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<tr>
<th><strong>Docket Number:</strong></th>
<th>21-ESR-01</th>
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<tbody>
<tr>
<td><strong>Project Title:</strong></td>
<td>Energy System Reliability</td>
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<tr>
<td><strong>TN #:</strong></td>
<td>243171</td>
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<tr>
<td><strong>Document Title:</strong></td>
<td>Presentation - May 20 Reliability Workshop Overview</td>
</tr>
<tr>
<td><strong>Description:</strong></td>
<td>N/A</td>
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<tr>
<td><strong>Filer:</strong></td>
<td>Courtney Wagner</td>
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<tr>
<td><strong>Organization:</strong></td>
<td>California Energy Commission</td>
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<tr>
<td><strong>Submitter Role:</strong></td>
<td>Commission Staff</td>
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<td><strong>Submission Date:</strong></td>
<td>5/20/2022 8:06:42 AM</td>
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<td>5/20/2022</td>
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Reliability Workshop Overview

May 20, 2022

David Erne
Energy Assessments Division
Workshop Overview

• Summer Assessments (CEC & CAISO)
• TED Task Force Overview
• Supply Chain Panel
• Interconnection Panel
Compounding Reliability Risks

Planning

• Historic conditions
• Average Climate Change Trends
• Begin to incorporate climate change uncertainty
• Increase effective PRM
• Identify Contingency Measures
• Re-assessing PRM
• Identifying need for a strategic reserve

Events

2020
• Extreme heat

2021
• Extreme heat
• Extreme drought
• Wildfire
• Supply chain

2022
• Extreme heat?
• Extreme drought
• Supply chain
• Tariff issues
• Wildfire?

2023+
• ?
Reliability Impacts

Capacity Needed During Coinciding Extreme Events

- Capacity to Cover Coincident Extreme Heat, Drought and Fire Events
- Capacity to Cover Extreme Heat Similar to August 2020 Conditions
- Capacity to Cover Developmental Delays to Authorized Procurement (e.g., supply chain, DOC investigation)
- Needed Capacity to meet 1-in-10 LOLE Traditional Planning Standard
Reliability Planning Coordination

Consisting of GO, CEC, CPUC, DWR and CAISO
To actively coordinate across three key sets of activities

Planning & Authorization of Procurement
Goal: Ensure adequate procurement is in place considering climate change and state policies

Procurement Tracking, Risk Management and Mitigation
Goal: Actively track procurement projects, and assign interagency teams to mitigate barriers such as supply chain, interconnection, transmission, permitting etc.

Recommend and Execute State Sponsored Contingencies & Actions
Goal: Proactively develop recommendations for state action as early as possible
Reliability Planning Actions

Planning & Authorization of Procurement
• Revised forecasts
• Unprecedented procurement
• Maximized demand
• Accelerated projects
• Delayed retirements

Procurement Tracking, Risk Management and Mitigation
• Tracking Energy Development Task Force

Recommend and Execute State Sponsored Contingencies & Actions
• Identified contingencies
• Procured emergency generators
## Contingencies

**Operational**
- Coordination with other balancing authorities
- Increasing CAISO Generation Limits (may also require 202C)

**Supply-side**
- Temporary generators
- Efficiency improvements

**Demand-side**
- Flex Alert
- Shift DWR pumping loads
- Voluntary reductions by large users

Total estimated contingencies: ~2,000 MW
# Estimated Impact on Energy Reliability

<table>
<thead>
<tr>
<th>Issue</th>
<th>2022</th>
<th>2025</th>
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<tbody>
<tr>
<td>Lag in incorporation of updated demand forecasts and policy goals in procurement targeting 1-in-10 traditional planning metric</td>
<td>1,700 MWs</td>
<td>1,800 MWs</td>
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<tr>
<td>Extreme weather and fire risks to energy assets not completely captured in a 1-in-10 traditional planning efforts</td>
<td>4,000 - 5,000 MWs</td>
<td></td>
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<td>Project Development Delay Scenarios (estimated)</td>
<td>600 MWs</td>
<td>1,600 - 3800 MWs</td>
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*In total the risk in a coincidental situation could be 7,000 MW in 2022 & 10,000 MW in 2025*
Reliability in May Revise Budget

- Strategic Electricity Reliability Reserve
  - Strategic Reliability Infrastructure Assets ($4.2B)
  - Distributed Electricity Backup Assets & Utility-Scale Assets Program ($950M)
  - Demand Side Grid Support Program ($295M)
- Planning Reserve Margins
Questions?