

Comments on Fifth Straw Proposal
From the Cogeneration Association of California and
the Energy Producers and Users Coalition

The Cogeneration of California (CAC) and the Energy Producers and Users Coalition (EPUC) appreciate the willingness of ISO staff to continue to discuss the treatment of combined heat and power (CHP) facilities in determining Effective Flexible Capacity. CAC and EPUC provide the following comments to augment the proposal so that it is feasible for CHP facilities while maximizing the amount of dispatchable flexible capacity available to the ISO from these facilities.

Remaining Issue with ISO Straw Proposal

On pg. 33 of the Fifth Straw Proposal, the ISO states:

The ISO believes that the reliability must take portion of these resources' should be treated the same way as a PMin with greater than a 90 minute start-up time.

We assume, based on that language, that the formula for determining EFC for CHP would be $NQC - RMT_{Max}$. Use of this metric would result in an EFC of zero, if not a negative number, for most CHP resources. RMT_{Max} is set based on the maximum possible obligation of delivery of thermal energy to the CHP unit's thermal host. Put another way, RMT_{Max} is the maximum electric energy the unit would export to the grid while it is concurrently producing the required thermal energy for the industrial host, and it is the amount of power the ISO is required to accept without curtailment¹ to facilitate that operation.

On the other hand, the NQC for these CHP resources is set according to the CPUC Resource Adequacy Manual based on a three-year rolling average of production. This produces an NQC that is obviously an average of historical performance, not a maximum potential generation.

Many CHP resources are sized to meet the thermal obligations to their industrial host. Because of this, their exports to the grid historically have been determined by their deliveries to their host. Thus, their RMT_{Max} is set at or above their NQC. $NQC - RMT_{Max}$ for these facilities will be zero or a negative number. Yet, at least some of these facilities can be operated to provide some flexible capacity available for ISO dispatch.

Proposal to Set EFC for CHP

Each CHP unit can be unique in both its configuration and its operating constraints. Some CHP units are bottoming cycle, and start with an industrial process producing

¹ Except for system emergencies.

waste heat, such as petroleum coke calcining or cement manufacturing. Some topping cycle units generate electricity from a combustion turbine and then produce useable thermal energy from the waste heat. Others start with a steam generator, generate electricity in a steam turbine, and then apply the waste heat to an industrial process. These options in technology mean each unit offers differing flexibility.

Each unit also may have unique contractual and operational constraints in serving its industrial host. Depending on the nature of that industry, the cogeneration unit may be able to generate excess electricity or it may be able to coordinate variations in thermal output with dispatchable variations in electricity output.

For these reasons, each CHP unit may have a unique ability to produce flexible capacity, and should be able to designate that capacity. A simple arithmetic formula does not capture the variance in capabilities of these units. Rather than apply the same formula to each CHP unit, CAC and EPUC propose that each unit designate its own EFC. The EFC could be no greater than the NQC for the unit. The CHP unit would then have the comfort that it can actually produce its identified EFC, as it may offer it in contract. The ISO would be assured, both by the unit's contractual obligations and the ISO penalty provisions, that the unit would deliver its EFC as actually sold in the market. The final policy document on flexible capacity should provide that:

A CHP resource will be permitted to designate an EFC value annually for each month of a counting year to reflect its unique operating requirements related to industrial host obligations or CHP contract limitations, provided that it does not exceed the NQC of the resource. This will ensure that a CHP's Must Offer Obligation does not interfere with its ability to self-schedule.

Proposal for CHP Safe Harbor

Candidly, many CHP units are concerned that if an EFC value is identified for their facility, they will be required to provide that full amount, regardless of either their business preference or their physical capabilities. For this reason, and to ensure that any flexible capacity protocol as adopted by the ISO is consistent with the QF/CHP Settlement and with the Net Scheduled Participating Generator Agreement, the final policy document on flexible capacity should explicitly provide that:

1. Flexible Capacity is not intended to diminish a CHP resource's ability to self-schedule into the ISO's Day-Ahead and Real Time markets.

2. A CHP resource, or any generating resource, will have the ability to designate or sell any portion of its designated EFC as "generic capacity." Such generic RA capacity would have the option to submit either self-schedules or economic bids, but would not have the flexible RA capacity Must-Offer Obligation to submit economic bids.

