



# WECC Study Program Update

October 21, 2021

Studies Subcommittee

# Variability in Loads and Resources

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- Purpose
  - Determine impact of variability in loads and resources on the interconnection.
- Reliability Questions
  - Study reliability impacts of a heat wave weather event.
  - Can BESS be used effectively to respond to variability in loads and resources?
- Data
  - 2030 ADS PCM.
  - 2030 HS Power Flow.
  - The CEC, 2020 Integrated Energy Policy Report, California Energy Demand Forecast Update 2020–2030.

# Resilience Study

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- Purpose
  - Test the risks associated with HILF events under projected generation mix.
- Reliability Questions
  - How would BPS reliability be affected by risks associated with HILF events?
- Data
  - 2030 ADS PCM Case.
  - 2030 HS PF Base Case
  - 2020 Load and Resource Data.
  - Hydro generation trends in NW.
- Status
  - Contingency and system vulnerability analysis.

# Impact of Distributed Energy Resources

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- Purpose
  - Identify potential risks of a high penetration of DER in the interconnection.
- Reliability questions
  - What impacts could DER have on resource flexibility and system stability?
  - What amount of DER will cause reliability concerns, and when is DER a reliability concern?
- Data
  - Year 10 case.
  - 2030 ADS PCM.
  - 2030 ADS Power Flow.

# 2040 Scenarios Study

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- Purpose: "Zero Carbon Future by 2040" by considering:
  - Renewable penetration.
  - Distribution-side integration with the bulk power system.
  - Levels of clean energy.
  - Regulatory forces.
  - Market forces.
  - Electrification.
- Reliability Questions
  - What is the realm of plausibility associated with the reliability risks and opportunities of an uncertain future and what are the drivers of change?
  - What strategic decisions may need to be made today to assure long-term reliability from various perspectives including investments, policies, market design, and consumer choice?
- Data
  - Scenario Planning will use data from several sources, including WECC ADS extended out another 10 years, National Lab datasets, and current trends (events, patterns, structures).



**WECC**

Electric Reliability and Security for the West

# Contact:

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