BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Integrate and Refine Procurement Policies and Consider Long-Term Procurement Plans.	R. 12-03-014 (Filed March 22, 2012)

TRACK 1 REPLY BRIEF OF CALPINE CORPORATION

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Pursuant to Rule 13.11 of the California Public Utilities Commission ("Commission") Rules of Practice and Procedure, Calpine Corporation ("Calpine") respectfully submits this reply to the Track 1 opening briefs of GenOn Energy, Inc. ("GenOn") and the California Independent System Operation ("CAISO"). As discussed below and in Calpine's opening brief, the Commission should take a cautious approach with respect to authorizing the procurement of any new resources in Track 1 until, at a minimum, flexibility requirements and system reliability needs have been determined. In addition, Calpine joins the vast majority of parties - including Southern California Edison ("SCE") - that do not support the procurement of any *new* resources in the Big Creek/Ventura area at this time.

I. THE COMMISSION SHOULD TAKE A CAUTIOUS APPROACH WITH RESPECT TO AUTHORIZING ANY TRACK 1 PROCUREMENT

GenOn and the CAISO recommend that the Commission authorize the procurement of several thousand megawatts of new resources to meet local reliability needs in the Los Angeles basin ("LA Basin")[1] and Big Creek/Ventura[2] local areas. As a general matter, the Commission

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[1] The CAISO identifies a local need for the LA Basin of between 1,870 MW - 3,896 MW of new generation depending on the scenario modeled. *See* Exh. CAISO-1 (Sparks) at 6.

[2] The CAISO identifies a local need for the Big Creek/Ventura area of 430 MW of new generation. *See* Exh. CAISO-1 (Sparks) at 13-14. GenOn requests that the Commission mandate the procurement of 430 MW of new generation in the Big Creek/Ventura area. GenOn Opening Brief at 17.

should not authorize the procurement of any new resources to meet local reliability needs in the LA Basin and Big Creek/Ventura areas until, at a minimum, system reliability needs have been addressed.

Identifying system needs associated with renewable integration, such as flexible resource procurement and multi-year forward procurement requirements, is a necessary predicate to the efficient and cost-effective procurement of new resources. Once such requirements are established, the Commission and CAISO will be in a much better position to evaluate the need to procure new resources and identify the resource attributes necessary to ensure future reliability *at both the local and system levels*. For example, as the record in this proceeding demonstrates, transmission upgrades have the potential to cost-effectively reduce local reliability requirements. The ability to take advantage of such cost-effective options, however, will be frustrated if procurement decisions address local reliability needs in a vacuum. Accordingly, Calpine supports taking a cautious approach with respect to any Track 1 procurement and agrees with SCE that "[t]he Commission should avoid making long-term commitments to new generation procurement [in Track 1] that could subsequently be rendered significantly less valuable by changed circumstances."[3]

If the Commission determines that *some* procurement is necessary to address Track 1 reliability needs, it is important that non-discriminatory procurement practices are employed that consider all types of resources and infrastructure investments, including: new generation; existing generation (including upgrades to add flexibility, increase capacity and/or extend the useful life of the resource); transmission; demand response; energy storage; and distributed

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[3] Exh. SCE-1 (Minick) at 4.

generation. Such non-discriminatory procurement practices will better ensure that least-cost/best fit resources are procured.

Going forward as Calpine described in its opening brief, the current resource adequacy ("RA") and long-term procurement planning ("LTPP") programs must be changed to incorporate non-discriminatory procurement practices that advance competition between new and existing resources of all types; or, alternatively, replaced with an integrated multi-year forward capacity market.[4] Whether the Commission addresses such market reform in this proceeding, the current RA proceeding or through some other process, it is critical that the Commission move forward quickly.

II. THE VAST MAJORITY OF PARTIES DO NOT SUPPORT THE PROCUREMENT OF NEW RESOURCES IN THE BIG CREEK/VENTURA AREA AT THIS TIME

With respect to the Big Creek/Ventura area, GenOn requests that the Commission "*mandate* that SCE procure a minimum of 430 megawatts of new capacity.[5] In support of its request, GenOn argues that the time needed to construct new generation resources necessitates the procurement of new resources now.[6] GenOn also asserts that transmission and other non-generation alternatives cannot meet the purported need for new generation resources.[7] Neither the record nor the vast majority of parties support the authorization of such procurement in the Big Creek/Ventura area.

A survey of the Opening Briefs addressing procurement in the Big Creek/Ventura area demonstrates that a broad cross-section of parties agree that there is no immediate need to

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[4] *See* Calpine Opening Brief at 1-3, 10-11.

[5] GenOn Opening Brief at 17 (emphasis added).

[6] GenOn Opening Brief at 1, 13-16.

[7] GenOn Opening Brief at 6-10.

procure any *new* resources to satisfy local reliability requirements. This cross-section of parties includes SCE, consumer advocates, environmental advocates and cogeneration interests:

- SCE. "The Commission should defer procurement of new [local capacity requirements ('LCR')] generation for the Ventura/Big Creek Area until the 2014 LTPP cycle."[8]

- DRA. "As discussed above, DRA recommends that the Commission find no current new resource need for the Big/Creek Ventura area, and that the Commission revisit the issue of LCR need in the Big Creek/Ventura area during the 2014 LTPP."[9]

- TURN. "TURN agrees with SCE that the Moorpark sub-area [of the Big Creek/Ventura area] deserves additional analysis that includes smaller generation sizes and reviews additional transmission mitigation options. In order to allow this analysis to proceed, no solicitations should be conducted to procure new or repowered generation for this subarea until the next LTPP cycle."[10]

- CLECA. "The Big Creek/Ventura need has not been fully established in this phase of the proceeding."[11]

- NRDC. "We recommend that the Commission not authorize any procurement for the Big Creek/Ventura area at this time."[12]

- Sierra Club. "There is no need for procurement in the Big Creek/Ventura LCR area in this proceeding."[13]

- CEERT. "In these circumstances, no basis exists in this record to authorize any procurement now of LCR resources in the Big Creek/Ventura area."[14]

- CEJA. "The Commission should not grant any procurement authorization for the Big Creek/Ventura Area when SCE is not asking for authority. SCE has

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[8] SCE Opening Brief at 10.

[9] Division of Ratepayer Advocates Opening Brief at 27.

[10] The Utility Reform Network Opening Brief at 14 (footnote omitted).

[11] California Large Energy Consumers Association Opening Brief at 26.

[12] Natural Resources Defense Council, Opening Brief at 13.

[13] Sierra Club California, Opening Brief at 25 (footnote omitted).

[14] Center for Energy Efficiency and Renewable Technologies Opening Brief at 31.

provided several reasons why no urgent need exists in this area and stated that LCR need for this area can be reevaluated in future years."[15]

- EnerNOC. "Given shortcomings in the CAISO's resource assumptions used to determine LCR need, deferring review of this area to the 2014 LTPP, especially to correct such deficiencies, has particular merit."[16]

- California Cogeneration Council. "The CCC agrees with SCE that there is no need for immediate procurement of LCR generation in this area."[17]

In contrast to this diverse group of parties, GenOn asserts that new conventional generation, such as the repowering of its Mandalay Generating Station and/or its Ormond Beach Generating Station, are the only options for satisfying local area needs. In particular, GenOn suggests that potential transmission upgrades identified by Calpine would not reduce or eliminate the need for new generation in the Big Creek/Venture area.[18] GenOn's position is not supported by the record.

For example, GenOn asserts that looping an existing transmission line into the Pardee substation (Calpine Option 1) "ignores the fact that SCE deliberately 'de-looped' the line after [an] earthquake."[19] As Calpine's witness testified, however, a "bypass" switch can be installed so that, in the case of the loss of the substation, the line can be switched over to bypass the substation.[20] In fact, Pacific Gas and Electric Company ("PG&E") has installed such bypass switches in its service territory:

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[15] California Environmental Justice Alliance Opening Brief at 39.

[16] EnerNOC, Inc. Opening Brief at 16.

[17] California Cogeneration Council Opening Brief at 11.

[18] GenOn Opening Brief at 6-10.

[19] GenOn Opening Brief at 8 (footnote omitted).

[20] Calpine/Calvert, Tr. at 1318.

> In my experience with PG&E we have bypass switches to the 230 kV towers for several stations in the Bay Area so that the station could be bypassed in the event we lost a station.[21]

With respect to other potential mitigation measures identified by Calpine, GenOn suggests that voltage support equipment, such as series capacitors (Calpine Option 2), cannot be deployed on SCE's 230 kV system without causing problems with subsynchronous resonance[22] and that the installation of a fourth line in an existing transmission corridor (Calpine Option 3) would not "protect local reliability if there [was] a fire in the transmission corridor."[23]

As Calpine's witness explained at the hearing, series capacitors have been installed on 230 kV systems in other parts of the country and can be sized to address subsynchronous resonance concerns.[24] Indeed, the CAISO itself acknowledged that the addition of voltage support equipment would significantly reduce the amount of new generation needed in the Big Creek/Ventra area.[25] Thus, contrary to GenOn, the record shows that series capacitors and/or other voltage support equipment are a potential means to help address local reliability concerns in the Big Creek/Ventura area. Furthermore, GenOn's suggestion that local reliability should consider the loss of an entire transmission corridor is inconsistent with the CAISO planning

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[21] Calpine/Calvert, Tr. at 1318.

[22] GenOn Opening Brief at 8.

[23] GenOn Opening Brief at 9.

[24] Calpine/Calvert, Tr. at 1322-1323:

> Q [GenOn] Is subsynchronous resonance more likely to occur if you place series capacitors relatively close to generators given that it is due to an interaction between the capacitors and the generators, as I understand it?
>
> A [Calvert/Calpine] It goes to sizing the series capacitors correctly. It is a consideration in that. Two other installations of series capacitors that I know of are -- there are two in Arizona on the 230 system near Kayenta, K-a-y-e-n-t-a, substation. And then there are four series capacitors in Idaho near Brownlee generating station. They are on the Brownlee-Boise finish line. So you can have series capacitors in close proximity to generation. You just have to be cognizant and careful in how you size them.

[25] *See* Exh. CAISO-1 (Sparks) at 14; Sparks/CAISO, Tr. at 104-105.

criteria. With respect to Calpine Option 3, the loss of the entire transmission corridor would represent a "Category D" contingency which is "outside" of the criteria used by the CAISO to determine local reliability need in the Big Creek/Ventura area.[26]

Based on initial power flow analyses,[27] each of the options identified by Calpine would provide a similar level of system performance and local reliability as 430 MW of new generation[28] but at a fraction of the approximately $500 million it would cost to develop and build such replacement generation.[29] Thus, instead of authorizing the procurement of new resources which as SCE warns "could subsequently be rendered significantly less valuable by changed circumstances," the Commission should direct SCE and the CAISO to perform further analysis of the Moorpark sub-area,[30] particularly with respect to transmission upgrades.

VIII. CONCLUSION

The Commission can - and should - defer authorizing the procurement of new generation until, at a minimum, system requirements and flexibility needs have been determined and changes to the current RA and LTPP programs possibly implemented. While there is clearly no need to authorize the procurement of new resources for the Big Creek/Ventura area at this time, if the Commission finds that some procurement in the LA Basin is necessary prior to the

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[26] Calpine/Calvert, Tr. at 1328-29 ("If you consider the fourth line out of service, that becomes clearly a Category D contingency, and it is beyond the scope of the Moorpark subarea designation.")

[27] *See* Exh. Calpine-2 (Calvert) at 2-4 (describing initial power flow analyses performed by Calpine).

[28] Exh. Calpine-2 (Calvert) at 5-6.

[29] *See* Exh. Calpine-2 (Calvert) at 7. The CAISO asserts that, even if transmission upgrades are installed, new generation would still need to be built - although not necessarily in the Moorpark sub-area. *See* CAISO Opening Brief at 37. The power flow analyses performed by Calpine showed that transmission upgrades could provide a similar level of system performance and local reliability as 430 MW of new generation without the need for 430 MW of new generation.

[30] The potential need for new generation in the Big Creek/Ventura local area is created by the need to support reliability requirements in the Moorpark sub-area. *See* Exh. CAISO-1 (Sparks) at 14; Exh. Calpine-2 (Calvert) at 4.

Commission issuing decisions on system requirements and flexibility needs, such procurement should be limited to the lowest amount necessary to ensure near-time reliability while further analysis is undertaken.

By: /s/

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