Memorandum

To: ISO Board of Governors

From: Neil Millar, Vice President of Transmission Planning and Infrastructure Development

Date: July 16, 2025

Re: Transmission Maintenance Coordination Committee update

This memorandum does not require ISO Board of Governors action.

EXECUTIVE SUMMARY

The Transmission Maintenance Coordination Committee (TMCC) held meetings on January 16, 2025, March 27, 2025, and April 24, 2025. The following were the main topics discussed:

January 16, 2025

- Extended Day Ahead Market project update
- Inspection effectiveness and risk-based inspection frequency;
- Overview of new participating transmission owner (PTO): Delaney Colorado River Transmission project
- Overview of GridLiance West (GLW) / Valley Electric Association (VEA) system expansion

March 27, 2025

- Nominate and confirm TMCC members for three open positions and add a new TMCC member of new PTO, Delaney Colorado River Transmission (DCRT).

April 24, 2025

- Gates Dynamic Reactive Support Project (Orchard Substation) overview
- Transformer seismic retrofits at Suncrest Static Var Compensator (SVC)
- Transbay Cable 15 Years of HVDC operations and maintenance
- SCE Static Var Compensator (SVC) overview, maintenance practices, and strategy

The next regular scheduled TMCC meeting is scheduled for October 23, 2025 at the ISO headquarters.

BACKGROUND

The TMCC is an advisory committee to ISO Management. TMCC membership includes one member representing each participating transmission owner (PTO) with transmission facilities subject to the ISO transmission maintenance standards, two members representing organizations representing labor interests, five members representing other organizations, and the ISO Vice President of Transmission Planning and Infrastructure Development, or his or her designee, who serves as the Chair of the TMCC.

Members of the TMCC perform duties specified in Appendix C to the transmission control agreement focused on maintaining the availability of transmission facilities, including:

- Conveying transmission facility maintenance-related information to the ISO Vice President of Transmission Planning and Infrastructure Development;
- Seeking input from participating transmission owners and interested stakeholders regarding the transmission maintenance standards; and
- Reviewing any proposed changes to the transmission maintenance standards submitted by the ISO, a participating transmission owner, or any interested stakeholder; and recommending revisions to the standards for submittal to the ISO Board of Governors for decision.

Summary of January 16, 2025 meeting

Extended Day Ahead Market Project Update

Trang Vo, ISO Project Management Office Release Manager, provided a presentation on the development and implementation of the ISO's Extended Day Ahead Market (EDAM). Ms. Vo discussed the basic EDAM market design and provided a history of the steps towards its implementation west-wide. This included a review of the current schedule for the implementation with committed participants starting in May of 2026.

Inspection Effectiveness and Risk-Base Inspection Frequency

Natalie Dawley PhD P.E., PG&E's Transmission Inspection and Maintenance Strategist, provided an overview and history of PG&E's Transmission HFTD/HFRA Inspections. The presentation detailed PG&E's transmission line inspection activities in High Fire Threat Districts (HFTD's) and High Fire Risk Areas (HFRA's) and included a discussion of the modeling used to determine threat areas. PG&E noted that they perform both visual inspections and supplemental targeted or specialized inspections including but not limited to, specific component wear testing and infrared, corona and structure climbing inspections.

Overview of Delaney Colorado River Transmission (DCRT) Project Overview

Ali Amirali, Managing Director Lotus Infrastructure Partners, provided an overview of the ISO's newest participating transmission owner, Ten Link West, and the new 500kV Delaney – Colorado River Transmission Line including the associated 500kV Ceilo Azul Switchyard. The 125 mile 500kV transmission line was placed in service in June of 2024 and the first phase of the six bay 500kV Cielo Azul Switchyard is scheduled for completion in February of 2025.

Overview of GridLiance West//Valley Electric Association System Expansion

Jim Useldinger, Senior Manager of Operations for GridLiance West (GLW), and Jed Ferguson, Director of Transmission Operations at Valley Electric Association (VEA), provided an overview of the core system and Beatty Substation upgrades being constructed to the GLW and VEA systems in Nevada. The upgrades were approved as part of the ISO approved 2022-2023 Transmission Plan to establish GridLiance West and Valley Electric Association as a gateway for Nevada solar imports into California. They include the construction of numerous 500kV and 230kV substations and transmission lines and are scheduled to be completed by December of 2027.

Summary of March 27, 2025 teleconference

The purpose of the conference call was for TMCC members to review nominations for four positions whose current members' terms were expiring on March 31, 2025. The committee voted on the nominees and the following were appointed to the committee to serve until March 31, 2028:

- Renewal – Dave Hahn, WAPA, Western Area Power Administration;
- Renewal – Jed Ferguson, Valley Electric Association;
- Renewal – Bryan Pena, California Public Utilities Commission;
- New Member – Ali Amirali, Delaney Colorado River Transmission, Managing Director

Summary of April 24, 2025 meeting

Gates Dynamic Reactive Support Project (Orchard Substation)

Ross Hohlt, Director, LS Power's Asset Management, John Randolph, LS Power's Principal Engineer and Matthew Eck, LS Power's Sr. Manager, Transmission Asset Management presentation detailed the Gates 500 kV Dynamic Reactive Support Project, which encompassed planning, development, and operational aspects of the Orchard Substation. A key focus of the presentation was the STATCOM control system, with discussion on the STATCOM's function in maintaining a steady voltage of 530 kV over several days in March 2025. The STATCOM unit includes 60 variable speed fans for thermal control. Discussions also included considerations around the balance

between MVAR usage and grid voltage control, highlighting the operational optimization of this reactive power support system.

Transformer Seismic Retrofits at Suncrest Static Var Compensator (SVC) Substation

Alexandre Veilleux, Horizon West's Senior Engineer presented a project review of the successful Suncrest Transformer Seismic Retrofit, completed in Spring 2022. The project scope involved removing existing transformers from their foundations and reinstalling them on new custom-designed steel platforms. To enhance seismic resilience, seismic pads, specifically triple pendulum isolators, were added between the foundations and platforms. Furthermore, the low side bus and conduit connections were modified to allow for 24 inches of horizontal movement and 2 inches of vertical movement during seismic events. Inspection of the transformer post-earthquake events showed no damage.

Transbay Cable 15 Years of HVDC Operations and Maintenance

Michael Blunt – Transbay Cable's Operations Manager presentation focused on the Transbay Cable system, the first MMC-VSC in service supplying 40% of San Francisco's load. The discussion covered technical specifications, including its half-bridge symmetrical monopole design with a floor-mounted converter using IGBTs (Siemens MMC-VSC "Type 1"). Key features are a floor-mounted arrangement with 216 modules per phase arm (1296 total across 6 phase arms, ±2.0kV per capacitor). Transbay Cable shared findings from a Siemens collaboration on IGBT performance, which found no degradation in modules from the Potrero (Station B) Converter after 14 years of service.

SCE Static Var Compensator (SVC) Overview, Maintenance Practices, and Strategy

Oscar Bonilla Portillo, Thuan Tran and Francisco Canales of Southern California Edison presentation explained how Static VAR Compensators (SVCs) help control voltage on the power grid. SVCs use technology to quickly adjust reactive power, which is essential for maintaining a stable electrical system. SCE discussed how SVCs respond to voltage changes after events like faults, ensuring the grid stays within safe operating limits. They also provided details on SVC units on their system, including the Rector and Devers SVCs, highlighting their capabilities and upgrade plans along with maintenance practices.