

BAMX Comments on the Revision to the ISO Transmission Planning Standards Draft Straw Proposal

The Bay Area Municipal Transmission group (BAMx)¹ appreciates the opportunity to comment on the Revision to ISO Transmission Planning Standards Draft Straw Proposal dated April 4, 2014 (Proposal) and the associated April 11th stakeholder presentation. We request that the CAISO address comments and questions below in its May 14th Revised Straw Proposal.

Non-consequential load dropping: Category C Contingencies

We appreciate the CAISO effort to hold a stakeholder forum on whether the CAISO should have a Planning Standard more stringent than NERC with regard to the non-consequential loss of load for Category C events, and if so, what form such a more stringent Standard would take. Unfortunately we are concerned that the CAISO, having already testified on this issue at during the CPUC Long Term Procurement Plan (LTPP) Track 4 hearings, may already have a firm position on this important issue. Despite this history, we hope that the CAISO will be receptive of stakeholder feedback.

Clarification of Proposal With Respect To Category C Contingencies

The Proposal should clearly state the intention about whether the standard applies to all Category C contingencies.² The confusion arises from the following statement in the Proposal.

“The ISO system has approximately 14 special protection schemes that drop load for category C contingencies on the 100 kV system and above. Two of these SPS will be removed once transmission upgrades that are under development are in-place. The remaining SPS are not relied upon in order to serve load in high population density areas from the high voltage transmission system.”

Is the Proposal to not allow the non-consequential tripping of load in urban areas for all Category C contingencies on the CAISO controlled grid, or just those that involve facilities > 100 kV? If the latter, more explanation is needed around whether all facilities lost need to be > 100 kV. (This would appear to be the case as there are a number of 60 kV Category C contingencies on the San Francisco Peninsula for which the near and long term mitigation is load dropping.)

Concerns with the Proposal

While BAMx supports maintaining the continuity of service to urban and critical loads³ for Category C events, BAMx is concerned about the lack of any foundation presented in support of

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

² As the term “Category C” will soon become archaic, the Proposal should make the identification in terms of the NERC P0-P7 levels.

³ Critical loads are meant to include those loads that support critical health and human services that cannot be supported through local back-up generation.

why a population density of 1,000 people per square mile is an appropriate threshold for the application of the proposed higher reliability requirement for urban areas. The material presented and the CAISO stakeholder presentation suggested that such a threshold would limit the application of the Proposal to small portions of California with high population densities. However, this is not the case. Attachment 1 shows the population densities for the largest 100 California cities. All of these cities easily meet this threshold, even those they may not be in the counties identified by the CAISO. Even communities of much more modest size easily meet this threshold.⁴ Many of these areas are served by transmission facilities that are currently at risk of consequential loss of load for Category C (and for more modest communities, Category B) contingencies. Therefore, BAMx does not support the use of population density as an appropriate measure of “urban” load, especially when the threshold is set so low. Rather, the CAISO needs to more specifically define those areas where NERC Standards will be exceeded for transmission contingency planning. If the CAISO means that this standard only includes the area impacted by the shutdown of SONGS, it should say so and justify its position. On the other hand, if the CAISO means a wider urban area in California should be covered in these standards, it should list the specific urban areas included in these standards and explain why these urban areas should have planning standards that exceed NERC standards.⁵ The proposal should also identify the statewide costs and impact on the TAC associated with a standard that exceeds the NERC Standards and how this cost compares with the benefit achieved by avoiding dropping urban load.

Alternate Proposal

At the stakeholder meeting an alternative was suggested for using a MW cap on the allowed non-consequential load loss. This would be similar to how NERC approached limiting the risk of non-consequential loss of load for single contingencies and the existing CAISO Planning Standards limits the risk of consequential loss of load for single contingencies. If the cap were set higher than the load at risk for either consequential load loss or contingencies on lower voltage systems that may result in load loss, such a method could avoid inconsistent outcomes.

A better alternative would be to use a \$/MW_{peak} value reflecting the extent to which capital dollars would be expended to avoid non-consequential load loss. If the concern is that such a value would not capture the societal impacts of larger outages, one solution would be to create non-linear value function. In either case, a \$/MW_{peak} would avoid having more stringent standards than NERC that are insensitive to customer cost.

San Francisco-Peninsula Extreme Event Reliability Standard

BAMx commends and supports the CAISO’s efforts to look at the exposure, risk and potential mitigation options for the San Francisco Peninsula. We understand the Proposal does not prescribe what mitigation, if any, would be required, but rather only requires that mitigation be considered.

⁴ A few random examples: Auburn – 1,900 pop/mi², Coalinga – 2,200 pop/mi², Livingston – 3,200 pop/mi², Marysville – 3,000 pop/mi², Gonzales – 3,200 pop/mi², Fortuna – 2,400 pop/mi², Susanville – 2,200 pop/mi².

⁵ Note that the planning practices in northern and southern California with respect to category C events differed prior to the formation of the CAISO.

Most stakeholders, by simple observation, tend to support that the San Francisco Peninsula merits special attention to its electric service due to its geography and seismic risks. This concern is borne out by the work that has been done by PG&E and the CAISO to assess the risks and consequences of major system disruptions in this area. Unfortunately, the Proposal is so narrowly crafted as to only address San Francisco. BAMx requests that this standard be expanded to provide a framework to better understand how this could be applied to other areas with high risk factors. There are many CAISO controlled facilities that are at risk for seismic events. Many of these are located in urban areas where the risk for a large loss of load for extended periods is heightened. Furthermore, the Proposal does not provide any guidance as to what, if anything, should be done for those areas. Even for the San Francisco Peninsula, the Proposal does not describe what standard of service is to be met. As such, the Proposal is not sufficient to justify any specific capital expenditure and provides no guidance as to how much mitigation is sufficient. Therefore, the Proposal as written is more of a study guide than a Planning Standard.⁶

In summary, BAMx requests that the Proposal be expanded to one of more general applicability. BAMx is especially interested as to whether this Proposal may be the genesis of a statewide spare equipment and restoration plan that could also benefit those customers not specifically located in one of the areas of concern.

Changes in the NERC Transmission Planning Standards

The change in the NERC Planning Standards has been approved by both NERC and FERC and is moving into implementation. BAMx supports the CAISO proposal to update the CAISO Planning Standards to reflect the new NERC standard. While effective dates of new NERC Requirements will be phased in over the next 20 months, BAMx recommends that their incorporation into the existing CAISO Planning Standards and into this Proposal for non-consequential loss of load for multiple contingencies be included in the next draft Proposal. While NERC has provided time to incorporate the new requirements into the PA & TP planning processes, both the Planning Standards and the Transmission Planning BPM should reflect these requirements before the applicable planning cycle begins.

Additionally, BAMx views the incorporation of this new NERC Standards structure and especially its treatment of load dropping for single contingencies, as an opportunity to develop a coherent policy as to when capital expenditures would be justified to maintain or improve reliability to customers. While the policy would have to comply with the NERC Standards, it could also address the gaps in the NERC standards where stakeholders were unable to reach consensus at a national level as well as the seams in the current standards in California. This would include whether to require continuity of service following single or multiple contingencies, whether the interruption was due to a consequential or non-consequential breaker action. The

⁶ We note that the information presented in the stakeholder meeting on the Con Edison Transmission Planning Criteria for New York City is a requirement for an assessment but not a specific requirement for action. As such, it provides little additional guidance for the planning for Extreme Events than exists in the NERC Planning Standards.

policy would also be broad enough to address Extreme Events as being discussed for the San Francisco Peninsula.

BAMx appreciates the opportunity to comment on the CAISO Revision to the ISO Transmission Planning Standards Draft Straw Proposal. BAMx views this as an opportunity to address issues that have arisen in multiple forums in a coherent fashion and hope to work with the CAISO staff to continue to improve and enhance the planning process in California.

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

Attachment 1
Population Densities of the 100 Largest California Cities⁷

Rank	City	Population	County	Size (sq. mi.)	Density
1	Los Angeles	3,792,621	Los Angeles	469	8,087
2	San Diego	1,307,402	San Diego	372	3,515
3	San Jose	945,942	Santa Clara	180	5,255
4	San Francisco	805,235	San Francisco	232	3,471
5	Fresno	494,665	Fresno	112	4,417
6	Long Beach	468,257	Los Angeles	51	9,182
7	Sacramento	466,488	Sacramento	100	4,665
8	Oakland	390,724	Alameda	78	5,009
9	Bakersfield	347,483	Kern	144	2,413
10	Anaheim	336,265	Orange	51	6,593
11	Santa Ana	324,528	Orange	28	11,590
12	Riverside	303,871	Riverside	81	3,751
13	Stockton	291,707	San Joaquin	62	4,705
14	Chula Vista	243,916	San Diego	52	4,691
15	Fremont	214,089	Alameda	88	2,433
16	Irvine	212,375	Orange	66	3,218
17	San Bernardino	209,924	San Bernardino	60	3,499
18	Modesto	201,165	Stanislaus	37	5,437
19	Oxnard	197,899	Ventura	39	5,074
20	Fontana	196,069	San Bernardino	42	4,668
21	Moreno Valley	193,365	Riverside	51	3,791
22	Glendale	191,719	Los Angeles	31	6,184
23	Huntington Beach	189,992	Orange	32	5,937
24	Santa Clarita	176,320	Los Angeles	48	3,673
25	Garden Grove	170,883	Orange	18	9,494
26	Santa Rosa	167,815	Sonoma	42	3,996
27	Oceanside	167,086	San Diego	42	3,978
28	Rancho Cucamonga	165,269	San Bernardino	40	4,132
29	Ontario	163,924	San Bernardino	50	3,278
30	Lancaster	156,663	Los Angeles	95	1,649
31	Elk Grove	153,015	Sacramento	42	3,643
32	Palmdale	152,750	Los Angeles	106	1,441
33	Corona	152,374	Riverside	39	3,907
34	Salinas	150,441	Monterey	23	6,541
35	Pomona	149,058	Los Angeles	23	6,481

⁷ Based on the reported results of the 2010 United States Census.

36	Torrance	145,438	Los Angeles	21	6,926
37	Hayward	144,186	Alameda	64	2,253
38	Escondido	143,911	San Diego	37	3,889
39	Sunnyvale	140,081	Santa Clara	23	6,090
40	Pasadena	137,122	Los Angeles	23	5,962
41	Orange	136,416	Orange	25	5,457
42	Fullerton	135,161	Orange	22	6,144
43	Thousand Oaks	126,683	Ventura	55	2,303
44	Visalia	124,442	Tulare	36	3,457
45	Simi Valley	124,327	Ventura	42	2,960
46	Concord	122,067	Contra Costa	31	3,938
47	Roseville	118,788	Placer	36	3,300
48	Santa Clara	116,468	Santa Clara	18	6,470
49	Vallejo	115,942	Solano	50	2,319
50	Victorville	115,903	San Bernardino	74	1,566
51	El Monte	113,475	Los Angeles	10	11,348
52	Berkeley	112,580	Alameda	18	6,254
53	Downey	111,772	Los Angeles	13	8,598
54	Costa Mesa	109,960	Orange	16	6,873
55	Inglewood	109,673	Los Angeles	9	12,186
56	San Buenaventura (Ventura)	106,433	Ventura	32	3,326
57	West Covina	106,098	Los Angeles	16	6,631
58	Norwalk	105,549	Los Angeles	10	10,555
59	Carlsbad	105,328	San Diego	39	2,701
60	Fairfield	105,321	Solano	38	2,772
61	Richmond	103,701	Contra Costa	52	1,994
62	Murrieta	103,466	Riverside	34	3,043
63	Burbank	103,340	Los Angeles	17	6,079
64	Antioch	102,372	Contra Costa	29	3,530
65	Daly City	101,123	San Mateo	8	12,640
66	Temecula	100,097	Riverside	30	3,337
67	Santa Maria	99,553	Santa Barbara	23	4,328
68	El Cajon	99,478	San Diego	14	7,106
69	Rialto	99,171	San Bernardino	22	4,508
70	San Mateo	97,207	San Mateo	16	6,075
71	Compton	96,455	Los Angeles	10	9,646
72	Clovis	95,631	Fresno	23	4,158
73	South Gate	94,396	Los Angeles	7	13,485
74	Vista	93,834	San Diego	19	4,939
75	Mission Viejo	93,305	Orange	18	5,184

76	Vacaville	92,428	Solano	29	3,187
77	Carson	91,714	Los Angeles	19	4,827
78	Hesperia	90,173	San Bernardino	73	1,235
79	Redding	89,861	Shasta	61	1,473
80	Santa Monica	89,736	Los Angeles	16	5,609
81	Westminster	89,701	Orange	10	8,970
82	Santa Barbara	88,410	Santa Barbara	42	2,105
83	Chico	86,187	Butte	33	2,612
84	Whittier	85,331	Los Angeles	14	6,095
85	Newport Beach	85,186	Orange	53	1,607
86	San Leandro	84,950	Alameda	16	5,309
87	Hawthorne	84,293	Los Angeles	6	14,049
88	San Marcos	83,781	San Diego	24	3,491
89	Citrus Heights	83,301	Sacramento	14	5,950
90	Alhambra	83,089	Los Angeles	8	10,386
91	Tracy	82,922	San Joaquin	22	3,769
92	Livermore	80,968	Alameda	24	3,374
93	Buena Park	80,530	Orange	11	7,321
94	Lakewood	80,048	Los Angeles	9	8,894
95	Merced	78,958	Merced	23	3,433
96	Hemet	78,657	Riverside	28	2,809
97	Chino	77,983	San Bernardino	30	2,599
98	Menifee	77,519	Riverside	47	1,649
99	Lake Forest	77,264	Orange	18	4,292
100	Napa	76,915	Napa	18	4,273