

Alameda Municipal Power Comments on the CAISO 2015-16 Transmission Planning Process Draft Study Plan

Alameda Municipal Power (AMP) appreciates the opportunity to comment on the CAISO Draft 2015-16 Transmission Planning Process (TPP) Unified Planning Assumption and Study Plan (Study Plan). The comments and questions below address the 2015-2016 TPP Unified Planning Assumptions and Study Plan posted on February 17, 2015, and discussed during the February 23rd stakeholder meeting. In addition to the below comments, AMP fully supports the BAMx comments.

Additional Special Study – East Bay 115 kV

Now that there is greater clarity concerning the direction of the San Francisco Peninsula Extreme Event mitigation and with the recent revision of the CAISO Transmission Planning Standards, this is an opportune time for an in-depth review of the East Bay 115 kV electric system and the development of a focused long-term plan. AMP recommends that a focused study of the Oakland-East Bay area be included in the Study Plan for the following reasons:

1. The current assessment is likely overestimating the relief that will be provided by the East Shore-Oakland J 115 kV Reconductoring Project.

The East Shore-Oakland J 115 kV Reconductoring Project, approved in the CAISO's 2012 Transmission Plan, is designed to provide relief for the transmission lines serving the southern Oakland/San Leandro/Alameda area by re-establishing a 115 kV source from East Shore Sub to Station J to relieve potential heavy flows on the four 115 kV circuits from Moraga to Stations U and J. However the relief identified in prior transmission assessments is likely overstated.

The overstatement of relief is due to the contingency modeling of the Russell City Energy Center connected to East Shore Substation. As per Section V of the CAISO Planning Standards,

“A single module of a combined cycle power plant is considered a single contingency (G-1) and shall meet the performance requirements of the NERC TPL standards for single contingencies (TPL002). Supporting information is located in Section V of this document. Furthermore a single transmission circuit outage with one combined cycle module already out of service and the system adjusted shall meet the performance requirements of the NERC TPL standards for single contingencies (TPL002) as established in item 1 above.

A re-categorization of any combined cycle facility that falls under this standard to a less stringent requirement is allowed if the operating performance of the combined cycle facility demonstrates a re-categorization is warranted.”

In the above text, “a single module” would constitute the 2x1 combined cycle power

block. However, the contingency files for this area (sample pasted below) continue to model the loss of a single machine (i.e. one combustion turbine or one steam turbine) at Russell City combined cycle plant for the G-1 contingency event.

Excerpt from contingency file "a16_B_2016.otg"

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B1_2 "RUSELCT1      15.00 Unit ID 1"

  gen      35304  "1 "    0          # gen      RUSELCT1
15.00  GEN ==184.19(21.57)

0

B1_3 "RUSELCT2      15.00 Unit ID 2"

  gen      35305  "2 "    0          # gen      RUSELCT2
15.00  GEN ==184.19(21.57)

0

B1_4 "RUSELST1      18.00 Unit ID 3"

  gen      35306  "3 "    0          # gen      RUSELST1
18.00  GEN ==242.41(35.74)

0
  
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The result is that under critical contingency conditions, the planning models show too much generation at Russell City. This makes East Shore a stronger source thereby providing greater relief to the Moraga 115 kV circuits by the East Shore-Oakland J 115 kV Reconductoring Project than should be assumed per the Planning Standards.

2. Implementation of the revised CAISO Planning Standards for load dropping in high-density urban load centers.

There are multiple Special Protection Schemes in the East Bay designed to drop load in order to comply with TPL002 and TPL003 contingency events. The 2015-2016 Transmission Planning Process Unified Planning Assumptions Study Plan identifies the following SPS in this area:

Greater Bay Area	Moraga-Oakland J 115kV line OL RAS
Greater Bay Area	Grant 115kV OL SPS
Greater Bay Area	Oakland 115 kV C-X Cable OL RAS
Greater Bay Area	Oakland 115kV D-L Cable OL RAS

A special study of the Oakland/East Bay Area is needed to bring this area into compliance with the recent revisions to the Planning Standards that no longer allows “non-consequential load dropping in high density urban load areas in lieu of expanding transmission or local resource capability to mitigate NERC TPL002 and TPL003 standards and impacts on the 115 kV or higher voltage systems.”

This is especially relevant in that the relief expected by the East Shore-Oakland J 115 kV Reconductoring Project to mitigate the need to drop load for single contingency events may not materialize as expected due to the above concerns with the modeling.

3. Continued and increasing reliance on the Oakland CTs to meet the Planning Standards.

In the recently completed TPP cycle, the Oakland CTs were initially modeled as being off-line (or retired) in the 2024 Summer Peak base case. As these units were installed in the 1970s, this is consistent with the planning in other areas¹ where fossil generation units over 40 years old are not to be relied upon in planning for the long-term reliability of a local area. Furthermore, the Oakland CTs are the last of the RMR generating units on the CAISO system.² Unfortunately, annual RMR contracts do not provide for a business model where large capital investments can be made to insure the long-term availability of a generating plant.

Furthermore, as part of the 2014-2015 Transmission Planning Process a long-term Local Capacity Requirements (LCR) study was done for this area. This study showed a strong dependence on the Oakland CTs in the 2024 planning horizon despite the units being modeled off-line in the base case.

Both the Oakland CTs and the NCPA CTs in Alameda have severe limitations on their hours of operation due to environmental restrictions. These limit the annual operation hours to 877 hours (10%). While the Oakland CTs are RMR units, the NCPA CTs are not and are typically dispatched to meet the NCPA resource portfolio needs. Therefore they may not have the availability necessary to also be relied upon for extensive local capacity needs. Lastly, in addition to meeting the planning requirements, it is our understanding that this local generation is needed to accommodate maintenance outages on the transmission system. This also consumes available operating hours of the generating units. Despite these various demands for these units, we are not aware of any assessment of the ability to need these demands within the available operating hours.

¹ In the planning for the LA Basin/San Diego area following the SONGS shut down, planning models assume that, due to its age in excess of 40 years, the Etiwanda power plant is not to be relied as an element of the long term plan to meet the reliability requirements of the area.

² The September 11, 2014 CAISO Board Memo from Keith Casey also identifies AES Huntington Beach synchronous condensers as RMR units. It is our understanding that this is a near term arrangement which is supported by these condensers being modeled off-line in the 2024 SCE Summer Peak base case as modeling the Huntington condensers off-line.

This gap between the initial planning assumption that these units would be off-line in 2024 and the long-term plan to rely on these units was not addressed in the 2014-2015 Transmission Plan.

4. High Seismic Risk

Similar to San Francisco, the Oakland/East Bay Area has a high seismic risk profile with transmission lines/cable that span major a major fault as well as critical stations that are located on or near the fault. Geography and urban development limit access to the area. Similar to what was performed for the San Francisco Peninsula, an assessment of the seismic risk and viable mitigation options could also be part of a special study of the Oakland/East Bay Area.

AMP appreciates the opportunity to comment on the CAISO 2015-16 Transmission Plan. AMP 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 Lindsay Battenberg (510-814-6412 and battenberg@alamedamp.com).