

CAISO

Transmission Planning Process

Joint Comments on 2013/2014 Draft Study Plan

March 14, 2013

I. Introduction

These comments are filed jointly by the Clean Coalition and Distributed Energy Consumer Advocates (Joint Stakeholders). The Clean Coalition is a California-based nonprofit organization whose mission is to accelerate the transition to local energy systems through innovative policies and programs that deliver cost-effective renewable energy, strengthen local economies, foster environmental sustainability, and enhance energy security. To achieve this mission, the Clean Coalition promotes proven best practices, including the vigorous expansion of Wholesale Distributed Generation (WDG) connected to the distribution grid and serving local load. The Clean Coalition drives policy innovation to remove major barriers to the procurement, interconnection, and financing of WDG projects and supports complementary Intelligent Grid (IG) solutions - demand response; energy storage; advanced inverters; and monitoring, communications, and control systems.

Distributed Energy Consumer Advocates (DECA) is a technology neutral California-based public benefit corporation that advocates on behalf of a transformative class of small scale producer-consumers who seek to invest in their own clean energy infrastructure, including both generation and demand side investments. This customer class has a fundamentally different relationship to the electrical grid than traditional load and DECA advocates for a range of policies that enable their full and cost effective integration with the grid.

The Joint Stakeholders commend the ISO for its close coordination with the CEC and CPUC to address multiple state goals regarding energy consumption and environmental impacts. By analyzing common demand scenarios, including the High DG and environmental scenarios, realistic and progressive energy planning becomes possible and inter-agency comparisons will be enhanced.

In summary, our points are as follows, with further explanations included below.

- The ISO should analyze at least one non-transmission alternative (NTA) in each case studied, considering programmatic solutions as well as specific proposals.
- We applaud the ISO for including the 33% RPS and achieving RA for renewables in its stated policy objectives. However, additional policy objectives, including the state's goal of 80% greenhouse gas reduction by 2050 and the Governor's goal of 12,000 MW DG by 2020, should be included as policy objectives that are highly relevant to the TPP.
- We also applaud the ISO for including some uncommitted energy efficiency in the TPP. We feel that demand response should be given equal consideration to energy efficiency. Moreover, all preferred resources should be included in TPP modeling at their full anticipated and risk-adjusted levels of availability.
- Assumptions made regarding the inclusion or exclusion of SONGS should be fully transparent and justified in each scenario studied by the ISO.

II. Discussion

a. The ISO should model Non-Transmission Alternatives in each scenario

The Joint Stakeholders applaud the ISO for acknowledging the need to model NTAs in its draft study plan. Going further, however, the ISO should as a matter of practice include in each evaluation of alternatives modeled an example of how NTA could address demand and system performance needs. While the SONGS outage has undoubtedly created a great deal of uncertainty at the ISO and elsewhere, one thing it has provided clarity on is the ability of the ISO to model NTA and non-generation alternatives that can and do play an important role in grid stability.¹

1 E.g. ISO executive director of infrastructure development Neil Millar's February 7, 2013 presentation to the board of governors, Update on SONGS Mitigation Planning, stated: "Focus is on non-generation alternatives to mitigate load shed risk for multiple-contingency events."
http://www.caiso.com/Documents/Briefing2013_Summer_Outlook-Presentation-Feb2013.pdf

The ISO, as part of the TPP, should similarly consider the ability of resources such as capacitors, synchronous condensers, static VAR compensators, and advanced inverters associated with DG or energy storage to address grid needs to the extent such infrastructure is practical and cost-effective. The TPP should support the use of preferred resources and these NTA practices are consistent with the state's Loading Order, compatible with the ISO's tariff, and have proven both cost-effective and rapid in their deployment when compared to new transmission and transmission-dependent generation alternatives.

The full cost of the least-cost transmission upgrade may be greater than the cost of a comparable solution involving one or more elements of a distributed generation and intelligent grid (DG+IG) system, including demand response, energy efficiency, and energy storage, especially when the cost of acquiring such facilities as an NTA is understood to only be the cost of any pricing or market incentive required to result in deployments consistent with a programmatic NTA. For example, a 10% addition to existing compensation rates for any preferred resource that contributes to an NTA's planned capacity may be more than sufficient to ensure such resources are committed and deployed in the locations necessary to meet system requirements; the cost of this approach is not the cost of the facilities, but only the incentive required to influence their location. Such an approach would be consistent with the locational costs and benefits evaluations currently being undertaken at the CPUC.² These preferred resource solutions address not only demand, but also contribute to preferred procurement, current and future RPS goals and emission targets, and satisfy the state's Loading Order. In addition, such distributed solutions reduce the scale of risk associated with loss of large individual facilities, enhancing grid resilience. In cases where NTA could be used at equal or lesser cost, policy and procurement should be developed to achieve this preferable alternative.

For these reasons, the Joint Stakeholders recommend that the ISO more fully consider the ability of NTA to mitigate transmission needs. Because such NTA represent programmatic responses that would be met by numerous individual projects in aggregate, it would be

² CPUC workshop January 31st following the initial report "Technical Potential for Local Distributed Photovoltaics in California." that took into account, among other things: (a) theoretical resource potential, (b) an assessment and quantification of suitable site locations, (c) an assessment of technology costs, (d) an assessment of available distribution and substation capacity, and (e) a quantification of the locational benefits.

appropriate for the ISO to model a preferred solution that could then be fulfilled, rather than relying upon submission of individual NTA facility proposals.

b. CAISO should include additional policy objectives in the TPP

The Joint Stakeholders feel that policy objectives in the draft proposal are incomplete and do not reflect the clear priorities of the Governor and other state energy agencies. While the 33% RPS and Resource Adequacy (RA) for renewables outside ISO's control area are important, and we fully support their inclusion in TPP, other related energy policy objectives should also be included.

Specifically, Governor Brown's 12,000 MW of distributed generation goal should be included as a policy objective, as the CPUC recognized in its recent LTPP Track I, Local Capacity Requirements, decision (D.13-02-015). Additionally, the state goal of reducing greenhouse gas emissions by 80% below 1990 levels by 2050, set by Governor Schwarzenegger in Executive Order S-21-09³ and supported by Governor Brown, should be included as a policy objective in TPP modeling.⁴ By 2023, we must be well on the way to achieving this reduction if California hopes to do its part in reducing the effects of climate change and remain competitive in a changing world. As the RPS is the primary mechanism for achieving GHG emissions reductions in the electricity sector, and renewable deployments are unlikely to suddenly cease in 2020, further increases in the share of generation derived from renewables should be included in planning. The current minimum 33% step occurs well before the current study horizon, and while there is uncertainty on exact numbers, a continuation of the current annual trajectory represents an appropriate default assumption.

Finally, when considering the role of DG and other preferred resources, the 1,400 to 1,800 MW of local capacity requirement (LCR) the CPUC recently required SCE to procure should be included in all TPP modeling.⁵

3 <http://gov.ca.gov/news.php?id=13269>

4 http://gov.ca.gov/s_energyconference.php and Executive Order S-3-05

5 CPUC decision 13-02-015, <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M050/K374/50374520.PDF>

c. Demand response and energy efficiency should be treated equally

The Joint Stakeholders are very pleased to see the inclusion, for the first time, of incremental uncommitted efficiency in the 2013/14 TPP. However, despite the uncertainty of where energy efficiency will come into the grid, which was cited as the reason for only including the lowest estimate, the ISO should consider the full amount of uncommitted energy efficiency forecast by the CEC in its modeling. In previous comments, the Clean Coalition has recommended that “programmatic proposals”, in addition to specific projects, require consideration under FERC 1000.⁶ These would include geographically targeted efficiency programs, which could direct the expected levels of energy efficiency to areas of most need. Once potential benefits are modeled and quantified, the ISO can create the necessary market incentives based on the offset cost of transmission.

Following the same rationale used for inclusion of realistic levels of uncommitted energy efficiency, the ISO’s modeling should also utilize the full expected contribution from other preferred resources. Demand response (DR) should be incorporated into planning in the same way energy efficiency is now included in the TPP. “Negawatts” of DR can provide flexibility and reliability equivalent to or better than megawatts of generation, and DR is equally capable of meeting fluctuating demand requirements. Therefore, the Joint Stakeholders are pleased to see the following in the draft study plan:

ISO is working with the utilities, and intends to consult with industry through the course of the summer, to finalize the complete set of characteristics demand response programs need in order to be viable transmission mitigations. The ISO will work with the utilities to identify those programs that have the appropriate characteristics such that they can be considered when alternatives are developed and compared once the study results testing system reliability have been completed, and options are being explored. (p.24)

The numbers currently listed in table 4-7 for DR programs from the IOUs are, according to the Joint Stakeholders’ estimates, low and show a minimal increase over the ten-year period. According to testimony at the CPUC, SCE alone will have 1,900 MW of DR by 2014, more than is listed for all IOUs combined.⁷ Hopefully, the deeper investigation the ISO plans

⁶ Clean Coalition comments on 2013/2014 Unified Planning Assumptions, 1/22/13, <http://www.clean-coalition.org/regulatory-filings/caiso-transmission-planning-process>

⁷ Bill Powers on behalf of the California Environmental Justice Alliance, CPUC R.12-03-014, March 22, 2012

to undertake this summer will demonstrate that additional DR capacity is available. We also recommend that the ISO create, for modeling purposes, DR subgroups based on response time and other relevant characteristics. By lumping all 30-minute-or-less capacity together, rapidly deployable automated demand response (ADR) is overlooked, or greatly undervalued. ADR is controlled directly by the utility or ISO and can respond almost instantaneously to fluctuating demand and supply, thus greatly increasing its value.

While considerable effort has been made to improve the geographic specificity of DR and EE in recent years, the ISO should seek to design and utilize busbar level DR and EE projections in the TPP and other ISO planning efforts. These assumptions should be consistent with those utilized by the CEC and the CPUC in the IEPR and LTPP processes and should be considered as potentially scalable as sensitivities so that they can provide the appropriate signals to policymakers throughout the state.

d. ISO assumptions about SONGS availability should be transparent and justified

The ISO's inclusion of SONGS in the base case scenario was questioned during the stakeholder meeting, due to the uncertainties surrounding its future operability and uncertain relicensing in 2022. While it is too soon to state with any certainty whether SONGS will come back online, in whole or in part, and when, the Joint Stakeholders request that the ISO thoroughly explain its assumptions on SONGS' role in the generation portfolio, both for 2018 and 2023. The sensitivity case in which SONGS is assumed not to be operational will be of great importance in contingency planning, particularly since the best evidence available today suggests that SONGS Unit 2 is unlikely to return to service in the near future and possibly never. This sensitivity analysis should prioritize NTA options that incorporate preferred resources to meet California's energy needs at the least cost possible while providing the best fit to all state energy policies.

Thank you for your time and careful consideration of these comments,

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