BAMX Comments on the CAISO 2014-15 Transmission Planning Process Draft Study Plan

The Bay Area Municipal Transmission group (BAMx)[1] appreciates the opportunity to comment on the CAISO 2014-15 Transmission Planning Process Draft Study Plan. The comments and questions below address the 2014-2015 Transmission Planning Process Unified Planning Assumptions and Study Plan posted on February 20, 2014, and discussed during the February 27th stakeholder meeting. We see several positive enhancements to this year's plan and look forward to continuing to work with the CAISO to continuously improve the planning process.

Scope and Schedule for the 2014-2015 Planning Cycle

Table 2-1 of the document should be enhanced. The table does not appear to delineate when the CAISO responds to each round of Stakeholder comments. BAMx believes this is an integral part of the annual transmission process that has not received as much attention in the past as it should have. BAMx requests that CAISO provide such feedback on a timely basis and that Table 2-1 should be expanded to identify when such responses would be available.

It is not apparent from the draft plan that the CAISO will continue to develop a forecast of the CAISO high voltage TAC. BAMx believes this forecast is crucial to stakeholder understanding and planning for upcoming TAC increases, and should become a formal part of the transmission planning process. It is also important that the CAISO update this forecast in a timely basis for meaningful stakeholder comment. We encourage the CAISO to continue to improve forecast methodology and include its intentions in the 2014-2015 Study Plan.[2] We suggest the timing for such an activity also be included in Table 2-1.

It is also important that stakeholders understand the options for solutions to reliability deficiencies that have been identified in the assessment. An important source for potential alternative solutions are the project submittals made through the Non-PTO Request Window. Therefore, BAMx requests that Table 2-1 be expanded to specifically identify a timely posting of Non-PTO Request Window projects.

Review of the CAISO Planning Standards

At the February 27th stakeholder meeting, CAISO indicated that it will launch a review of the CAISO Planning standards during this planning cycle to address consideration of load shedding for Category C (*N-1-1*) contingencies, address the unique conditions of San Francisco Peninsula, and prepare for new *TPL-001-4* NERC Standard. BAMx encourages stakeholder vetting of such

[1] BAMx consists of Alameda Municipal Power, City of Palo Alto Utilities, and City of Santa Clara, Silicon Valley Power.

[2] See BAMx's Comments on the CAISO Transmission Access Model, dated October 28, 2013 on missing data and documentation, input assumptions on the capital projects and costs, reliability project costs and TAC model functionalities.

important planning considerations and requests that within these topics, the following be considered:

- Within the context of load shedding and the new *TPL-001-4* NERC Standard, the CAISO Planning Standards should address how non-consequential load shedding under footnote 12 for single contingencies as well as *G-1*, *N-1* events will be managed within the CAISO.
- In addressing the unique conditions of the San Francisco Peninsula, consider how planning for major seismic events in the Greater Bay Area outside of San Francisco will be considered.
- Assess whether the distinction in *TPL-001-4* between EHV and HV stations provides guidance on the design of station switchyards. For example, an important question to address is under what circumstances should consideration be given to rebuilding an existing switchyard to a different arrangement for the purposes of improved reliability.

RPS Portfolios

BAMx is concerned that the recent discovery of the loss of all deliverability in the Imperial zone may initiate additional transmission expansion into an area where billions of dollars have already been spent to enhance the transmission system to access renewable generation. The CAISO identified a path whereby up to 1,000 MW of the previous 1,710 MW may be restored, depending on which transmission projects in the draft 2013-2014 Draft Transmission Plan are approved and constructed. Before considering additional expansion, consideration should be given to areas where renewable generation may be accessed at much lower TAC customer costs. We understand that the Joint letter sent by the CEC and the CPUC Commissioners to the CAISO CEO included an additional sensitivity scenario that explores additional deliverability from the Imperial zone.[3] As indicated below, BAMx is not aware of any State Policy to assure the deliverability of intermittent resources. We highly encourage the CAISO to take a broad and critical look as to whether any additional policy-driven upgrades are truly needed for California to reach its 33% RPS goal.

Generation Assumptions

New Generation

In Section 4.9 of the Study Plan, the CAISO states its practice of assuming new generators are online for the study period if they are currently under construction or have their major permits for siting. In Table 4-3, the CAISO identifies the Once-Through-Cooling (OTC) generation units in the CAISO BAA. As many of these projects have not completed their permitting processes which are necessary to achieve compliance with SWRCB requirements, will the CAISO be modeling them off-line in the years beyond their compliance dates? The statement following Table 4-4 suggests that they will be modeled off-line except as needed to meet the CPUC Track 1 decision and Track 4 proposed decision. It would be helpful to provide clarity and describe

[3] A letter, titled, "Base Case and Alternative Renewable Resource Portfolios for the CAISO 2014-2015 Transmission Planning Process," dated February 27, 2014.

which OTC replacement generation that are not currently on-line or authorized in these decisions are assumed to be off-line in the transmission planning base cases.

Generation Retirements

The Study Plan identifies that "Other Retirements" will include, unless otherwise noted, retirement of resources with an age of 40 years or more (excluding renewable and hydroelectric resources). That appears to be an arbitrary number, as many units on the CAISO grid that are over 40 years old continue to provide support to the CAISO grid. BAMx encourages the CAISO to provide further clarification which characteristics of older units, beyond a pronouncement by the owner, put them at risk of retirement.

In addition, it is difficult to determine from Table A3-1 whether this assumption results in any changes in the modeling of resources in the planning process. Therefore, BAMx would appreciate the addition of a table in Section A3 that includes the age of specific resources that are subject to this consideration and their assumed status in the transmission planning base cases. BAMx is concerned that in the event that reliability issues are identified resulting from any assumed retirements, sufficient notification should be given to the CPUC regarding the cost of alternative transmission solutions so that the CPUC may consider the extension of procurement contracts under the Long Term Procurement Plan (LTPP) proceeding.

Table A3-1 also identifies three San Diego resources totaling 187 MW that may potentially retire within the planning horizon, but with the retirement date listed as "TBD." Given the recent resource gap in the area and the large effort being undertaken to address this need, please include more detail including the driver(s) for the these retirements and when the timing for this change in status may be known.

Major Path Flows

The Study Plan identifies major path flow assumptions. While we understand the need to study stressed system considerations to understand system limitations, capital upgrades to maintain such transfer capabilities under stressed system conditions may not be cost effective. For example, transmission upgrades to maintain the capability to reliably flow 5,400 MW south-to-north on Path 15 under Summer Off-peak conditions may very well not provide a sufficient benefit to justify the cost. We assume that redispatch of generation could be used to address any criteria violations. If the system lacks sufficient flexibility to redispatch around such limitations, it may well be more symptomatic of a resource issue rather than a transmission capacity limition. We are encouraged that the Study Plan also identifies that the CAISO will consider lower cost alternatives to the construction of transmission additions or upgrades in action plans to address any violations of criteria that are identified due to the path flow assumptions. However, we urge caution that these assumptions do not also drive the need for transmission solutions in other studies, such as the GIDAP, without a similar consideration of lower cost alternatives.

Long-Term LCR Studies

BAMx is very supportive of the inclusion of long-term LCR studies in this transmission planning cycle. Such studies will be extremely valuable in supporting any decision to address projected reliability deficiencies though expanded transmission or local resource procurement as driven by the CPUC Long Term Procurement Plan (LTPP) process. The near-term LCR studies, however, merely focus on the generation solutions. BAMx recommends that the long-term LCR studies also include planning level estimates of the costs to address reliability deficiencies through transmission upgrades so that the CPUC LTPP can compare these with the cost of local resource solutions based upon generation capacity costs and production cost studies performed by the CAISO and other factors.

We urge the CAISO to consider employing its modeling expertise to perform integrated generation and transmission analysis based upon a reasonable set of assumptions in the 2014-15 TPP for the following reasons. First, the production cost simulation models are very effective in comparing the effectiveness of competing alternatives such as local generation, new transmission and preferred resources. Second, the CAISO already plans to deploy the production cost simulation tool directly to perform congestion analysis and to evaluate economic planning study requests. The CAISO also plans to use the generation profiles from the production cost studies in their policy-driven as well as the new "over-generation" studies. Therefore, we believe that the CAISO's incremental resources and the cost of using the production cost simulations model to inform the 2014-15 TPP in this area is likely to be minimal. BAMx encourages the CAISO staff to consult with CPUC Energy Division staff on appropriate assumptions. If desired, BAMx would provide its recommendations on assumptions for such studies.

San Francisco Peninsula Extreme Events Assessment

BAMx continues to be very interested in the assessment and potential recommendations associated with extreme system events impacting the San Francisco Peninsula. BAMx is expecially interested in the assessment methodology and the potential modifications to the CAISO Planning Standards that may be applicable to other urban areas with high seismic risk. We look forward to working with the CAISO and learning how this process may be applied more broadly.

Potential Risk of Over-Generation

This new special study focuses on system performance at times of limited generation flexibility. BAMx sees this work as being invaluable in understanding the system's ability to meet certain performance metrics related to frequency excursions. However, if the issue is the lack of flexible system capacity, it is not clear how such a study may impact the annual transmission plan and whether transmission improvements are even capable of relieving any issues found. Therefore, BAMx requests that the Study Plan be more specific as to what types of solutions may be considered in the event that the studies indicate system deficiencies.

2014-2015 ISO 33% RPS Transmission Assessment

As part of its assessment of the 33% RPS portfolios, the Study Plan identifies that the CAISO will conduct a production simulation for each of the developed portfolios using the ISO unified economic assessment database. These results will be used to inform the development of power flow scenarios for the power flow and stability assessments. BAMx requests that these production simulations be expanded very modestly to include looking at the potential change in congestion costs both with and without any policy driven upgrades recommended, as needed to support the 33% RPS program. This would allow stakeholders to better understand whether any such recommended upgrades could be expected to improve the economic efficiency of the grid or are for the purpose of accessing the RA capability of renewable generators.

Deliverability Assessment Methodology

In Section 3.1.1 (Achieving 33% renewable energy on an annual basis) of the 2014-15 Study Plan, the CAISO states the following:

> "The state's mandate for 33% renewable energy by 2020 refers to the share of total electricity consumed by California consumers over the course of a year that is provided by renewable resources. In the context of the transmission planning studies, the question to be investigated is whether a specified portfolio of renewable supply resources, in conjunction with the conventional resource fleet expected to be operating, will deliver a mix of energy over all 8760 hours of the year that is at least 33% supplied by the renewable portfolio on an annual basis. Through the studies the ISO performs to address this question, the ISO could identify policy-driven transmission additions or upgrades that are necessary in order to achieve the 33% renewable share of annual consumption by 2020."

BAMx agrees with the above paragraph. However, BAMx strongly disagrees with the CAISO's interpretation that it is the State Policy that "all" renewable projects needed to meet the 33% RPS goal should provide Resource Adequacy. For instance, the CAISO's 2014-15 Study Plan in Section 3.1.2 (Supporting RA deliverability status for needed renewable resources outside the ISO balancing authority area) states the following:

> "Deliverability for the purpose of a resource providing RA capacity is a distinct requirement and is integral to achieving the 33% RPS policy goal."

Rather than designating transmission projects as policy-driven solely to allow intermittent renewable projects to satisfy the State's system RA needs, the CAISO should undertake a cost-benefit analysis to show that any proposed new transmission project to assure deliverability of new resources and/or to decrease envisioned congestion is justified. Further the CAISO should determine whether the new proposed transmission is both necessary and the most economical alternative to meet the State's resource adequacy needs.

BAMx is even more concerned with the proposal in this year's plan to expand upon the assumption that there is a need to provide deliverability from intermittent resources to resources that are outside the CAISO grid. BAMx considers this effort as likely to compound the existing problem whereby major transmission projects are approved for deliverability reasons independent of the need for such RA resources or a cost/benefit determination.

In our research, we have discovered that the annualized transmission cost is significantly higher than the RA value associated with the interconnecting renewable resources. The California Energy Commission (CEC) acknowledged this in their 2013 Integrated Energy Policy Report (IEPR)[4], which states that

> "Requiring full deliverability for future PPAs for renewable generators in the state may not be a cost-effective strategy and modification of deliverability requirements should be considered in light of the billions of dollars in transmission investments the requirement triggers."

BAMx believes that now is the time for the CAISO to work with the CPUC and the CEC to address this important issue.

BAMx appreciates the opportunity to comment on the CAISO 2014-15 Transmission Plan. BAMX would also like to acknowledge the significant effort of the CAISO staff to develop the plan to date, as well as the staff's willingness to work with the stakeholders in the process to more fully develop it. We hope to work with the CAISO staff to continue to improve and enhance its capabilities.

If you have any questions concerning these comments, please contact Barry Flynn (888-634-7516 and brflynn@flynnrci.com) or Pushkar Wagle (888-634-3339 and pushkarwagle@flynnrci.com) or Robert Jenkins (888-634-0777 and robertjenkins@flynnrci.com).

[4] See pp. 122-23 of the California Energy Commission 2013 Integrated Energy Policy Report (CEC-100-2013-001-CMF), dated January 14, 2014.