



BAMX Comments on the CAISO 2011-12 Transmission Plan: CAISO Preliminary Study Results and PTO's Proposed Solutions

The Bay Area Municipal Transmission group (BAMx)¹ appreciates the opportunity to comment during the development of the CAISO 2011 Transmission Plan. The comments and questions below address the studies posted on the ISO's website on August 10, 2011 and discussed during the September 28th-29th Stakeholder meetings.

Reliability Assessment Results

BAMx appreciates the ISO staff efforts in issuing the study information that is timely and complete.

In past years, the completeness of the analysis and the designation of proposed remedies for criteria violations have been inconsistent across the CAISO grid. Some areas are much better documented and the analysis has been more complete than in other areas. Several areas including PG&E Bulk Transmission System, Humboldt, North Coast, North Bay and North Valley in the PG&E service area and the SCE/SDG&E areas were adequately documented, whereas hardly or no explanations of results were included for the Greater Bay Area or in Central Coast and Los Padres Areas.

It is most helpful when a diagram is provided indicating the contingency creating the criteria violation, overloaded facility and proposed mitigation.

Greater Bay Area Assessment

The CAISO's September 28th presentation indicates that the 2011-12 assessment has identified fifteen (15) category B thermal overloads. It also adds that this is "similar" to the category B thermal overloads identified in the last year's (2010-11) assessment. In Table 1, we have included a comparison of these two assessments. The 2010-11 assessment actually indicated only five (5) category B thermal overloads. Only three out of these overloads are also identified in the 2011-12 assessment. Please explain why the remaining 2 overloads (highlighted in green) identified in 2010-11 assessments were not found in the 2011-12 assessment. On the other hand, please explain why the six (6) new category B "pre-2021" overloads (highlighted in yellow) found in the 2011-12 assessment were not detected in the 2010-11 assessment.

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

Table 1: A Comparison of Thermal Category B Overloads Identified in 2010 and 2011 Reliability Assessments

2010-11 Assessment	2011-12 Assessment
Potrero - Mission (AX) 115 kV Cable	Potrero - Mission (AX) 115 kV Cable
Oleum-North Tower-Christie 115	Oleum-North Tower-Christie 115
Contra Costa PP - Contra Costa Sub 230 kV Line	
Birds Landing - Contra Costa 230 kV Line	
	Lakewood - Meadow Lane - Clayton 115kV Line
	Contra Costa - Moraga 230 kV Line #1
	Contra Costa - Moraga 230 kV Line #1
Newark-Dixon Landing 115kV Line	Newark-Dixon Landing 115kV Line
	Piercy-Metcalf 115kV Line
	Monta Vista - Los Gatos 60 kV Line
	Evergreen - Almaden 60 kV Line

Below, we include questions regarding specific sub-areas within GBA.

1. **De Anza:** Please provide an explanation for the dramatic changes in category B loadings on the facilities in De Anza as shown in Tables 2 and 3 below. For example, the loading on the CLY LNDG – WSTNG JT 60kV as shown in Table 2 below changes 14-15% each year for 2012 to 2014? During 2014-2016 the loading increases by 1%. However, during 2016-2021 the increase in loading is as high as 15%. Similarly, the Evergreen-Almaden 60 kV line overloads on years 2012-2016, but not in 2021. Please provide a rationale for proposing congestion management as a mitigation measure for this category B overload. Furthermore, describe what entails this congestion management solution.

Table 2: Category B Overloads in De Anza

Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)						ISO Proposed Mitigation
				2012	2013	2014	2015	2016	2021	
CLY LNDG - WSTNG JT60kV	Monta Vista-Los Altos 60 kV Line(Loyola-Monta Vista)	B	N-1	95%	81%	96%	96%	97%	112%	Congestion Management
CLY LNDG - WSTNG JT60kV	Monta Vista 230/60 kV Trans No. 5	B	N-1	95%	81%	96%	96%	97%	112%	Congestion Management
Evergreen - Almaden 60 kV Line	Monta Vista 230/60 kV Trans No. 5	B	N-1	108%	109%	109%	110%	111%	87%	Congestion Management

2. **De Anza:** Please explain how increased Monta Vista bank rating would relieve the category C overload(s) on a 230kV line and a 60kV line as shown in your table below.

Table 3: Category C Overloads in De Anza

SARATOGA - VASONA 230kV Line	Metcalf-Monta Vista No. 3 & Monta Vista-Coyote Sw. Sta. 230 kV Line	C	DCTL	91%	88%	92%	92%	92%	102%	Increase Monta Vista bank rating or energize Shisman-MT View 115kV Line
NEWARK F - LCKHD J2 115 kV Line	Newark-Lawrence 115 kV Line _Britton-Monta Vista 115 kV Line	C	N-1-1	87%	91%	94%	97%	100%	110%	Re-rate or reconductor line. Drop load either manually or thru SPS as appropriate
CLY LNDG - WSTNG JT 60kV Line	Monta Vista-Coyote Sw. Sta. 230 kV Lin_Monta Vista 230/60 kV Trans No. 5	C	N-1-1	95%	81%	96%	97%	97%	112%	Increase Monta Vista bank rating or energize Shisman-MT View 115kV Line

3. **Mission:** Please explain why the overload on the Newark-Ames 115kV line under a category C contingency is reduced in 2013 relative to 2012 and no overloads in subsequent years. Based on the CAISO's September 28th presentation, it is our understanding that the dramatic increase in the category C overload on the East Shore 230/115kV Transformer as shown in Table 4 below is attributed to the Russell City generation in 2014. Please confirm and include this information in the Draft Final 2011-12 Transmission Plan. Please also explain whether and how network upgrades caused by interconnecting generators were treated in the GIP studies/process.

Table 4: Category C Overloads in Mission

Newark - Ames Distribution 115 kV Line	Newark-Ravenswood 230 kV and Tesla-Ravenswood 230 kV lines	C	DCTL	127%	105%	Less than 80%				Re-rate or reconductor line. Drop load either manually or thru SPS as appropriate
Newark - Ames #2 115 kV Line	Newark-Ravenswood 230 kV and Tesla-Ravenswood 230 kV lines	C	DCTL	125%	103%	Less than 80%				Re-rate or reconductor line. Drop load either manually or thru SPS as appropriate
East Shore 230/115 kV Transformer #2	Eastshore-San Mateo 230kV Line _Eastshore 230/115kV Transformer #1	C	N-1-1	89%	104%	210%	214%	219%	227%	Re-rate or reconductor line. Drop load either manually or thru SPS as appropriate

4. **San Jose:** We understand from the discussion during the September 28th stakeholder meeting that both, the Newark-Dixon Landing 115kV and the Piercy-Metcalf 115kV lines category B overloads as shown in Table 5 are eliminated in 2015 onwards due to the Evergreen - Mabury 60 kV to 115 kV conversion. Please include such information in the Draft Final 2011-12 Transmission Plan. Furthermore, please describe the "action plan" that addresses the category B overload on the Monta Vista-Los Gatos 60kV line as shown in Table 5. What causes the overload to disappear in 2021?

Table 5: Category C Overloads in San Jose

Overloaded Facility	Worst Contingency	Category	Category Description	Loading (%)						ISO Proposed Mitigation
				2012	2013	2014	2015	2016	2021	
Newark-Dixon Landing 115kV Line	Piercy-Metcalf 115kV Line	B	L-1	113%	116%	119%	Less than 80%			Re-rate or reconductor line. Drop load either manually or thru SPS as appropriate
Piercy-Metcalf 115kV Line	Newark-Dixon Landing 115 kV Line	B	L-1	104%	106%	108%	Less than 80%			Re-rate or reconductor line. Drop load either manually or thru SPS as appropriate
Monta Vista - Los Gatos 60 kV Line	Monta Vista 230/60 kV Trans No. 5	B	T-1	119%	121%	121%	123%	124%	95%	Short term: Action Plan Long term: Monta Vista - Los Gatos-Evergreen reconductor project

PTO Request Window Project Applications

Maintain Consistency Between the CAISO and PTO Base Cases

It became apparent during the September 29th Stakeholder meeting that there are discrepancies among the power flow cases used by the PTOs to make their request window applications and those used by the CAISO ultimately to perform reliability assessments. We believe that the CAISO and the PTOs should use identical power flow cases. Without consistency, it is almost impossible to have any meaningful stakeholder participation. If different base cases were used, CAISO or PTO must provide the reasons for such deviation. We request the CAISO to clearly label the power flow cases (on the CAISO's secured website) that were used by the CAISO to perform their reliability assessments versus those that were utilized by the PTOs to make their request window applications.

PTOs Should Provide Capital Cost Estimates for their Request Window Projects

Unlike PG&E and SCE, SDG&E did not provide any capital cost estimates for their request window projects as presented during the September 29th. SDG&E indicated during the stakeholder meeting that they would provide all the capital cost estimates. We request the CAISO to make that data publicly available.

PTO Request Window Applications

Below we seek more information on some of the PTO Request Window applications that were presented during the September 29th Stakeholder meeting.

1. **San Joaquin Valley Area:** The *Wheeler Ridge 230kV Voltage Support*, the *Kern Power Plant 230kV* and the *Kern Power Plant 115kV* projects all mention that there is a 500 kV solution for Wheeler Ridge and Kern PP area. Please have PG&E describe this 500 kV alternative.
2. **North Coast & North Bay:**
 - Please have PG&E explain how replacing breaker would relieve the overload on the *Tulucay 230/60 kV Transformer No. 1*.

- Since the overload occurs on the *Geysler No.3 – Cloverdale 115 kV Line* only due to the renewable generation, why has PG&E not considered tripping of the generation rather than considering switch upgrades as the only solution. Similar observation can be made in case of the *Rio Dell Jct - Bridgeville 60 kV Line Reconductoring Project*. Please explain if and how such overloads were treated under the GIP study/interconnection process. Currently, GIP is the appropriate platform to study the impact of interconnecting generation on the transmission grid and to identify related reliability and deliverability network upgrades.
3. **Timing of the Request Window Projects:** There are several PTO projects listed below are submitted in the 2011 Request Window. Given the typical lead-time of 2-3 years, we question the need to approve these projects in the 2011-12 transmission plan. We believe these type of projects with short mitigation and extended need date should be categorized separately. The current preferred option(s) for mitigation should be identified for these projects along with a current estimated date that CAISO approval will be sought. This is a good practice even if we did not exist in the current world of having hundreds of interconnecting generators, some with short lead times, altering the performance of the grid. In today's regime of constantly shifting generator connection patterns, it is even more important that irrevocable decisions are not made prematurely.
- Reedley 70 kV Area Reinforcement (2017);
 - Borden 230 kV Voltage Support (2019);
 - Oceanside 69kV Area (2021);
 - Penasquitos 69kV Area (2021); and
 - Talega 69kV Area (2021).

BAMx appreciates the opportunity to comment on the CAISO 2011-12 Transmission Plan and acknowledges the significant effort of the ISO staff to develop the plan so far.

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).