

The CAISO received comments on the topics discussed at the June 17, 2024 stakeholder call from the following:

- A. Bay Area Municipal Transmission Group (BAMx)
- B. California Public Utilities Commission – Public Advocates Office

Copies of the comments submitted are located on the Transmission Planning Process page at:

<https://stakeholdercenter.caiso.com/RecurringStakeholderProcesses/2023-2024-Transmission-planning-process>

The following are the CAISO's responses to the comments

1. [Please provide a summary of your organization's comments regarding the ISO's presentation on Oakland Area Transmission Reinforcement](#)
2. [Please provide a summary of your organization's comments regarding the ISO's presentation on Short Circuit Mitigation for Miguel 230 kV Circuit Breakers](#)
3. [Please provide a summary of your organization's comments regarding the ISO's presentation on Short Circuit Mitigation for Imperial Valley 230 kV Circuit Breakers](#)
4. [Please provide any additional comments on the 2023-2024 Transmission Planning Process](#)

1. Please provide a summary of your organization’s comments regarding the ISO's presentation on Oakland Area Transmission Reinforcement

No	Submitting Organization	Comment Submitted	CAISO Response
1A	Bay Area Municipal Transmission Group (BAMx)	<p>The Bay Area Municipal Transmission Group (BAMx)[1] appreciates the opportunity to comment on the material presented at the CAISO 2023-2024 Transmission Plan—Extension (Extension, hereafter) stakeholder meeting on June 17, 2024. BAMx understands that the CAISO is considering the additional transmission upgrades in the area to supply the anticipated increased load in Oakland without relying on the local thermal generation.</p> <p>A considerable analysis is needed to determine the preferred project to address the Oakland area transmission needs, which has yet to be performed. This includes a comparison of several 115 kV and 230 kV alternatives in terms of their scope and costs.[2] Therefore, BAMx supports the CAISO's proposal to continue the assessment of the Oakland area reinforcement in the 2024-2025 transmission planning process. This additional time will provide the stakeholders with the necessary time to perform independent evaluations.</p>	The comment has been noted.
1B	California Public Utilities Commission - Public Advocates Office	<p>The Public Advocates Office at the California Public Utilities Commission (Cal Advocates) provides these comments on the California Independent System Operator's (CAISO) stakeholder meeting on the 2023-2024 Transmission Planning Process: Transmission Plan Extension on June 17, 2024. Cal Advocates is an independent ratepayer advocate with a mandate to obtain the lowest possible rates for utility services, consistent with reliable and safe service levels and the state's environmental goals.[1]</p> <p>Cal Advocates has no comments on the June 17, 2024 Oakland Area Transmission Reinforcement project update at this time.</p>	The comment has been noted.

2. Please provide a summary of your organization’s comments regarding the ISO's presentation on Short Circuit Mitigation for Miguel 230 kV Circuit Breakers

No	Submitting Organization	Comment Submitted	CAISO Response
2A	Bay Area Municipal Transmission Group (BAMx)	San Diego Gas and Electric’s (SDG&E) request window application[3] for the Short Circuit Mitigation for Miguel 230 kV Circuit Breakers did not entail installing a 3-Ohm series reactor on TL23026 Silvergate –Bay Boulevard 230 kV line, which will be located at the Bay Boulevard substation as proposed by the CAISO. It appears that the other element of the proposed project, i.e., opening the Miguel 230 kV CB 6X, leads to additional issues requiring installing the proposed series reactors. The CAISO’s June 17, 2024 presentation lacks crucial details. BAMx, therefore, requests the CAISO to include those details in the CAISO Board approval of the project. We also request the CAISO to provide the detailed cost estimates, by component, of the Short Circuit Mitigation for Miguel 230 kV Circuit Breakers, which have increased from the \$1 million initially proposed project by SDG&E to \$51 million.	<p>In response to this comment, the ISO and SDG&E have worked together to provide the following response.</p> <p>The \$1M cost estimate only included opening the 230 kV 6X circuit breaker at Miguel substation and modifying involved RAS. After opening the 230 kV 6X circuit breaker, some power flow issues were observed and mitigated by adding the line series reactor in TL23026 which in turn increased the cost to \$51M with following breakdown.</p> <p>Transmission Components: One underground to overhead 230 kV relocation, one 230 kV underground relocation and one 69 kV underground transmission line relocation to new bay positions at Bay Boulevard Substation. Cost \$17M</p> <p>Substation Components: Relocate one 230/69 kV transformer to another bay position, install one 230 kV line series reactor, install three 230 kV breakers, and install one 69 kV breaker at Bay Boulevard substation. Relocate existing spare transformers at Bay Boulevard to a new location, including site development at new location. Cost \$34M</p>
2B	California Public Utilities Commission - Public Advocates Office	Please refer to our response to questions 3.	The comment has been noted.

3. Please provide a summary of your organization’s comments regarding the ISO's presentation on Short Circuit Mitigation for Imperial Valley 230 kV Circuit Breakers

No	Submitting Organization	Comment Submitted	CAISO Response
3A	Bay Area Municipal Transmission Group (BAMx)	BAMx notes that the scope for the proposed Short Circuit Mitigation for Imperial Valley 230 kV Circuit Breakers[4] is different from the one included by SDG&E in its request window application. BAMx requests the CAISO provide a detailed cost estimate for each component of the proposed project	<p>SDG&E provided additional information in their comments of the Draft 2023-2024 Transmission Plan that was used in the determination of the recommended mitigation. The cost estimate provided was for the scope of the entire project, but the detailed cost estimate for the Short Circuit Mitigation for Imperial Valley 230 kV Circuit Breakers is included in the response to comment 3B.</p> <p>The ISO will continue to work with the PTOs on the level of estimate in future planning cycles.</p>
3B	California Public Utilities Commission - Public Advocates Office	<p>Cal Advocates recommends greater transparency on the project scopes, which are provided in CAISO’s Transmission Planning Process. Specifically, Cal Advocates requests that the Participating Transmission Owners (PTO) provide detailed cost estimates for all proposed projects when they are presented for approval. With detailed project cost estimates, stakeholders would be able to compare the project costs to alternatives as well as PTO Per Unit Cost Guides, to verify whether the costs are reasonable or require further explanation.</p> <p>Cal Advocates makes this request based on its experience reviewing PTOs final project proposals. For example, during the 2023-2024 Transmission Plan Extension stakeholder meeting on June 17, 2024, San Diego & Electric Company (SDG&E) explained that the proposed Short Circuit Mitigation for Imperial Valley 230 kV Circuit Breakers and for the Miguel 230 kV Circuit Breakers involve new breakers.[1] However, new breakers are not listed among the project scope components for these proposed Short Circuit Mitigation projects.[2],[3] SDG&E only provided the total estimated project costs for its Short Circuit Mitigation projects and not the cost for each project component. SDG&E also revised its project scope for the Short Circuit Mitigation projects from the September 27, 2023 proposals, to include different equipment and other substation changes that increased costs. Yet, the revised June 17, 2024</p>	<p>In response to this comment the ISO and SDG&E have worked together to provide the following response.</p> <p>Initial alternative mitigations proposed for the Short Circuit Duty (SCD) concerns for Imperial Valley 230 kV circuit breakers and Miguel 230 kV circuit breakers were to replace all 230 kV circuit breakers at each substation to achieve short circuit ratings above 63 kA. However, engineering analysis of these proposed breaker replacement mitigations at both substations revealed construction feasibility concerns associated with replacing all circuit breakers and multiple other equipment replacements and upgrades to safely achieve short circuit ratings above 63 kA. As a result, other alternatives considered, including those outlined during the 2023-2024 Transmission Plan Extension stakeholder meeting on June 17, 2024, focused on mitigations to reduce the available short circuit current at Imperial Valley 230 kV and Miguel 230 kV in order to stay below the SCD of 63 kA for the existing substation equipment. The selected project scopes at both substations do not include replacement of 230 kV circuit breakers to achieve ratings above 63 kA.</p> <p>At Imperial Valley, the total \$97M cost estimate includes the following breakdown.</p>

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		<p>project scope still does not include the new breakers that are also needed for this project. The Miguel 230 kV Circuit Breaker project description explained that the original solution had drawbacks. However, the Imperial Valley 230 kV Circuit Breaker project description did not explain the need for changes and the project cost increased by \$2 million.</p> <p>If stakeholders had a detailed cost estimate for each project, they could know with confidence that all capital costs are accounted for in the total project cost estimate. Additionally, stakeholders would better understand the reason for the project scope revisions and project selection. Providing only the total project cost just does not provide sufficient information to understand SDG&E's project development and selection process.</p>	<p>Transmission Components: Three underground 230 kV transmission line relocations with overhead substation drops to new bay positions at Imperial Valley substation. Cost \$43M</p> <p>Substation Components: Install two (2) 10-ohm current limiting reactors in series with the 230 kV north and south buses at Imperial Valley substation, including the relocation and rebuilding of the 230 kV west buses, installation of ten (10) new 230 kV breakers, and installation of other associated equipment such as disconnect switches, instrument transformers, and protection devices. Expansion of the substation in the northwest corner by 2.5 acres is required to accommodate the additional footprint of the reactors and associated equipment. Cost \$50M</p> <p>Site Development and Environmental Cost \$4M Costs to expand the substation in the northwest corner by approximately 2.5 acres.</p>

4. Please provide any additional comments on the 2023-2024 Transmission Planning Process

No	Submitting Organization	Comment Submitted	CAISO Response
4A	Bay Area Municipal Transmission Group (BAMx)	BAMx appreciates the CAISO staff's efforts and due diligence in keeping the stakeholders updated on the additional proposed analysis and recommended approvals as part of the 2023-2024 TPP.	The comment has been noted.
4B	California Public Utilities Commission - Public Advocates Office	<p>Cal Advocates also recommends CAISO develop a project cost review process similar to Southwest Power Pool's (SPP) to manage project costs and ensure these costs remain just and reasonable. For 11 years now, SPP's project review process has tracked project costs starting from the project estimation phase to construction on a quarterly basis. If a project's quarterly report reveals that its cost exceeds 10% of the original project cost, the project is reviewed to ensure that the escalations are appropriate.^[1] If a project cost exceeds 20% of the original cost estimate, SPP's Board can suspend the project or order the project not be constructed.^[2] SPP officials have stated that this process has resulted in projects completed at or below their original cost estimates.^[3]</p> <p>The Federal Energy Regulatory Commission (FERC) also recently issued Order No. 1920, which requires transmission providers to reevaluate long-term regional transmission projects if the reported costs of a previously selected facility "significantly exceed" the cost estimate used to select the project.^[4] To this end, transmission providers are required to have a mechanism to track project costs so that transmission providers can determine if the reported cost for a selected project will exceed the approved cost.^[5]</p> <p>Since it is an accepted practice for transmission providers to track project costs, CAISO should track the costs of approved regional transmission projects and reevaluate projects if their reported costs are 10% or greater than approval costs. This recommendation is consistent with SPP's business practice which FERC approved.^[6] Having estimated costs for each project component should also assist with project cost tracking.</p>	The comment has been noted. The ISO is currently assessing the requirements of Order No. 1920 that was recently issued by FERC.