

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Oversee
The Resource Adequacy Program, Consider
Program Refinements, and Establish Annual
Local Procurement Obligations.

Rulemaking 11-10-023
(Filed October 20, 2011)

**INFORMAL COMMENTS OF ENERNOC, INC., ON
DRAFT STAFF PROPOSAL FOR QC/EFCC METHODOLOGIES FOR
ENERGY STORAGE AND SUPPLY-SIDE DEMAND RESPONSE RESOURCES**

October 22, 2013

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EnerNOC, Inc. (EnerNOC) respectfully submits these Informal Comments on the Draft Staff Proposal Qualifying Capacity and Effective Flexible Capacity Calculation Methodologies for Energy Storage (ES) and Supply-Side Demand Response (DR) Resources (Staff Proposal). These Informal Comments are submitted to RAFiling@cpuc.ca.gov pursuant to the electronic mail sent by Joanna Gubman (Energy Division) on September 13, 2013, and have been served on the service list in R.11-10-023 (RA).

I.

ENERNOC'S RECOMMENDED CHANGES TO THE STAFF PROPOSAL

EnerNOC has reviewed the Staff Proposal and participated in the Workshop on that proposal and related materials held by the Commission on October 15, 2013 (October 15 Workshop). EnerNOC will also be providing comments on the proposals related to the treatment of use-limited resources on October 31, 2013, pursuant to the instructions emailed to the service list by Megha Lakhchaura (Energy Division) on October 21, 2013. EnerNOC's focus is on DR resources.

EnerNOC has grave concerns related to implementing the Staff Proposal to calculate qualifying capacity (QC) and effective flexible capacity (EFC) by using the effective load carrying capability (ELCC) model. Some of these concerns were expressed by EnerNOC, as well as others, at the October 15 Workshop. While EnerNOC appreciates the amount of work

and effort that went into this proposal by Staff, nonetheless, EnerNOC advises against using Staff Proposal for calculating QC and EFC.

In the wholesale markets wherein DR is already integrated, resources bid to provide capacity, subject to use-limitation definitions, and are penalized if they fail to meet their commitment, just like other resources. The risk is borne by the resource. Some test the resources capability as the manner to verify the capacity available, but that is not a uniform requirement. The fact that this complex method has not been utilized in any other successful market design wherein DR provides resources is very concerning.

A. Complexity

EnerNOC's over-riding concern regarding the Staff Proposal's QC/EFC calculation is the amount of complexity associated with this calculation. It is apparent that the model is very complex, as the Staff presenting the proposal at the workshop required training in order to use it. The electricity system is becoming more complex; but, EnerNOC disagrees that the process of determining QC and EFC should be made equally complex.

The biggest concern is the opacity that the adoption of this model would introduce into the determination of QC and EFC into what is largely a very transparent process. Transparency is of great importance to efficient market operation. If parties have no idea what amount of QC or EFC will be ascribed to the resource that they are trying to buy or sell, then it diminishes the value of the resource.

The Staff's model starts from "de-rating" the value of DR and energy storage (ES) QC and EFC capacity offered, in recognition of its use limitation, instead of defining the use limitation as part of the product definition of QC and EFC. All this model will do is de-rate the value of capacity assuming it will be used beyond its limitation. This is the opposite of the way

that use limitation for DR resources is recognized in other markets-where the use limitation is part of the product definition. By using that approach, there are no surprises either for the provider of the resource or the system operator when the resource is unavailable.

The prospect of de-rating offered capacity, by definition, diminishes the value of the resource, which could perform at full capacity if utilized in recognition of its use limitations. Said simply, this process would discourage DR contracting for supply-side resources. A better way of determining whether a resource is available when it is required to perform is to establish reasonable availability criterion, in light of the use limitation, and measure the resource's performance against that criterion.

EnerNOC recognizes, and has advocated for, requiring DR resources to be available for flexibility purposes when the need is greatest on the system, similar to the way in which DR resources are utilized and made available for meeting system peak conditions. DR resources are not base-load resources and should not be dispatched at the bottom of the dispatch order. Instead, they should be utilized as other resource options are being exhausted. That is when DR resources provide the most value, by displacing the next marginal resource.

Inherent within that calculation is a use limitation. It is simply more rational to define the product that you need, consistent with its operational capabilities, than to require a resource to do what it is not designed to do and then de-rate the contribution that it makes to the system through this probabilistic model.

B. Perfect Generator

EnerNOC is further concerned about using a "perfect generator" as the basis against which the value of "real resources" is measured. It should certainly be agreed that the "perfect

generator” does not exist. And yet, that “perfect generator” will be the basis against which DR and ES resources are measured.

A concern was expressed at the October 15 Workshop about first applying this methodology against DR and ES resources before it is uniformly applied against all resources in the system. This has the effect of de-rating, first, the very resources that the State is trying to promote. Since a “perfect generator” does not exist, if this method were uniformly applied, the result would be that all resources’ QC and EFC would be de-rated to some degree and signal that the system requires more capacity. And yet, by all accounts, for the near term, there is adequate capacity on the system.¹

This comparison of DR against generation is problematic to begin with, but to make the comparison against a “perfect generator” is even more troubling. DR is not a generator. DR is load responding to market signals or incentives. It cannot produce energy in all hours, it cannot continuously ramp, and it cannot continuously follow load. Setting that bar as the expectation for any resource, much less DR, is unreasonable.

C. Historical Performance Data

The Staff Proposal asks parties to comment upon whether historical performance data should be the basis of measuring QC and EFC. Herein lies the problem: historical data for DR resources reflect the use of the resource for retail purposes – that is, dispatched by the investor-owned utility, not integrated into a wholesale market and dispatched by the utility. This year is the first year that the retail programs have been dispatched on a local basis. Needless to say, there have been difficulties with this transition this year. Historical data may not reflect future performance. This year will be a good example of that. When you change the manner in which

¹ There may be a need for additional local capacity; but, that is outside of the consideration of need for flexible capacity.

you utilize the resource it affects the customers, and you could have a significant amount of churn. Further, as DR resource composition, location, and dispatch changes, the performance will change. If more capacity is added to any local area, the performance risk associated with that resource diminishes. So, again, past performance will not be indicative of future performance.

D. Calculation of a Monthly QC

At the October 15 Workshop, in response to a question asked by EnerNOC, Staff clarified that QC would be calculated on a monthly basis to determine how well DR and ES resources would meet a monthly peak requirement. That is a brand new definition of QC. In other words, QC would not be measured against how well a resource met a coincident system peak, as is the definition for all other resources. QC will assess how well a resource meets a monthly peak requirement.

This change is disturbing on two levels: first, the measure of QC will not be consistent across resource types, as some will measure monthly capabilities and some will measure the resource's ability to meet a coincident system peak; and, second, DR resources, today, are specifically acquired to meet summer requirements and are not, in all cases, annual resources. The result would be to start measuring capability for resources for purposes that are in conflict with the manner in which the resources were procured in the first place.

E. Conflicts Between Wholesale and Retail DR QC and EFC

The method described in the Staff Proposal is specific to DR resources that are “supply-side” resources, meaning they are bid into the wholesale market. There is an existing methodology for demand-side DR resources for calculating resource adequacy (RA) value called the Load Impact Protocols (LoIP) method. LoIP calculates ex-poste and ex-ante values of DR

performance for RA purposes. If a retail DR resource is bid into the wholesale market by the IOU, which method will be used to determine RA?

F. Definitional Concerns

The Staff Proposal uses the term “transmission node” when describing the way in which DR resources would bid into the wholesale market.² There may be instances when a DR resource may submit a “nodal” bid, as an individual customer, or an aggregation of nodes within a sub-LAP. However, for the most part, if a DR resource is comprised of multiple customers, the bid will be submitted at the sub-LAP level.

A must-offer obligation (MOO) is under development for flexible capacity resources. Presently, there is no must-offer obligation as it relates to capacity availability to meet a coincident system peak requirement, which is what QC is designed to meet. The California Independent System Operator (CAISO) has indicated that it will be working on incorporating DR resources into its Standard Capacity Product (SCP), which may establish a MOO for DR resources. But, the Staff Proposal is incorrect in suggesting that DR resources must be subject to a MOO for QC and EFC when it does not exist today.³

The Staff Proposal also refers to the EFC as meeting intra-hour needs.⁴ At present, the definition of a flexible ramping product is relative to providing three-hours of ramping needs. The product definition, today, does not include intra-hour needs. While that may be a functionality that the CAISO may like to have, the CAISO has not defined that need for intra-hour flexibility as part of its flexible capacity definition.

² Staff Proposal, at pp. 2, 5, 6.

³ Staff Proposal, at p. 3.

⁴ Staff Proposal, at p. 4.

II. CONCLUSION

For the above reasons, EnerNOC strongly recommends that the Commission *not* adopt the Staff Proposal for the purpose of determining QC and EFC for DR resources. Specifically:

1. It is too complex; it has not been utilized in any successful wholesale market design;
2. It could be disruptive or damaging to the development of DR resources as supply-side resources relative to other generation resources to which this methodology will not be applied;
3. It makes contracting more difficult and risky because RA value is dependent upon these complex model results;
4. Comparing any resource against a “perfect generator” would result in de-rates to available capacity across the spectrum. It is even more concerning when applied to a resource that is not a generator and is being forced into that square peg. It is far better to define the requirements of the resource on the front-end, recognizing its use limitations, than to compare it on the back-end to a perfect generator and de-rate the capacity value it can contribute;
5. The use of historical data is problematic;
6. The calculation of a monthly QC is in conflict with the way that QC has been defined historically and for other resources;
7. There are concerns about the relationship between the LoIP methodology and the ELCC methodology application when retail programs are bid into the wholesale market; and
8. There are definitional concerns contained in the Staff Paper.

Respectfully submitted,

October 22, 2013

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