Decision on ISO 2020-2021 Transmission Plan

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Board of Governors Meeting
General Session
March 24, 2021
Approving the plan means approving determinations and recommendations contained in the plan

- 3 transmission projects identified as needed:
  - 3 reliability-driven projects totaling less than $5 million

- Changes to previously-approved projects
  - 2 previously approved transmission projects can be wholly or largely replaced by appropriately procured and sited battery storage.
  - 3 projects require further evaluation in future planning cycles

- No policy-driven projects

- No economic-driven projects
2020-2021 Transmission Planning Process

Phase 1 – Develop detailed study plan
- State and federal policy
- CEC - Demand forecasts
- CPUC - Resource forecasts and common assumptions with procurement processes
- Other issues or concerns

Phase 2 - Sequential technical studies
- Reliability analysis
- Renewable (policy-driven) analysis
- Economic analysis

Publish comprehensive transmission plan with recommended projects

ISO Board for approval of transmission plan

Phase 3
Procurement
Emphasis in transmission planning cycle

- A modest capital program, as
  - Reliability issues are largely in hand,
  - Policy work considered portfolios submitted by CPUC of “42 MMT scenario” baseline and sensitivity studies
  - Very little new economic-driven opportunity, largely due to past studies and approvals
- Significant interest in development community for transmission lines and storage proposals needing detailed economic analysis.
- Continued “special” study efforts on local capacity areas and gas-fired generation requirements.
- Initiated wildfire assessment, starting with the PG&E area.
Studies are sequentially coordinated as a part of the transmission planning process

- Reliability Driven Projects meeting Reliability Needs
- Policy Driven Projects meeting Policy and possibly Reliability Needs
- Economic Driven Projects meeting Economic and possibly Policy and Reliability Needs (multi-value)

Commitment for biennial 10-year local capacity study
Assess local capacity areas
Subsequent consideration of interregional transmission project proposals as potential solutions to regional needs...as needed.
The ISO’s reliability analysis led to the following:

• 3 new reliability projects less than $5 million
  – All projects in the PG&E service territory

• 2 previously approved transmission projects can be wholly or largely replaced by appropriately procured and sited battery storage.

• Three previously approved projects in PG&E service territory are recommended to be on hold for further review in future cycles
Policy-driven analysis

• CPUC’s 2019-2020 Integrated Resource Planning cycle provided resource planning assumptions to the ISO:
  – Base portfolio based on its “42 MMT scenario” that results in approximately a 60 percent RPS, and
  – Two sensitivity portfolios.

• The ISO performed policy-driven study assessments of the 42 MMT scenario and did not identify any new Category 1 policy-driven transmission needs.

• The ISO is not recommending any new transmission solutions at this time for policy purposes.
Economic-driven analysis

• In the economic assessment the ISO:
  – Received a number of economic study requests, which included projects that would more reasonably be categorized as interregional transmission projects;
  – Received several proposed reliability projects that cited material economic benefits
  – Continued the expanded 10-year local capacity technical study initiated in the 2018-2019 planning cycle.

• No new projects were found to be needed as economic-driven projects in the 2020-2021 planning cycle.
## New Projects Recommended for Approval

<table>
<thead>
<tr>
<th>Projects</th>
<th>PTO</th>
<th>Project costs (millions)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palermo – Wyandotte 115 kV Line Section Reconductoring Project</td>
<td>PG&amp;E</td>
<td>$0.25</td>
<td>Reliability</td>
</tr>
<tr>
<td>Manteca #1 60 kV Line Section Reconductoring Project</td>
<td>PG&amp;E</td>
<td>$2.8</td>
<td>Reliability</td>
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<tr>
<td>Kasson – Kasson Junction 1 115 kV Line Section Reconductoring Project</td>
<td>PG&amp;E</td>
<td>$0.5</td>
<td>Reliability</td>
</tr>
</tbody>
</table>
### Previously Approved Projects Recommended to be on Hold

<table>
<thead>
<tr>
<th>Projects</th>
<th>PTO</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>North of Mesa Upgrades</td>
<td>PG&amp;E</td>
<td>On hold (Recommending procurement of storage as mitigation plan)</td>
</tr>
<tr>
<td>Moraga-Sobrante 115 kV Line Reconducto</td>
<td>PG&amp;E</td>
<td>On hold</td>
</tr>
<tr>
<td>Wheeler Ridge Junction Station Project</td>
<td>PG&amp;E</td>
<td>On hold (Recommending procurement of storage as part of mitigation plan)</td>
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Other Informational Studies

- ISO undertook additional informational studies to help inform future transmission planning or resource procurement processes:
  - Frequency response and dynamic system modeling
  - Reliance on gas-fired generation in local capacity areas
  - Flexible capacity deliverability requirements
  - Wildfire assessment – PG&E area
Regional high voltage transmission access charge projection trending from January 1, 2021 values:

Current projection (blue) tracks last year's equivalent projection (red)
Stakeholder Comments

• General support for reliability, policy and economic assessment

• Further consideration of alternatives submitted

• Concerns with respect to CPUC Integrated Resource Plan portfolios

• Concerns with reliance on remedial action schemes in lieu of transmission upgrades
Management recommends the Board approve the 2020-2021 ISO Transmission Plan

• 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