generation

Dear Ms. Thompson:

The Energy Producers and Users Coalition,¹ the Cogeneration Association of California² and the California Cogeneration Council (CHP Parties) provide these comments on the Regulatory Must Take Generation (RMTG) Revised Straw Proposal issued by the California Independent System Operator (CAISO). The CHP Parties support the CAISO's efforts to update the RMTG definition and see this revision as an improvement over the January 26, 2011, draft proposal.

The CHP Parties offer the following limited observations and recommendations:

1. The term "RMT_{max}" is better suited to the tariff than "RMT_{min}."
2. Protection of CHP host load requires assurance that Scheduling Coordinators will schedule RMTG as specified by the CHP facility within CAISO-approved RMTG levels.
3. The scope of facilities permitted to establish RMTG levels should include all CHP facilities serving host load, regardless of whether these facilities meet the Public Utility Regulatory Policies Act (PURPA) operating or efficiency standards.
4. The procedures for establishing RMTG levels should be modified to ensure adequate protection of CHP hosts and to minimize the administrative burden on CHP facilities.

¹ EPUC is an ad hoc group representing the electric end use and customer generation interests of the following companies: Aera Energy LLC, BP West Coast Products LLC, Chevron U.S.A. Inc., ConocoPhillips Company, ExxonMobil Power and Gas Services Inc., Shell Oil Products US, THUMS Long Beach Company, and Occidental Elk Hills, Inc.

² CAC represents the combined heat and power and cogeneration operation interests of the following entities: Coalinga Cogeneration Company, Mid-Set Cogeneration Company, Kern River Cogeneration Company, Sycamore Cogeneration Company, Sargent Canyon Cogeneration Company, Salinas River Cogeneration Company, Midway Sunset Cogeneration Company and Watson Cogeneration Company.

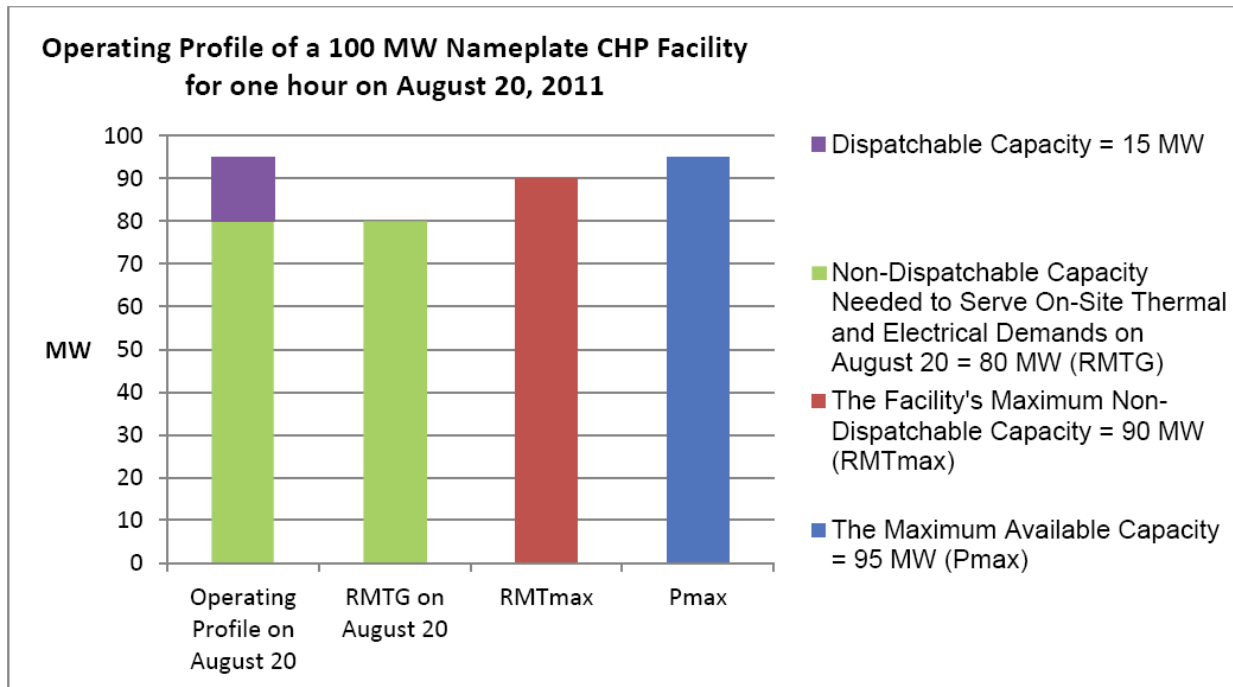
These changes will ensure that the RMTG definition protects industrial host load served by CHP while maximizing the available dispatchable capacity available from these facilities.

I. USE OF THE TERM “RMT_{MAX}” IS BETTER SUITED TO THE TARIFF THAN “RMT_{MIN}”

The parties in this stakeholder process have debated whether the Regulatory Must Take Generation quantity should be referred to as RMT_{max} or RMT_{min}. While this may appear to be simply a debate about terminology, the debate may indicate a lack of a clear understanding of the meaning and implications of RMTG designations. The level that the CAISO is trying to define is the *maximum* amount of output that may be designated as RMTG in the CAISO Master File. While this value also may be viewed, from the CHP perspective, as the facility's *minimum* operating level to support its host, the correct perspective from which to develop the tariff language is that of the CAISO. The CAISO thus should adopt the term RMT_{max} to designate the maximum level of output that may be self-scheduled by a CHP and its Scheduling Coordinator as RMTG.

RMT_{max} delineates the minimum amount of output to the grid that must be permitted in order for the CHP facility to safely and reliably meet the industrial hosts' thermal and electrical needs. RMT_{max} is a fixed value that will appear in each generator's CAISO Master File, and the generation self-scheduled as RMTG must be less than or equal to the value of RMT_{max}. Any generation above this level may be bid into the market by the Scheduling Coordinator without an RMTG flag. Moreover, to the extent a CHP facility has the ability on a day-to-day basis to reduce the protected RMTG level, it can coordinate with its Scheduling Coordinator to designate that quantity as non-RMTG.

To illustrate this concept, the chart below shows a fictional 100 MW nameplate facility and the relationship between RMT_{max}, RMTG, and P_{max} for one hour on August 20, 2011:



The CHP generator's P_{max} is 95 MW, and the RMT_{max} is 90 MW, leaving 5 MW of dispatchable capacity on a regular basis. During the illustrative hour, although the CHP generator could schedule 90 MW as RMTG, the CHP requests that its SC self-schedule as RMTG only 80 MW of output, as determined by the industrial host's onsite thermal or electric needs for that hour. Consequently, the SC may schedule the 10 MW as additional dispatchable capacity, providing a total of 15 MW of dispatchable capacity. In this example, only 80 MW is protected from curtailment, except in response to an existing or imminent emergency condition. Thus, this approach to RMT_{max} will offer CAISO as much dispatchability as possible (15 MW) while still protecting the facility's underlying business needs (80 MW).

II. PROTECTION OF CHP HOST LOAD REQUIRES ASSURANCE THAT SCHEDULING COORDINATORS WILL SCHEDULE RMTG AS SPECIFIED BY THE CHP FACILITY WITHIN CAISO-APPROVED RMTG LEVELS

The Revised Straw Proposal substantially improves on the proposal advanced by the CAISO on January 26, 2011. The current RMTG definition defines the RMTG amount as an amount of generation "that the relevant Scheduling Coordinator will self-schedule directly with the CAISO on a must-take basis." In its January 26, 2011, proposal, the CAISO moved from the existing mandatory language to permissive language, defining RMTG as the amount that the SC "may bid or schedule" as RMTG. The Revised Straw Proposal appears to correct this language, defining the output level as the amount the "relevant Scheduling Coordinator self schedules directly with the CAISO on a must-take basis."

The permissive language in the former draft -- "*may bid or schedule*"-- is unnecessary to maximize dispatchability. The CHP settlement, without other changes, will increase the amount of dispatchable capacity on the grid as the CAISO intends. The CHP settlement includes efficiency factors and standards that will preclude the execution of CHP settlement contracts by "*PURPA machines*". Facilities unable to execute settlement contracts will either shut down or convert to peaking plants. CAISO will gain operational flexibility through this reduction in the number of RMTG resources since self-schedules in the Day Ahead Market (DAM), Hour Ahead Scheduling Process (HASP) and Real-Time Market (RTM) will decrease. Further, some facilities that do not execute settlement contracts will transition into peaking or partial peaking facilities as their steam load declines. Thus, the CHP settlement will both reduce the MWs of self-scheduled RMTG on the grid and increase the number of facilities able to respond to CAISO's renewable integration need.

The permissive language, "*may bid or schedule*", also would fail to protect CHP generators from curtailment. CAISO tentatively confirmed in informal discussions that only self-scheduled capacity in the DAM can contain an RMTG flag; economically bid capacity in the DAM cannot contain an RMTG flag. Thus, if a utility SC bids CHP RMTG capacity into the DAM, the CHP facility will be subject to the same curtailment provisions as other economically bid resources – an unacceptable result. Giving this discretion to an SC defeats the purpose of RMTG protection.

While the CAISO's proposed language is a step in the right direction, it should modify the proposal to make the mandatory nature of the obligation crystal clear. It should return to the current tariff language on this point, providing that RMT_{max} will be the amount the "*relevant Scheduling Coordinator will self schedules directly with the CAISO on a must-take basis.*"

Protection from curtailment is absolutely essential to the operation of CHP facilities, as demonstrated by the seven years of litigation between CHP parties and CAISO regarding the curtailment provisions of the QF PGA. Thus, it is very important to CHP Parties that the RMTG definition default to self-scheduling and require SCs to schedule within the RMTG amount consistent with the CHP directives.

III. RMTG PROTECTION SHOULD EXTEND TO ALL CHP FACILITIES

The Revised Straw Proposal in subpart (1) appropriately continues to protect all facilities delivering as "must take" under PURPA. The CAISO seeks comments, however, on what types of CHP facilities in the post-PURPA regime should be provided RMTG protection. Should protection be limited to only CHP facilities that meet PURPA standards or should they apply to any CHP facility?

The RMTG provision should protect any CHP facility serving host load. While the original RMTG definition was based in PURPA, the new definition should recognize more practically the goal of this provision: to prevent interference by the CAISO or the

electric utilities in industrial operations supported by CHP. Whether or not a CHP meets the PURPA standards, its host load should be protected.

Concern has been raised that expanding this definition could substantially increase the total of RMTG quantity protected by the CAISO, but it would not. The CHP Settlement will naturally reduce the amount of protected capacity. The CHP Settlement creates Utility Prescheduled Facilities (UPFs), a category of CHP facilities that have a large amount of dispatchable capacity beyond the on-site thermal and electric need of the industrial host. UPFs may not meet the traditional PURPA efficiency requirements but have enough industrial load to provide valuable distributed capacity to the CAISO grid. The difference between the P_{max} and the RMT_{max} of these facilities will be very large compared to other CHP generators, providing CAISO with a substantial amount of dispatchable capacity. Further, like “PURPA machines”, the entire P_{max} capacity value of these facilities is currently designated as RMTG. Thus, the transition to UPF status will not only provide CAISO with dispatchable capacity, it will reduce the amount of non-dispatchable RMTG on the grid. For these reasons, we generally support the earlier direction of the CAISO regarding eligibility: “(2) Generating Units that produce electric energy and forms of useful thermal energy used by an industrial or commercial host for industrial, commercial, heating or cooling purposes....”

This provision, however, requires further refinement to recognize the mandatory scheduling requirement. As the provision is written currently, requiring that an SC “will” schedule the generation identified in (2) would mean that the SC would schedule *all* of the Generating Unit’s output as RMTG. To achieve the CAISO’s goal of maximizing dispatch flexibility, the provision should be modified to include within the RMTG definition:

- (2) Generation up to RMT_{max} as designated by Generating Units that produce electric energy and forms of useful thermal energy used by an industrial or commercial host for industrial, commercial, heating or cooling purposes; and

IV. THE PROCEDURES FOR ESTABLISHING RMTG LEVELS SHOULD BE MODIFIED TO ENSURE ADEQUATE PROTECTION OF CHP HOSTS AND TO MINIMIZE THE ADMINISTRATIVE BURDEN ON CHP FACILITIES.

The Revised Straw Proposal requires modification to ensure adequate protection of CHP hosts and to minimize the administrative burden on CHP facilities. The CHP Parties propose modifications of subparts (b) and (c), as discussed below.

The Revised Straw Proposal contemplates establishing RMTG levels as follows:

For a Generating Unit that provides Regulatory Must-Take Generation the minimum operating level at which the Generating Unit can safely and reliably meet the cogeneration host’s thermal and electrical requirements, which is determined as follows:

(a) *Established by agreement of the Generating Unit's owner or operator and its Scheduling Coordinator, if the Scheduling Coordinator is an IOU, or by agreement of the Generating Unit's owner or operator and the CAISO, if not, or*

(b) *In the event agreement cannot be reached, certified by affidavit of an independent California-licensed, certified engineer; and*

(c) *Reassessed and recertified by affidavit as often as quarterly if agreed by the Generating Unit's owner or operator and its Scheduling Coordinator and at a minimum once every year using the procedure set forth in (a) or (b) above.*

The first alternative in this process seems reasonable, and likely most CHP facilities will be able to resolve their RMTG quantity in consultation with the interconnected utility or the CAISO. In many cases, the RMTG value may be evident in the power purchase agreement between the CHP and its buyer.

The second alternative continues to raise material concern among the CHP Parties. Each CHP facility and host has unique industrial processes and, therefore, unique thermal and electric needs. The methodology that third-party engineers would use to test for RMTG would necessarily vary by plant creating undue complexity. Moreover, it is unlikely in some very complicated processes – e.g., oil refineries – that an outside engineer will even have the capability necessary to make such an evaluation given the high level of operating variability. Finally, the CHP Parties suggest that neither the utilities nor the CAISO should want to place themselves in the position of misjudging RMTG and thereby causing curtailment of industrial production or other consequences for the host. For these reasons, the CHP Parties continue to propose that the IOU and SC rely on an affidavit provided by the owner of the Generating Unit to set RMT_{max} .

(b) *In the event agreement cannot be reached, certified by affidavit of an independent California-licensed, certified engineer authorized representatives of the Generating Unit and the host.*

An alternative to this approach would be to ensure that the engineer is selected by mutual agreement, and to provide a boundary on the determination of RMT_{max} based on the Generating Unit's power purchase agreement.

(b) *In the event agreement cannot be reached, certified by affidavit of an independent California-licensed, certified engineer selected by mutual agreement of the Generating Unit and the SC or CAISO; provided that the RMT_{max} may not be less than the net contract capacity under a power purchase agreement between the Generating Unit and an IOU.*

The bottom line objective should be to ensure the protection of the host operations from unnecessary and unreasonable interruptions.

The Revised Straw Proposal in (c) requires assessment and recertification of the RMTG quantity at least once a year and up to quarterly. This level of review seems wildly unnecessary. It may be that the RMTG set by the parties is differentiated by month, by season or otherwise. In that case, the RMTG included in the Master File may change periodically. It seems unnecessary, however, to review a facility's operation each quarter, or even each year, and this requirement would create unreasonable administrative burden on the CHP facility and its host. Consequently, the CAISO should replace (c) with the following language:

(c) reassessed and recertified upon the shorter of a significant modification to the Participating Generator's RMT_{max} or once every three years.

Where a CHP facility is under a long term contract, or where its operations are established and ongoing, this level of review should be more than adequate.

V. CONCLUSION

The CHP Parties request that the CAISO modify its proposed RMTG definition as proposed in these comments. A draft of the changes is attached as Attachment A. With these changes, the RMTG definition will balance the CAISO's desired flexibility and CHP parties' needed protection from curtailment.

Please contact us with any questions or concerns.

Very truly yours,



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Michael Alcantar
Counsel to the Cogeneration Association of California



Beth Vaughn
Executive Director of the California Cogeneration Council

ATTACHMENT A Proposed Changes to Revised Straw Proposal

The following Generation resources that the relevant Scheduling Coordinator will self schedule directly with the CAISO on a must-take basis:

- (1) Generation from Qualifying Facility Generating Units subject to
 - a) an Existing QF Contract or
 - b) a QF power purchase agreement for a QF 20 MW or smaller pursuant to a mandatory purchase obligation as defined by federal law;
- (2) Generation up to RMT_{max} as designated by Generating Units that produce electric energy and forms of useful thermal energy used by an industrial or commercial host for industrial, commercial, heating or cooling purposes; and
- (3) Generation from nuclear units.

For a Generating Unit that provides Regulatory Must-Take Generation the minimum operating level at which the Generating Unit can safely and reliably meet the cogeneration host's thermal and electrical requirements, which is determined as follows:

- (a) Established by agreement of the Generating Unit's owner or operator and its Scheduling Coordinator, if the Scheduling Coordinator is an IOU, or by agreement of the Generating Unit's owner or operator and the CAISO, if not, or
- (b) In the event agreement cannot be reached, certified by affidavit of an ~~independent California-licensed, certified engineer~~ authorized representatives of the Generating Unit and the host.
- (c) ~~Reassessed and recertified by affidavit as often as quarterly if agreed by the Generating Unit's owner or operator and its Scheduling Coordinator and at a minimum once every year using the procedure set forth in (a) or (b) above.~~
- (c) Reassessed and recertified upon the shorter of a significant modification to the Participating Generator's RMT_{max} or once every three years.