

Memorandum

To: ISO Board of Governors
From: Neil Millar, Vice President, Infrastructure and Operations Planning
Date: July 10, 2024
Re: **Decision on Addendum 1 to 2023-2024 Transmission Plan**

This memorandum requires ISO Board of Governors action.

EXECUTIVE SUMMARY

The California Independent System Operator Corporation (ISO) has completed its assessment of the short circuit mitigation for the Imperial Valley 230 kV and Miguel 230 kV Circuit Breaker projects as an extension of the 2023-2024 transmission planning cycle, and recommends that the ISO Board of Governors approve the two projects as described below and in Addendum 1 of the 2023-2024 Transmission Plan.

As set out in the 2023-2024 Transmission Plan approved by the ISO Board of Governors at its May 2024 meeting, analysis of the projects continued beyond the approval of the rest of the Transmission Plan.

The projects are needed to address the identified short circuit concerns, described below and in Addendum 1 to the ISO's 2023-2024 Transmission Plan, with the previously approved transmission projects and the base resource portfolio provided by the California Public Utilities Commission (CPUC) for the 2023-2024 transmission planning process. Both projects entail substation reconfigurations and use of reactors rather than breaker replacement programs due to timing, cost, and substation limitations.

Moved, that the ISO Board of Governors approve Addendum 1 to the 2023-2024 Transmission Plan for the approval of the following two reliability-driven projects as described in the memorandum dated July 10, 2024:

- ***Short Circuit Mitigation for Imperial Valley 230 kV Circuit Breakers Project***
- ***Short Circuit Mitigation for Miguel 230 kV Circuit Breakers Project***

DISCUSSION AND ANALYSIS

As indicated in Addendum 1 to the ISO's 2023-2024 Transmission Plan, all 63 kA circuit breakers at the Imperial Valley 230 kV and Miguel 230 kV substations will exceed their ratings during short circuit conditions with the previously approved transmission projects and the base resource portfolio provided by the CPUC's for the 2023-2024 transmission planning process. The following two reliability-driven projects mitigate the overstress of the 230 kV circuit breakers:

- Short Circuit Mitigation for Imperial Valley 230 kV Circuit Breakers Project
- Short Circuit Mitigation for Miguel 230 kV Circuit Breakers Project

Both projects entail substation reconfigurations and use of reactors rather than breaker replacement programs due to timing, cost, and substation limitations. The estimated cost of the two projects is \$148 million.

POSITIONS OF THE PARTIES

Stakeholders generally support the ISO's proposal recommending the two reliability-driven projects.

A couple of stakeholders expressed concern with the level of detail of the estimates provided and changes that had been made between the original projects scopes submitted by SDG&E in the Request Window and the recommended alternatives.

ISO response: The project cost estimates provided are for the entire scope of the project. The ISO will continue to work with the participating transmission owners in future planning cycles on the appropriate levels of planning level estimates to be provided. SDG&E provided additional details on the project in the comments to the Draft 2023-2024 Transmission Plan that was used in determining the recommended projects. The ISO has included in Addendum 1 of the 2023-2024 Transmission Plan the latest cost estimates for the recommended projects and the alternatives that were considered.

CONCLUSION

The ISO is recommending the following reliability-driven projects for approval as an Addendum to the 2023-2024 Transmission Plan:

- Short Circuit Mitigation for Imperial Valley 230 kV Circuit Breakers Project; and
- Short Circuit Mitigation for Miguel 230 kV Circuit Breakers Project

The projects are needed to address the identified short circuit concerns described above and will allow the interconnection of future generation resources beyond the CPUC baseline portfolio and transmission upgrades beyond the previously approved transmission projects.