

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Develop an
Electricity Integrated Resource Planning
Framework and to Coordinate and Refine
Long-Term Procurement Planning
Requirements.

Rulemaking 16-02-007
(Filed February 11, 2016)

**REPLY COMMENTS OF THE BAY AREA MUNICIPAL TRANSMISSION GROUP IN
RESPONSE TO ADMINISTRATIVE LAW JUDGE'S RULING SEEKING
COMMENT ON STAFF PROPOSAL ON PROCESS
FOR INTEGRATED RESOURCE PLANNING**

Debra Lloyd
For the
BAY AREA MUNICIPAL TRANSMISSION GROUP
Utilities Compliance Manager
City of Palo Alto Utilities
1007 Elwell Ct.
Palo Alto, CA 94303
650.329.2369
debra.lloyd@cityofpaloalto.org

July 12, 2017

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Develop an Electricity Integrated Resource Planning Framework and to Coordinate and Refine Long-Term Procurement Planning Requirements.

Rulemaking 16-02-007
(Filed February 11, 2016)

**REPLY COMMENTS OF THE BAY AREA MUNICIPAL TRANSMISSION GROUP IN
RESPONSE TO ADMINISTRATIVE LAW JUDGE’S RULING SEEKING
COMMENT ON STAFF PROPOSAL ON PROCESS
FOR INTEGRATED RESOURCE PLANNING**

The Bay Area Municipal Transmission Group (“BAMx”)¹ appreciates the opportunity to provide reply comments in response to the Administrative Law Judge’s Ruling (“Ruling”) seeking comment on the Energy Division (“ED”) Staff proposal on the process for Integrated Resource Planning (“IRP”).

I. INTRODUCTION

The Ruling seeking comment on the ED Staff proposal on the process for IRP was issued on May 16, 2017. This Ruling requests that all parties, to the extent they wish, respond in their comments to several questions about the major recommendations contained in the ED staff proposal attached to the Ruling. Several parties including BAMx, submitted opening comments on June 18, 2017.

II. BAMx REPLY COMMENTS

In this section, we include the BAMx’s replies to a subset of the party opening comments.

¹ The members of BAMx are City of Palo Alto Utilities and City of Santa Clara, *dba* Silicon Valley Power.

Q. 7. Modeling in 2017-2018.

a. Do you support use of the RESOLVE modeling approach for development of a Reference System Plan in 2017-2018? Why or why not?

b. If you prefer an alternative approach, describe it in detail.

BAMx agrees with several parties, including SDG&E², NRDC³, and CalWEA⁴ that at this point in the IRP cycle there are no alternatives to using RESOLVE to maintain a workable schedule, as also believe along with others that RESOLVE provides a reasonable if not ideal capacity expansion screening model at this time. We also strongly agree with Parties including PG&E, SCE and LSA that when the first round of RESOLVE results and candidate portfolios have been released along with the RESOLVE model itself, there should be strong opportunity for vetting of the model and inspection of its results, including transparent disclosure and accessibility of model inputs and outputs, and opportunity for comment, questions and answers via writing, phone/webinar and in-person meeting(s).

We particularly agree with LSA⁵ that “objective, transparent information, algorithms and methodologies” should be provided including “detailed documentation on which results are from the model and which have been manually augmented or modified.” We view this as consistent with BAMx’s opening comments that all elements of the objective function including costs disaggregated by types of cost and resources should be clearly reported for each scenario, and furthermore that modeled costs and measures (e.g., physical resource additions and operational programs or requirements) that are associated with an output portfolio but are ***not*** included in the optimization should be clearly distinguished and reported as such.

BAMx agrees with several parties including PG&E⁶, SCE⁷ and NRDC⁸ that it is desirable that demand-side and other distributed measures and resources (such as energy efficiency, behind the meter PV/other generation) should ideally be dynamically and consistently (alongside

² San Diego Gas and Electric (SDG&E) Opening Comments, pp. 19-20.

³ Natural Resources Defense Council (NRDC) Opening Comments, p. 7.

⁴ California Wind Energy Association (CalWEA) Opening Comments, p.8.

⁵ Large-scale Solar Association (LSA) Opening Comments, p.5.

⁶ Pacific Gas and Electric (PG&E) Opening Comments, p.23.

⁷ Southern California Edison (SCE) Opening Comments, p.21.

⁸ NRDC Opening Comments, p. 5.

other candidate investments and measures) included in the optimization. We also agree with Parties including the CAISO⁹, SCE and Vote Solar that attributing and valuing locations (within California and on the grid) for demand-side and other distributed resources is very desirable. Bringing demand-side and other distributed resources along with their locational attributes and values into the optimization appears to be a modeling and data challenge beyond what is currently possible. However, strong efforts should be made to both give such resources a fair and transparent opportunity to compete in the current phase of the IRP.

Q. 9. Modeling Assumptions. Do you have any specific changes to recommend to the modeling assumptions detailed in Chapter 4 and Appendix B of the Staff Proposal and the associated spreadsheet Scenario Tool? What are they and why? Indicate a publicly-available source of your recommended assumptions.

BAMx strongly agrees with TURN¹⁰ that in the future course and evolution of the IRP process, CPUC should, while making use of timely RA-relevant information, avoid delegating local reliability procurement decisions to CAISO, noting that there are apparently no currently identified local capacity shortfalls. Similarly, as recommended by ORA¹¹, the CPUC should vet any CAISO need analyses and such analysis should be presented in IRP proceeding.

CAISO has recommended setting the net export limit (a modeling constraint) at only 2,000 MW (for any one hour) unless CAISO regionalization is explicitly modeled¹², and SCE apparently believes that the 5,000 MW limit is appropriately conservative¹³. However, BAMx recommends that consideration be given to CalWEA's recommendation that for modeling net export limits in future markets be informed by what level of exports would be *commercially rational* in neighboring BAs, considering those BAs' marginal energy costs, operating constraints (e.g., minimum generation) and appropriate wheeling costs. RESOLVE does not conduct such informative modeling of neighboring BAs, but other studies have done and will continue to do this, and BAMx believes that such a (future) market-based assessment would

⁹ California Independent System Operator (CAISO) Opening Comments, pp. 12-13.

¹⁰ The Utility Reform Network (TURN) Opening Comments, p.8.

¹¹ Office of Ratepayer Advocates (ORA) Opening Comment, p.24.

¹² CAISO Comments, p.9.

¹³ SCE Comments, pp.26-27.

support a higher net export limit than 5,000 MW. We note that the future markets in question will be experiencing high levels of renewable generation as well as continuing reforms and evolution regarding inter-area scheduling and trading. In this regard, we agree with TURN's comment that "such increases in 'regionalization' can and likely will occur even without the expansion of the CAISO balancing authority footprint."

Furthermore, if the net export limit is set considerably below 5,000 MW in the early years (e.g., 2022) of the RESOLVE simulations, then it appears that as stated by ORA this is an overly conservative constraint and should be relaxed.

Finally looking briefly beyond Reference System Plan development BAMx agrees with CalWEA that the CPUC should seek to maximize consistency of fundamental assumptions among LSEs and between LSE and Reference Plan assumptions, when LSE plans are subsequently developed, informed by the Reference Plan. This especially applies to demand forecasts. The CAISO notes the different approaches of the three IOUs in establishing basic demand forecasts for this post-Reference Plan activity. The implications of such divergence of assumptions among the IOUs or others should be recognized, considered and if necessary addressed.

Q. 16. Demand-side resources.

a. Is the treatment of these resources in the staff's recommended approach reasonable? What changes would you suggest and why?

As noted regarding topics 7 and 9 (modeling approaches, and modeling assumptions generally), BAMx agrees with several parties' comments regarding the desirability of including demand side and other distributed resources within the optimization process on a level playing field basis that recognizes locational attributes and values. As also stated regarding topics 7 and 9 BAMx recognizes that the current state of modeling and data make this an aspiration for the future rather than a current option. However, this is an aspiration that should be seriously and strongly pursued. This could include moving to a more locationally granular treatment of such resources as advocated by Vote Solar, ORA, SCE, and CAISO. We call attention to and support ORA's comment that demand response (and this should apply to ***all*** demand-side and other distributed resources) should be attributed

the full RA value (system, flexible and local) justified by resource characteristics¹⁴. We also call attention to SCE’s emphasis that “In recent years the role of demand-side resources in the marketplace has evolved rapidly” and also to SCE’s subsequent comment that “To maximize the value of demand side resources certain foundational regulatory changes are required.”¹⁵ BAMx recommends that to the extent that enabling regulatory changes are required this should be recognized but not used to unreasonably constrain demand-side and other distributed resources in the modeling and analysis unless such changes are reasonably assessed to be unlikely or significantly risky over the planning horizon.

Q. 17. Supply-side resources.

a. Is the treatment of these resources in the staff’s recommended approach reasonable? What changes would you suggest and why?

BAMx responds to the following Party comments regarding supply-related assumptions and methodologies.

- We only partly agree with SDG&E that the IRP is a modeling process and is not a procurement process¹⁶. The present Reference Plan development phase of the IRP is primarily a modeling and information-producing process, but it informs later LSE planning and procurement phases. We do not agree that the “CAISO should have the freedom to evaluate alternative renewable portfolios provided by stakeholders.” Rather, CAISO studies should inform the IRP process and also be prioritized and designed based on information from the IRP process. Such studies should not substitute for the IRP process.
- BAMx agrees with ORA that the assumed (and modeled) ability of imports to provide flexible RA should be clearly documented, and should not be limited more than what can be clearly justified¹⁷.
- BAMx agrees with CalWEA that it appears that the amount of out of state wind resources and energy available with no and/or very low transmission investment

¹⁴ ORA Comments, p.21.

¹⁵ SCE Comments, p.36

¹⁶ SDG&E Comments, p.27.

¹⁷ ORA Comments, p.26.

could be credibly set significantly higher than 2,000 MW, for reasons presented by CalWEA¹⁸.

- SCE makes valid and important points that that impacts of supply side resources on transmission system reliability and costs will not be included in the Reference Plan until next TPP cycle, and that granular regional/geographic impacts will not be captured by RESOLVE. BAMx believes this is an inevitable consequence of sacrificing locational and operational detail in RESOLVE, to enable broad scope of resource options in an optimization framework. However,
 - i. these limitations must be explicitly recognized;
 - ii. any resulting biases should be noted and if possible compensated for (e.g., if the optimization favors options having hidden grid investment or reliability costs, or disfavors options having grid investment or reliability benefits); and
 - iii. the above situation (absence of full transmission implications in the Reference Plan) should inform an assessment of how to reduce or compensate for these modeling limitations, both in the current IRP cycle and also in future IRP cycles which may use a different expansion planning/optimization platform.

Q. 20. Reference System Plan development.

a. What methodology should staff use to develop a recommendation for the portfolio to include in the Reference System Plan?

BAMx has not observed Party comments favoring applying qualitative or semi-quantitative objectives via a formal scorecard, and this is consistent with BAMx’s opening comment that any particular scorecard approach would ultimately be “wrong” and undesirably constraining. We do agree that any approach for distilling RESOLVE results down to a few candidate portfolios and ultimately a Reference Plan should be clearly and fully documented and justified, including the specific sequence of individual steps in the

¹⁸ CalWEA Comments, p.2.

process. We agree with ORA that any particular scorecard would provide false precision, and agree with SDG&E's observation that many of the "goals" may simply be pass/fail. We also note that SCE's proposed approach to distillation represents if not the ultimately best or preferred method, then at least a rational, quantitative-qualitative approach susceptible to reasoned discussion and clear documentation - - all of which represent desirable traits.

BAMx cannot disagree with PG&E's observation that the distillation method is "critical and complex".¹⁹ However, we are unclear if this is best addressed via a PG&E-recommended workshop, at least without prior foundation for the workshop such as involving and comparing specific "distillation" options illustrated with actual modeling results for realism. Perhaps the initial round of RESOLVE modeling results could be "distilled" with a few clearly and informative distillation methods for purposes of illustration and mutual education and discussion, such that a workshop might be part of the process of fine tuning the distillation method for the next round of modeling.

Party comments on the first round of modeling will likely be both deep and extensive, representing the thorough RESOLVE vetting as noted in BAMx reply comments on Question 7 above (modeling). Thus, on the one hand there might be ample time for comment and discussion on a distillation method since model vetting should take considerable time. On the other hand, everyone's resources (Parties, modelers, CPUC staff) could be stretched to the limit if critical and complex modeling *and* distillation are being digested and vetted at the same time. However, the second round of modeling could begin (after very substantial vetting, as noted above) *before* the final vetting and refinement of the distillation process. BAMx recommends this approach, model vetting first, final distillation process vetting/refinement subsequently, while second round modeling is occurring. Both resolutions (modeling and distillation process) could require comments and workshops.

Q. 36. Alignment with CEC's Integrated Energy Policy Report (IEPR) and California Independent System Operator's (CAISO's) Transmission Planning Process (TPP).

¹⁹ PG&E Comments, p.43.

a. Do you support the Staff Proposal approach to coordination with the IEPR and TPP processes? What changes would you recommend and why?

BAMx notes that essentially all parties recognize the importance and also increasing complexity of process (e.g., IRP-IEPR-TPP) coordination. The apparently unavoidable time lags and potential disconnects between processes have also been noted (e.g., by CAISO, PG&E and SCE), such as when the TPP proceeds based on demand and resource (including resources requiring transmission) forecasts and information from the IEPR and IRP processes even as that “incoming” information is being overtaken and possibly invalidated by the new IEPR and IRP cycles coinciding with the current TPP cycle.

BAMx has not observed a reliable, comprehensive solution to this problem. However, several Parties have noted that at least in some situations, a planning process at risk of making decisions based on outdated information could conduct informational analyses reflecting more current but less final information. An example is TPP special (informational) studies utilizing Reference Plan information while the more detailed Preferred Plan (and individual LSE plans) are not yet available. Both BAMx²⁰ and SCE²¹ have recommended this approach while CAISO expressed caution but not unwillingness. The level of effort involved for reasonable (not overly extensive) “look-ahead” special studies is, BAMx believes, well worth the effort. For example, planning or approving transmission based on information suspected of becoming obsolete and even misleading is not only undesirable, it is also more inefficient than running the extra, special studies in the first place.

III. CONCLUSION

BAMx appreciates the opportunity to provide reply comments regarding Parties’ responses to certain previously published formal questions regarding major recommendations

²⁰ BAMx Opening Comments, pp.6-7.

²¹ SCE Comments, pp.65-66.

contained in the ED staff proposal. We continue to look forward to participating in the IRP proceeding.

July 12, 2017

Respectfully submitted,

/s/ Debra Lloyd

Debra Lloyd

For the

BAY AREA MUNICIPAL TRANSMISSION GROUP

Utilities Compliance Manager

City of Palo Alto Utilities

1007 Elwell Ct.

Palo Alto, CA 94303

650.329.2369

debra.lloyd@cityofpaloalto.org