

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)

**COMMENTS OF ENERNOC, INC., ON  
CAISO FLEXIBLE CAPACITY REPORT AND  
ISSUES ADDRESSED AT WORKSHOP OF APRIL 9, 2014**

April 18, 2014

**Mona Tierney Lloyd**  
**Director, Regulatory Affairs**  
**EnerNOC, Inc.**  
P.O. Box 378  
Cayucos, CA 95630  
Telephone: (805) 995-1618  
Facsimile: (805) 995-1678  
Email: [mtierney-lloyd@enernoc.com](mailto:mtierney-lloyd@enernoc.com)

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EnerNOC, Inc. (EnerNOC) respectfully submits these Comments on the Flexible Capacity Report (FCR) filed by the California Independent System Operator (CAISO) in this proceeding on April 4, 2014, and the issues, documents, and presentations identified for comment at the Workshop held on April 9, 2014 (April 9 Workshop). These Comments are filed and served pursuant to the Commission's Rules of Practice and Procedure and the Administrative Law Judge's (ALJ's) Ruling identifying the schedule and subject matter for these comments on April 9, 2014 (April 9 ALJ's Ruling).<sup>1</sup>

**I.  
SUMMARY**

By Decision (D.) 13-06-024, issued in this proceeding in June 2013, the Commission, along with establishing 2014 local capacity procurement obligations for electric load serving entities (LSEs), also adopted an "interim 'flexible capacity' framework as an additional component of Resource Adequacy (RA) requirements" and further defined what constitutes a "flexible capacity need."<sup>2</sup> While "no compelling need" was found to adopt a flexible capacity requirement for the 2014 RA year, the Commission did conclude in D.13-06-024 that the

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<sup>1</sup> Reporter's Transcript (RT) (April 9, 2014) at 79-81 (ALJ Gamson).

<sup>2</sup> D.13-06-024, at p. 2. According to D.13-06-024, a "flexible capacity need" is "defined as the quantity of resources needed by the California ISO to manage grid reliability during the greatest three-hour continuous ramp in each month," with resources considered as "flexible capacity" "if they can sustain or increase output, or reduce ramping needs, during the hours of the ramping period of 'flexible need.'" (Id., at p. 2.)

California Independent System Operator (CAISO) had “shown a reasonable likelihood that there will be a need for additional flexible capacity for 2015 through 2017, due to a combination of plant closures and additional less-flexible capacity, and we set those requirements in proceedings over the next year.”<sup>3</sup> To that end, D.13-06-024 imposed reporting requirements and updated filings by the LSEs as a basis for determining 2015 flexible capacity requirements and sought further input through workshops and proposals “to refine the flexible capacity requirement to go into effect in 2015.”<sup>4</sup>

Relative to this direction, the following documents have been either served or filed in this proceeding since the beginning of 2014:

- (1) *January 16, 2014*: Commission Staff (Energy Division) Proposals on Resource Adequacy (RA) program refinements, effective load carrying capability (ELCC) and Qualifying Capacity (QC) calculation methodology for wind and solar resources, and a further version of Energy Division’s QC and Effective Flexible Capacity Calculation (EFCC). These proposals were the subject of Workshop held on *January 27* and were the subject of Opening and Reply Comments filed in *February 18 and March 3, 2014*, respectively.
- (2) *February 10, 2014*: Commission Staff (Energy Division) Proposal on the Implementation of the Flexible Capacity Procurement Framework. This proposal was the subject of Opening and Reply Comments filed on *February 24 and March 6, 2014*, respectively.
- (3) *April 4, 2014*: Flexible Capacity Report (FCR) filed by CAISO.
- (4) *April 9, 2014*: Commission Workshop on Staff RA Proposals and CAISO FCR. As summarized and “formally placed into the record” of this proceeding at the conclusion of the Workshop or previously filed and/or served, these documents now include the following:<sup>5</sup>
  - CAISO FCR (as filed on April 4, 2014), with CAISO Power Point Presentation on 2014 ISO Flexible Capacity Needs Assessment: Study Methodology, Assumptions, and Preliminary Results dated April 9, 2014.

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<sup>3</sup> D.13-06-024, at p. 3.

<sup>4</sup> *Id.*

<sup>5</sup> RT (April 9, 2014) at 93 (ALJ Gamson).

- Staff Proposal on the Implementation of the Flexible Capacity Procurement Framework dated April 9, 2014, with Staff Power Point Presentation on summary of changes since February 10, 2014.
- Revised RA Implementation Staff Proposal dated April 3, 2014, with Staff Power Point Presentation dated April 9, 2014.
- San Diego Gas and Electric Company (SDG&E) Unbundling Flexible and Generic Attributes for Procurement Purposes Presentation dated April 9, 2014.
- Qualifying Capacity and Effective Flexible Capacity Calculation Methodologies or Energy Storage and Supply-Side Demand-Response Resources (Commission Staff Presentation) dated April 9, 2014.
- Revisions: Qualifying Capacity (QC) and Effective Flexible Capacity (EFC) for Storage and Supply Side DR dated April 9, 2014.<sup>6</sup>

EnerNOC has been actively participating on the issue of RA counting of DR resources for many years and, more recently, has also focused on “flexible capacity” calculation and/or procurement since the inception of these proposals in the prior and current RA program cycles. EnerNOC has specifically filed comments on the Staff’s Proposals on both a flexible capacity procurement framework (February 24, 2014) and Staff’s proposed QC and EFCC calculation methodologies for supply-side DR resources (February 18, 2014). EnerNOC has also actively participated in all of the Workshops that have been held on these topics, including the April 9 Workshop. EnerNOC’s comments are focused on the supply-side DR resource proposals.

Having fully reviewed all currently offered proposals by CAISO and Commission Staff on flexible capacity and DR counting methodologies, EnerNOC recommends that Staff consider the following comments and take appropriate actions *before* any of these pending proposals or reports are adopted or relied upon in a formal Commission decision, each of which is addressed in more detail below.

1. Staff’s proposal on QC/EFC calculation methodologies for supply-side DR resources should be revised as follows:

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<sup>6</sup> RT (April 9, 2014), at 93-95 (ALJ Gamson).

- a. EFC and QC should be required to be bundled for DR resources;
  - b. It is unreasonable to require DR resources to provide a system resource (flexible capacity) on a sub-LAP basis, and such a requirement should be eliminated;
  - c. The testing window should be 1 month, as originally proposed by Staff.
2. Use of CAISO's flexible capacity calculations by Staff or the Commission should take the following into consideration:
- a. Because the percentage of flexible capacity resource needs that could be met by Category 3 resources is higher in CAISO's most recent calculations than was provided in 2013, Staff should *not* adopt CAISO's proposal to allow Category 1 and 2 Flexible Capacity Resources to displace Category 3 Resources, unless those resources are not available;
  - b. While EnerNOC has agreed to a 5% cap on Category 3 resources, for an interim period, Staff should clearly state that the 5% cap on Category 3 Resources is interim and provide for changes to the cap to occur when CAISO's calculations indicate that such changes are appropriate;
  - c. CAISO's calculations are based on actual 2013 data, but that data is not normalized and has produced some anomalous results.

**II.  
STAFF'S PROPOSALS ON QC AND EFC CALCULATION METHODOLOGIES  
FOR SUPPLY-SIDE DEMAND RESPONSE MUST BE REVISED.**

**A. QC and EFC Must Not be Bundled Together.**

Staff's Revised Proposal (April 9, 2014) bundles the requirements for DR resources meeting the requirements for qualifying capacity (QC) and effective flexible capacity (EFC) together in order to be "consistent" with the treatment of other resources.<sup>7</sup> This element of Staff's Revised Proposal must be modified for the following reasons:

1. There are specific and critical differences between resource types that make bundling unnatural and detrimental for DR resources; and

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<sup>7</sup> Staff's Revised Proposal, at p. 3.

2. The CAISO, appropriately, does not require these characteristics for DR resources to be bundled.

Staff's Revised Proposal is to treat DR resources the same as generation resources without acknowledgement of some critical operational differences. Generators are designed such that they can respond to different resource criteria by changing the operation of the resource. In short, if a generator has the ability to operate in a flexible manner as well as to meet the generic RA requirements, it can do so within its operating parameters. DR resources are built to meet a specific resource requirement; they do not inherently have the operational flexibility to meet any resource requirement.

EnerNOC protested this construct in its comments on Staff's previous proposal on February 18, 2014.<sup>8</sup> As stated in EnerNOC's previous comments, requiring a DR resource to meet both the QC requirements, to be available for hours of dispatch per day for four consecutive days between the months of May and September and between the hours of 1 and 6 PM and, simultaneously, require the same resource to be available in all months, on non-holiday weekdays, for five hours in either the morning or the evening could, in some months, require a resource to be available for more than 10 hours/day as either a generic resource or a flexible resource.

EnerNOC believes that this construct will reduce the number of DR capacity that can be solicited by making the availability and potential dispatch of the resource onerous for most customers. EnerNOC has designed its relationship with its customers to mirror its obligation to the utility as a generic (system or local) peaking resource. EnerNOC may lose a significant number of those customers if it layers on top of that existing availability requirement for a peaking resource to be available to meet the flexible capacity requirements as well. Indeed,

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<sup>8</sup> EnerNOC Comments (February 18, 2014), at pp. 10-11.

those customers may not be well suited to being a flexible capacity resource. EnerNOC would recruit customers who are capable of responding to either the generic resource requirements (QC) and, separately, recruit customers who are capable of responding to the flexible capacity resource requirements. The number of individual customers who are available to respond to both, generic and flexible capacity requirements, would be smaller than the universe of customers who would be able to respond to either RA requirement.

DR resources are not configured to meet any resource need that comes along. They are developed to meet specific resource requirements. CAISO modified its Flexible Resource Adequacy Criteria Must-Offer Obligation (FRACMOO) to take the concern expressed by EnerNOC, and others, relative to bundling these requirements and has, in its Revised Draft Final FRACMOO Proposal, modified its proposal so as not to require the bundling of QC and EFC.<sup>9</sup>

Applying rules in a consistent manner across resource types is a laudable goal; but, the application of a rule should weigh the value of consistency against disadvantaging certain resource types that, by definition, are not generators. In that way, forcing resources to act as if they were generators can be discriminatory. FERC acknowledged the difference between comparability of the rules applied to resources versus requiring the treatment between demand resources and other resources to be identical.<sup>10</sup>

**B. The Requirement for EFC to be Provided on a SubLAP Basis Is Inconsistent with the Fact that Flexible Capacity Is a System Resource.**

Staff's Revised Draft Proposal, in conformance with the Proxy Demand Resource (PDR) construct of the CAISO, requires EFC to be delivered on a sub-LAP basis. FRACMOO is a system, not a local, requirement. DR resources are distributed resources. This requirement, for DR resources to be delivered on a sub-LAP basis, due to the design of PDR, will make it more

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<sup>9</sup> CAISO Revised Draft Final FRACMOO Proposal, at p. 35.

<sup>10</sup> FERC Order 719, at p. 88.

difficult for DR resources to provide EFC. EnerNOC has raised this design problem in its comments on CAISO's FRACMOO proposal and in previous comments relative to Staff's Previous Proposal.<sup>11</sup>

### **C. Staff's Revised Proposal Regarding Testing Must be Changed.**

Staff's September 2013 Proposal, relative to testing DR resources, was that they should be available to be tested within a one-month window.<sup>12</sup> EnerNOC raised concerns about the test window being too long.<sup>13</sup> Staff's Revised Proposal adopts CAISO's position that the test window should be a 3-month window.<sup>14</sup> This is even longer and, therefore, worse than Staff's earlier proposal because it provides an even wider window that resources should be available to be tested. Meanwhile, generation resources can choose when the resource will be tested to ensure best performance.

In this way, DR resources will be disadvantaged relative to generation. Peaking resources will perform differently in different months based upon the amount of weather-sensitive load that is available to be dropped in August versus May, for example. It is not clear if flexible resources will have the same capability to respond across all months or if temperature sensitivity will play a role in the capability of flexible resources as well. Flexible capacity requirements will vary by month. Since DR resources contribution to meeting the flexible capacity requirement is a percentage of the requirement, the amount DR resources will be contributing per month will vary. It is not clear what a test in any month will demonstrate for any other month.

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<sup>11</sup> EnerNOC Comments (February 18, 2014), at pp. 4-6.

<sup>12</sup> Staff September 2013 Proposal, at p. 4.

<sup>13</sup> EnerNOC Comments (February 18, 2014), at pp. 8-9.

<sup>14</sup> Staff's Revised Proposal, at p. 4.



**III.  
CAISO’S CALCULATIONS SHOW A GREATER  
PERCENTAGE OF FLEXIBLE CAPACITY RAMPING NEEDS  
CAN BE MET BY SUPER RAMPING RESOURCES THAN THE 5% CAP.**

While EnerNOC has publicly stated that it is acceptable to limit the amount of super-ramping flexible capacity resources, initially, to 5%, CAISO’s analysis clearly shows that the amount of flexible capacity need that can be met by super-ramping resources exceeds 5%.<sup>15</sup> Despite the fact that the overall flexible capacity need is less, based upon CAISO’s most recent calculations relative to those prepared in 2013,<sup>16</sup> a greater percentage of the flexible capacity resource need could be met by super-ramping resources than was previously calculated. In fact, in some months, super ramping resources could comprise in excess of 10% of the flexible capacity resource need. Since the distribution of the super-ramping resources is only in the top 5% of hours, that would indicate that CAISO would require a greater percentage of resources that are available for fewer hours than previously calculated.

EnerNOC raises this point for two reasons:

- (1) First, with respect to CAISO’s proposal that allows Category 1 and 2 resources to displace Category 3 resources, EnerNOC has objected to this design feature because CAISO’s own calculations demonstrate that they do not need resources with 17 hour availability in all hours. Category 1 resources, essentially, correspond to a base-load, flexible resource, one that is available over a large number of hours. However, based upon CAISO’s methodology for calculating these categories, Category 1 resources are not required in all hours to meet CAISO’s flexible capacity needs. In fact, the need for Category 1 resources is between 50-90%, with the balance being represented by Category 2 and Category 3 resources.<sup>17</sup>

Allowing a Category 1 resource to displace Categories 2 and 3 means that you are allowing the LSE to “over-procure” for the flexible capacity resource need that exists on the system.

The logic is the same for allowing Category 2 resources to displace Category 3 resources.

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<sup>15</sup> CAISO April 9, 2014 Presentation, at p. 16.

<sup>16</sup> CAISO April 9, 2014 Presentation, at p. 4.

<sup>17</sup> CAISO April 9, 2014 Presentation, at p. 23.

For these reasons, EnerNOC respectfully requests that the Commission not approve this aspect of CAISO's proposal and recognize that the relationship of these resource categories will change over time and that, in fact, resources may not be needed as frequently to provide flexible capacity resources as previously thought. However, to the extent Category 2 or 3 resources are not available, then resources that are numerically higher could be used to fill the deficit.

- (2) Second, the Commission should be open to evaluating the 5% cap, along with the CAISO, so as not to unduly limit resource participation in Category 3. Category 3 resources should not be seen as an inferior resource simply because they are not available for 17 hours per day, especially if CAISO does not need that level of resource availability.

**IV.  
CAISO'S RELIANCE UPON ACTUAL DATA MAY  
NOT BE REPRESENTATIVE OF THE FUTURE.**

CAISO's use of June data, which could be anomalous, is questionable in terms of projecting future resource needs. While it is a reasonable assumption that the most recent historical data may be most predictive of the future, in terms of flexible capacity needs, it seems that data should be normalized, in some way, to correct for anomalies in the data. June, in particular, seems to be creating anomalous results. As such, EnerNOC would suggest that CAISO revisit its June results, and any other data, that is inherently anomalous with normal data.

**V.  
CONCLUSION**

EnerNOC appreciates this opportunity to address the RA proposals currently before the Commission as detailed in Section I above. For the foregoing reasons, EnerNOC strongly recommends that the Staff's Revised Proposal on its QC and EFC calculation methodologies for supply side resources should be further revised as follows:

1. EFC and QC should not be bundled for DR resources.

2. The requirement for DR resources to supply a system resource on a sub-LAP basis is unreasonable and should be eliminated.
3. The testing window should be reduced from 3 months to 1 month, as originally proposed by Staff.

In addition, CAISO's calculations demonstrate that a higher percentage of flexible capacity resource needs could be supplied by super-ramping resources. In these circumstances, EnerNOC recommends that the Commission staff should respond as follows:

1. Staff should not allow Categories 1 and 2 to displace Category 3 resources, unless those resources are unavailable, at which point the deficit could be filled by higher "ranking" resources;
2. Staff should be open to revising the 5% limitation proposed by CAISO, if lifting that cap is supported by CAISO's calculations.
3. CAISO's calculations, using actual data, contain some apparent anomalies, which should be corrected before adopted for use by Staff.

Respectfully submitted,

April 18, 2014

/s/ MONA TIERNEY-LLOYD

Mona Tierney-Lloyd

**Director, Regulatory Affairs**

**EnerNOC, Inc.**

P.O. Box 378

Cayucos, CA 93430

Telephone: (805) 995-1618

Facsimile: (805) 995-1678

Email: [mtierney-lloyd@enernoc.com](mailto:mtierney-lloyd@enernoc.com)