Comments on FRAC-MOO Phase 2 August 18, 2015 meeting

Submitted by	Company	Date Submitted
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Wellhead continues to support the CAISO's efforts to identify the operational/flexibility attributes that must be available in order to operate the grid reliably. Through the annual RA process, the CAISO obtains these capabilities from the existing supply resources for the following year. And as the CAISO has noted, the CPUC, in their LTPP proceedings, can effectuate changes to the available supply resources giving the CAISO more options in the future that fully support California's policies and plans for a reduced GHG environment.

Wellhead believes the CAISO has correctly identified over-generation as the immediate and growing problem that requires significant additional flexibility to operate the grid reliably. A critical first step in addressing this problem is to clearly define over-generation in the Tariff. Wellhead believes it should be updated as follows (changes are in italics):

Overgeneration – A condition that occurs when total Supply *from:*

i) renewable Generating Units;

ii) *non-dispatchable Generating Units; and*

iii) *dispatchable Generating Units that must be on line at the minimum or otherwise necessary operating level in order to meet Reliability Criteria*

exceed*s* total Demand in the CAISO Balancing Area.

Wellhead does not believe there was any intent to exclude reliability considerations in determining when over-generation conditions existed. It was simply a detail that had never been raised/challenged.

Over-generation is a growing grid reliability problem because i) renewable resources are growing dramatically in response to California's GHG laws and policies and ii) the existing fleet does not have sufficient resources that can get off line during peak solar and/or wind generation hours and still be available to generate during the ensuing morning or evening ramps (i.e. the required Pmin burden for reliability is too large). The proposed clarification to the definition of over-generation is essential so the discussion can productively focus on attributes the revamped fleet must provide.

Some parties say that curtailing renewables is a simple/reasonable way to manage this problem thus concluding that "over generation" is not a problem. This assessment conflates the problem with the solution.

Curtailment of renewables is only one of several potential options to address the over-generation problem, but is probably the most contradictory with the State's GHG laws and public policy goals that have been clearly articulated by the Legislature and the Governor. In addition to contravening State laws and policies, the CAISO has raised questions about the practicality of having to routinely curtail significant amounts of renewable generators as part of their real-time operating procedures.

Other solutions which properly consider the State's environmental policies need to be enabled. These include incentives to alter consumption patterns, demand response, energy storage, and revamping the gas fleet with some fast/flexible resources that can get out of the way of renewable generation yet be available very quickly when needed for the routine ramps and contingencies, all of which can last for

several hours or longer. The key point is the Pmin burder necessary for reliable system operation must be reduced so that over-generation conditions do not result.

It is also important to acknowledge the urgency in addressing the over-generation problem. It is coming sooner than many have expected. The CAISO has said that they are seeing over generation this year that was not expected until 2017. Indeed the CAISO recently reported that it was forced to curtail over 100GWh of GHG-free renewable generation in the twelve months ended June 30, 2015 and that curtailment in May and June of 2015 was a multiple of the curtailment in May and June 2014. Delaying needed discussion and resulting decision(s) will simply result in a continued reliance on GHG-laden energy when GHG free energy is available but unusable (i.e. renewables curtailment).

The CAISO has a key role in ensuring that California policy and decision makers understand this situation and are fully informed of the actions that need to be taken to ensure that the over-generation problem is addressed in ways that are compatible with California's environmental policies.

As the CAISO has noted, the CPUC has the ability to direct changes to supply resources in the LTPP proceeding so that CAISO operations will support the State's environmental goals. For the near term (until the CPUC directs procurement of flexible resources with the needed attributes), curtailment of renewables will be increasingly necessary making the CAISO's FRAC-MOO proposal to use "flexibility allowances" a rational approach because it takes account of the fact that curtailment is necessary until there are other solutions available.

The work that CAISO is doing in the FRAC-MOO process should be accelerated and used to inform the CPUC of the need for procurement of flexible resources that will be on line well before 2024 to protect system reliability while meeting the state's GHG goals.