



## Decision on ISO 2025-2026 Transmission Plan

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Board of Governors Meeting

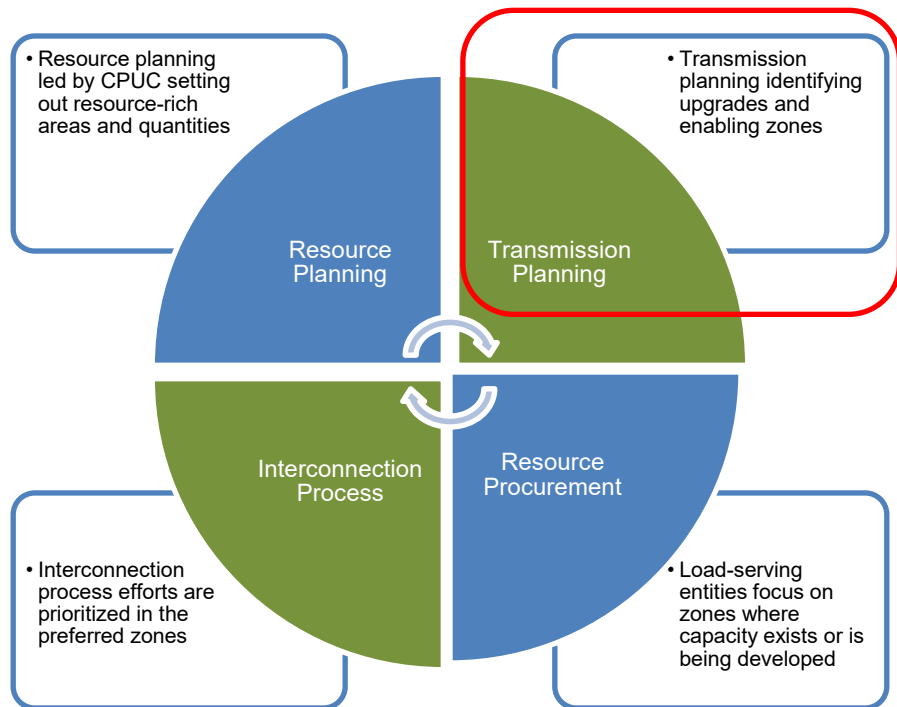
General Session

May 19, 2026

# Management is seeking approval of the ISO 2025-2026 Transmission Plan

- The primary drivers of the capital costs within this year's plan are:
  - Increases in the pace of load growth, particularly in the Greater Bay area
  - The additional resources needed to serve load and meet state policy goals in the California Public Utilities Commission (CPUC) resource portfolios
- The ISO is always focused on costs; recommendations are based on the long-term effectiveness and efficiency of solutions

# Transmission Planning is coordinated with key state load and resource forecasting

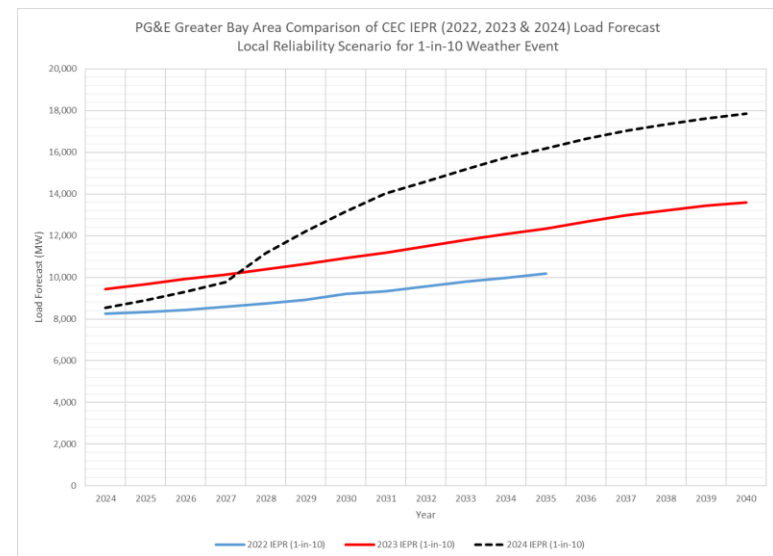
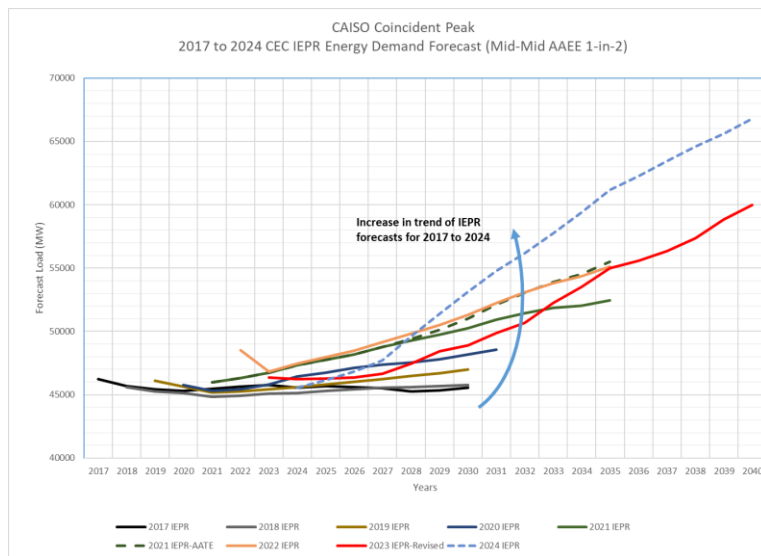


The 2022 Memorandum of Understanding between the CPUC, California Energy Commission (CEC), and ISO:

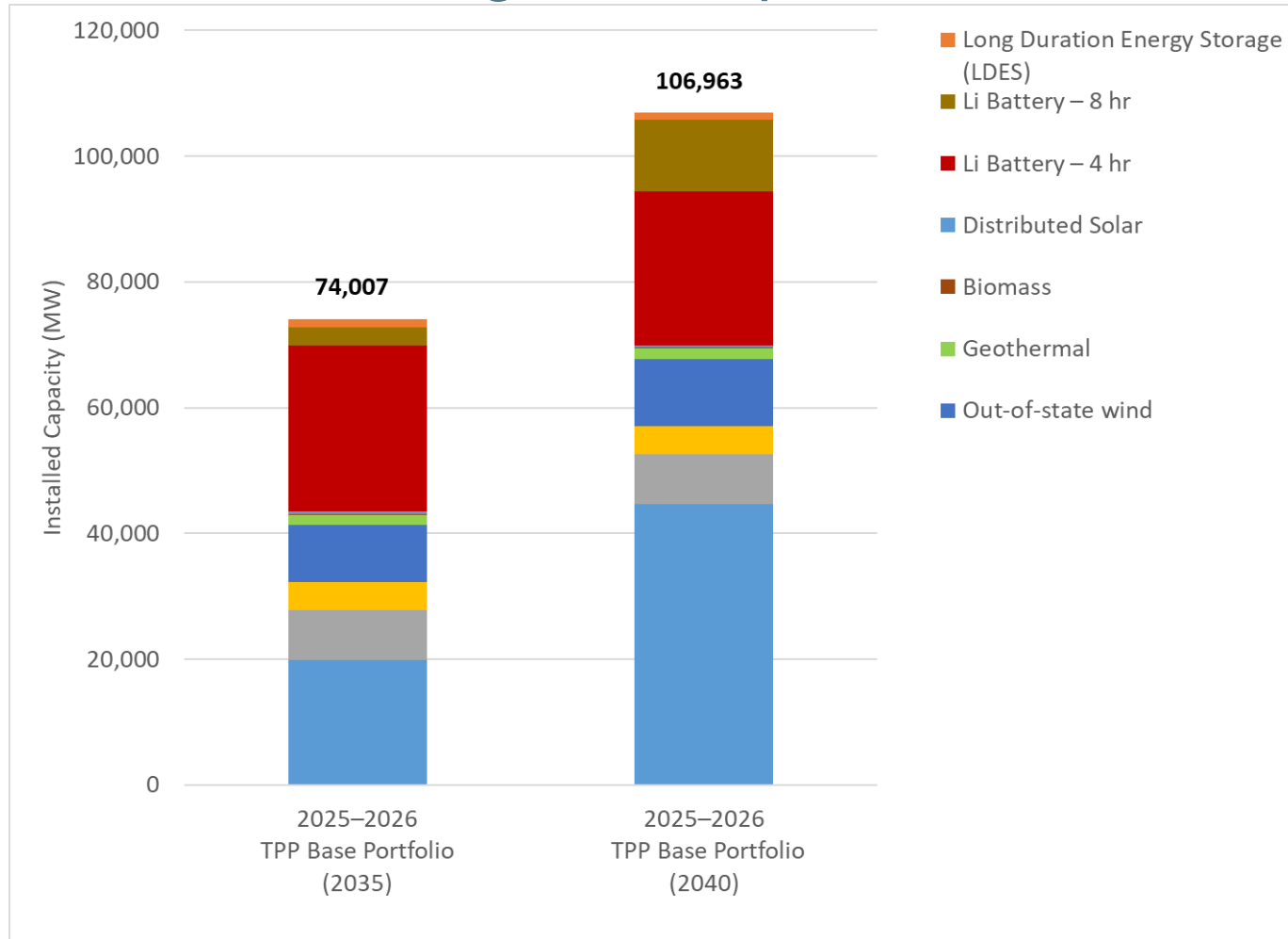
- Tightened the linkage between resource and transmission planning, procurement direction, and the ISO interconnection process.
- Reaffirmed the existing state agency roles and coordination on a single forecast set.

# The CEC load forecast for the ISO system continues to increase in 2025-2026 planning cycle

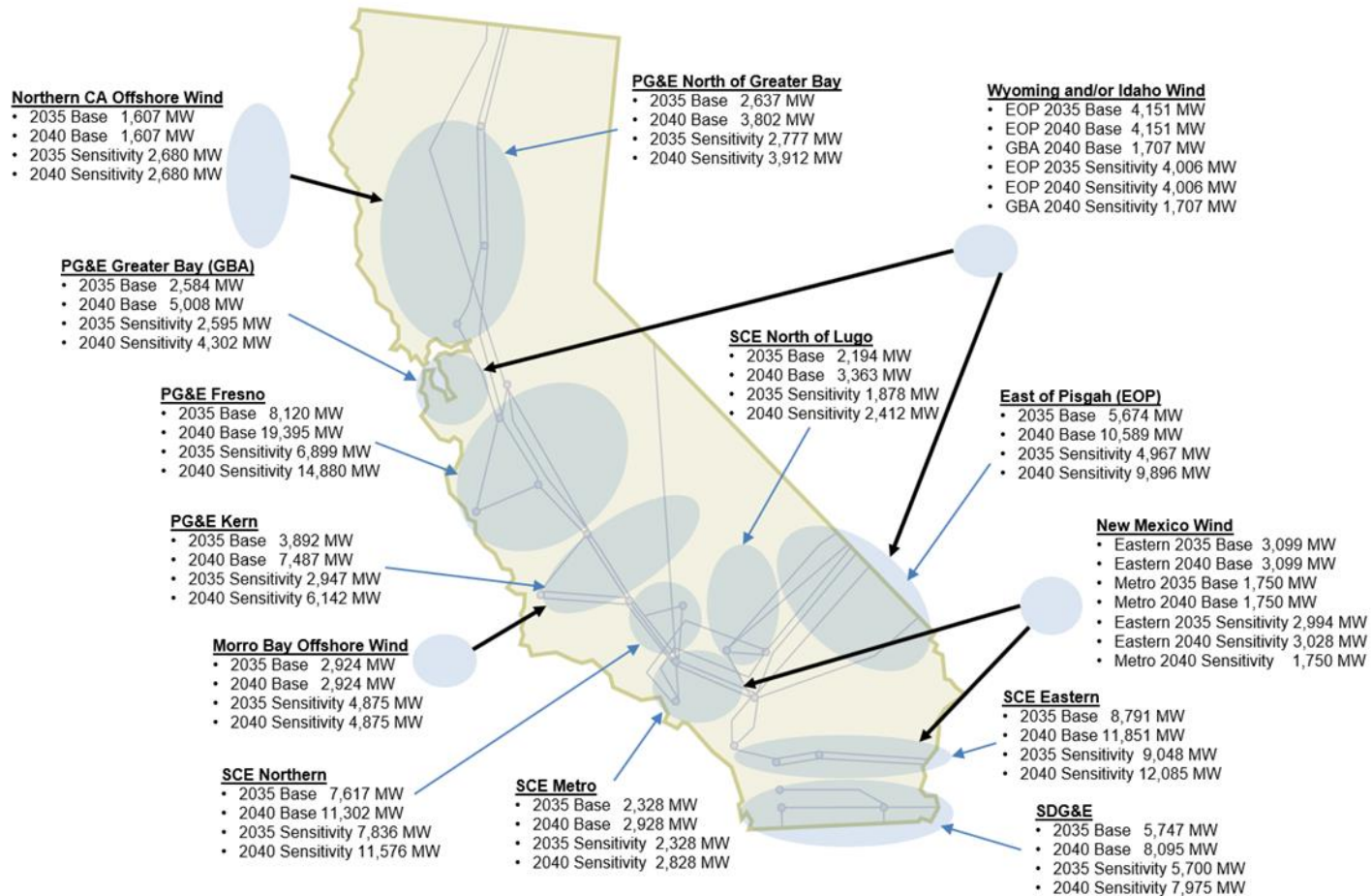
- The increase in load growth is seen across the entire ISO system,, especially in 10 to 15-year planning horizon, and particularly in the Greater Bay area
- The Greater Bay area is affected by concentration of datacenter loads in addition to other load growth



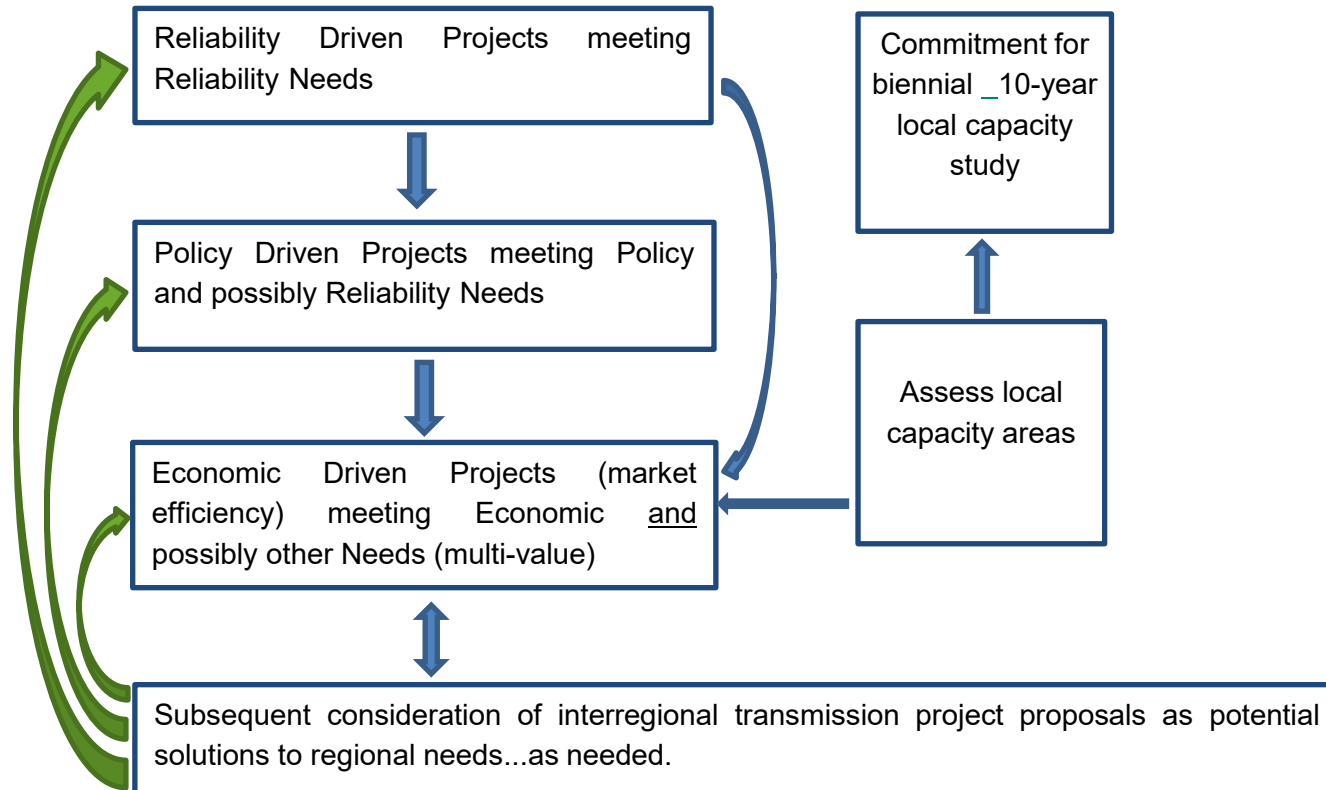
# The CPUC resource portfolios have also grown in response to increasing load requirements



# The ISO 2025-2026 Transmission Plan continues to use a zonal approach which enables clear direction and prioritization



# The ISO's studies are coordinated as a part of the transmission planning process



# Recommended reliability-driven projects

- 33 reliability-driven projects have been identified as need, with an estimated cost of \$4.2 billion
- Two reliability-driven projects were approved by ISO management
- 26 additional reliability projects are recommended for approval. These projects are driven by load growth and evolving grid conditions as the generation fleet transitions to increased renewable generation.
- Five previously approved projects with scope changes to address current needs are recommended for approval

| #  | ID        | Project Name  | PTO   | Area         | Est. Cost (\$M) |
|----|-----------|---|-------|--------------|-----------------|
| 1  | 1011-R-16 | Oro Loma 70 kV Area Reinforcement (Re-scope)                                    | PG&E  | GFA          | 38              |
| 2  | 2526-R-01 | Walnut 230 kV CB Upgrade  | SCE   | Metro        | 15              |
| 3  | 2526-R-02 | Ames 115 kV Short Circuit Mitigation  | PG&E  | GBA          | 5               |
| 4  | 2526-R-03 | DeAnza 115 kV Substation  | PG&E  | GBA          | 260             |
| 5  | 2526-R-04 | Lincoln - Pleasant Grove Line Reconductoring                                    | PG&E  | CVLY         | 120             |
| 6  | 2526-R-05 | Los Esteros 230 kV Short Circuit Mitigation                                     | PG&E  | GBA          | 20              |
| 7  | 2526-R-06 | Mariposa 70 kV Voltage Support  | PG&E  | GFA          | 63              |
| 8  | 2526-R-07 | Metcalfe 230 kV Short Circuit Mitigation  | PG&E  | GBA          | 405             |
| 9  | 2526-R-08 | Midway 115 kV Bus Upgrade   | PG&E  | Kern         | 89              |
| 10 | 2526-R-09 | Monta Vista – Loyola – Los Altos 60 kV Line Reconductoring                      | PG&E  | GBA          | 64              |
| 11 | 2526-R-10 | Monta Vista 230/115 kV Transformer Bank Addition                                | PG&E  | GBA          | 104             |
| 12 | 2526-R-11 | Newark 115 kV Short Circuit Mitigation  | PG&E  | GBA          | 60              |
| 13 | 2526-R-12 | Newark 230/115 kV Bank Upgrade  | PG&E  | GBA          | 63              |
| 14 | 2526-R-13 | Nortech 115 kV Short Circuit Mitigation   | PG&E  | GBA          | 5               |
| 15 | 2526-R-14 | San Jose B 230/115 kV Transformer Bank Addition                                 | PG&E  | GBA          | 69              |
| 16 | 2526-R-15 | Saratoga-Vasona 230 kV Line Reconductoring                                      | PG&E  | GBA          | 178             |
| 17 | 2526-R-16 | South Oakland Reinforcement (Phase 2)   | PG&E  | GBA          | 86              |
| 18 | 2526-R-17 | Tesla – Trimble – Metcalfe 230 kV Corridor Expansion                            | PG&E  | GBA          | 1424            |
| 19 | 2526-R-18 | Trimble 115 kV Short Circuit Mitigation   | PG&E  | GBA          | 16              |
| 20 | 2526-R-19 | Lugo 230 kV CB Upgrade  | SCE   | NOL          | 5               |
| 21 | 2526-R-20 | Devers 230 kV SCD Upgrade   | SCE   | Eastern      | 186             |
| 22 | 2526-R-21 | Lugo 500 kV Reactive Power Reinforcement  | SCE   | Bulk         | 450             |
| 23 | 2526-R-22 | Mesa - Laguna Bell 230 kV #2 Upgrade  | SCE   | Metro        | 56              |
| 24 | 2526-R-23 | Etiwanda and Mira Loma 230 kV SCD Upgrade                                       | SCE   | Metro        | 55              |
| 25 | 2526-R-24 | Penasquitos- Mira Sorrento 69 kV #2 line  | SDG&E | SDG&E        | 115             |
| 26 | 2526-R-25 | TL600B Reconductor  | SDG&E | SDG&E        | 8               |
| 27 | 2526-R-26 | TL623C Reconductor  | SDG&E | SDG&E        | 5               |
| 28 | 2526-R-27 | TL690B & TL 697 Reconductor   | SDG&E | SDG&E        | 33              |
| 29 | 2425-R-02 | Ames Distribution – Palo Alto 115 kV line (Re-scope)                            | PG&E  | GBA          | 52              |
| 30 | 1314-R-17 | Morgan Hill Area Reinforcement project (Re-scope)                               | PG&E  | GBA          | 28              |
| 31 | 2425-R-25 | South Bay Reinforcement Project (Re-scope)                                      | PG&E  | GBA          | 0               |
| 32 | 1819-E-01 | East Marysville 115/60 kV Project (Re-scope)                                    | PG&E  | CVLY         | 69              |
| 33 | 2324-R-20 | Short Circuit Mitigation for Imperial Valley 230 kV Circuit Breakers (Re-scope) | SDG&E | SDG&E        | 33              |
|    |           |   |       | <b>TOTAL</b> | <b>4178</b>     |

## Previously approved reliability-driven projects to be placed on-hold

- Management recommends four previously approved projects be placed on-hold for further review in the next planning cycle:
  - Alamitos 230 kV short circuit duty upgrade;
  - Lone Tree – Cayetano – Newark Corridor Series Compensation;
  - Coolwater 115 kV Line Looping into Tortilla 115 kV Substation;  
and
  - Julian Hind-Mirage 230 kV Line Upgrade Project

## Previously approved reliability-driven projects recommended to be canceled

- Management recommends the following three previously approved reliability driven projects be cancelled:
  - East Shore bus re-configuration;
  - Metcalf 230/115 kV transformers circuit breaker addition; and
  - Moraga-Sobrante 115 kV line re-conductor.

# Recommended policy-driven projects

- To meet the renewable generation requirements established in the CPUC-developed renewable generation portfolios, four transmission projects that are policy-driven are recommended, totaling \$2.4 billion
- One project is eligible for competitive procurement

| ID        | Project Name                              | PTO  | Area  | Est. Cost (\$M) |
|-----------|---|------|-------|-----------------|
| 2526-P-01 | Drum - Higgins 115 kV Line Reconductoring | PG&E | CVLY  | 308             |
| 2526-P-02 | East Shore 230 kV Area Reinforcement      | PG&E | GBA   | 257             |
| 2526-P-03 | Oleum Area Reinforcement                  | PG&E | GBA   | 144             |
| 2526-P-04 | Trout Canyon - Lugo 500 kV Line           | SCE  | EOP   | 1685            |
|           |   |      | TOTAL | 2395            |

## Previously approved policy-driven projects recommended to be canceled

- Management recommends the following two previously approved projects be cancelled:
  - Serrano–Del Amo–Mesa 500 kV Transmission Reinforcement project; and
  - Helm 230/70 kV Bank project

## Economic-driven (market efficiency) projects

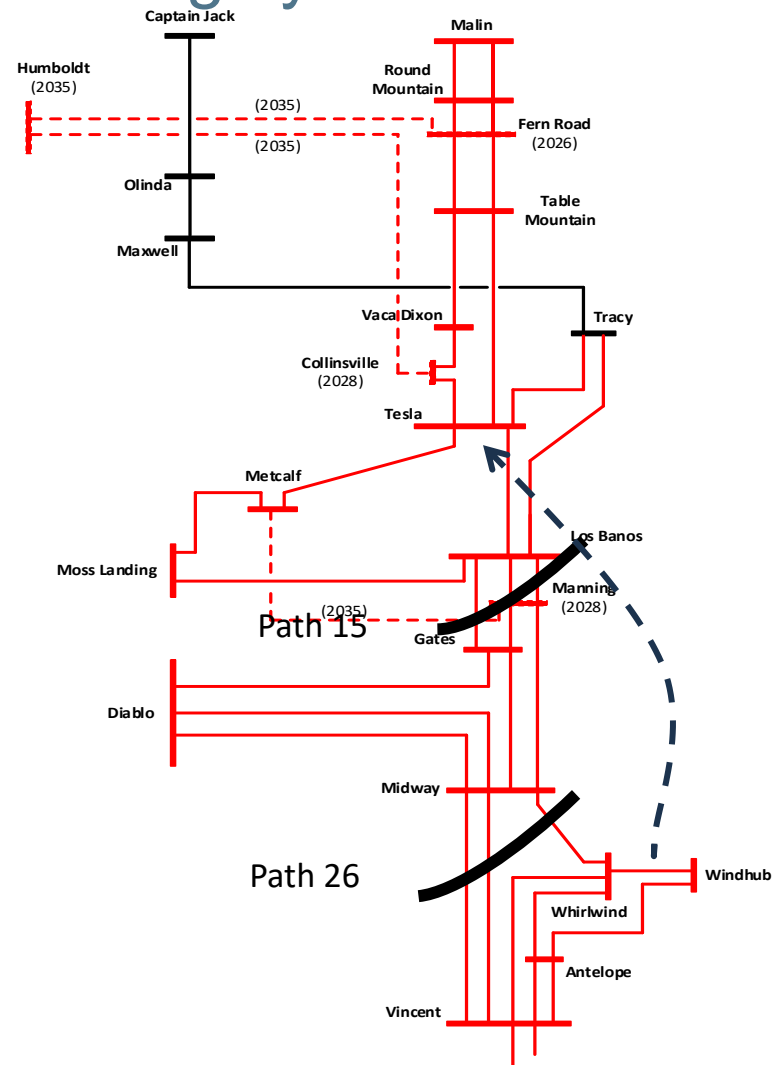
- Each year the ISO studies and monitors expected levels of congestion on the transmission system through detailed production cost modeling, and prioritizes study areas to assess if the benefits of alleviating that congestion exceed the cost of additional transmission upgrades
- One project driven solely by economic considerations is recommended for \$150 Million

| ID        | Project Name   | PTO  | Area   | Est. Cost (\$M) |
|-----------|--|------|--------|-----------------|
| 2026-E-01 | Gates – Los Banos #3 500 kV Line Series Compensation | WAPA | Fresno | 150             |

- The need for upgrades on Path 15/26 has been established, but additional time is needed for engineering detailed analysis that will be undertaken in the next planning cycle.

# Economic-driven projects requiring engineering detail and cost estimating in next planning cycle

- Path 15
  - Need identified for addressing congestion
  - Potential 500 kV line from Whirlwind/Windub area to Tesla substation
  - Bulk system studies required and adoption of new congestion cost allocation will be undertaken in next planning cycle
- Path 26
  - Need identified for addressing congestion
  - Further assessment of feasibility of RAS for south-north flows (similar to north-south flows) for the common corridor outage of Midway-Vincent 500 kV #1 and #1 lines to be explored in next planning cycle



# FERC Order 1000 Interregional Coordination Process

- The ISO considered all interregional transmission project proposals in its 2024-2025 transmission planning process and did not identify an ISO need for the proposed interregional transmission projects
- WestConnect and NorthernGrid also determined that there were no regional transmission needs in their 2024-2026 regional planning cycle, their precursor step to considering if there is a need for an interregional project
- No further assessment was needed within the 2025-2026 transmission planning process

# Stakeholder comments

- General support for reliability, policy and economic assessment

# Summary

- 38 projects totaling \$6.7 billion were found to be needed
- One project is eligible for competitive procurement:

| Project                                    | Need          |
|--|---------------|
| Trout Canyon-Lugo 500 kV Transmission Line | Policy-driven |

## Management recommends the ISO Board of Governors approve the ISO 2025-2026 Transmission Plan

- Continues to use a zonal basis for resource development as a foundation for interconnection process prioritization and focus for procurement activities
- Continues to pursue low emission strategies in addressing reliability needs on the ISO controlled grid
- Sets a foundation for higher renewable energy goals
- Provides for prudent and economic development of the transmission system focusing on the most efficient and cost-effective solutions