

DOCKETED

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CPUC's Integrated Resource Planning (IRP) Process and Transmission Planning in California

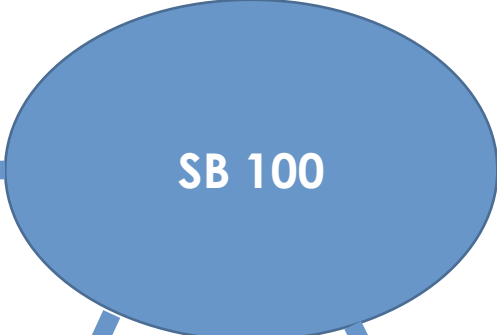
May 4, 2023



California Public
Utilities Commission

California's Electricity Planning Ecosystem

- Economy-wide plan to reach GHG targets
- Updated every 5 years



- Zero carbon electricity by 2045
- Joint agency report, every 4 years

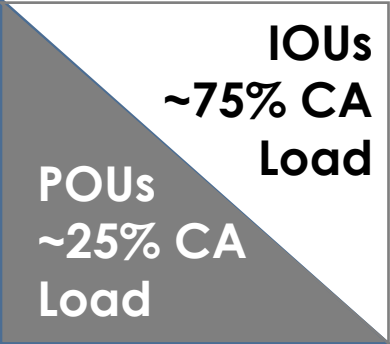
- Demand forecast for infrastructure planning
- Updated annually



SB 350: CARB sets electric sector GHG target range



- Assess transmission needs
- Conceptually approves new projects
- Updated annually



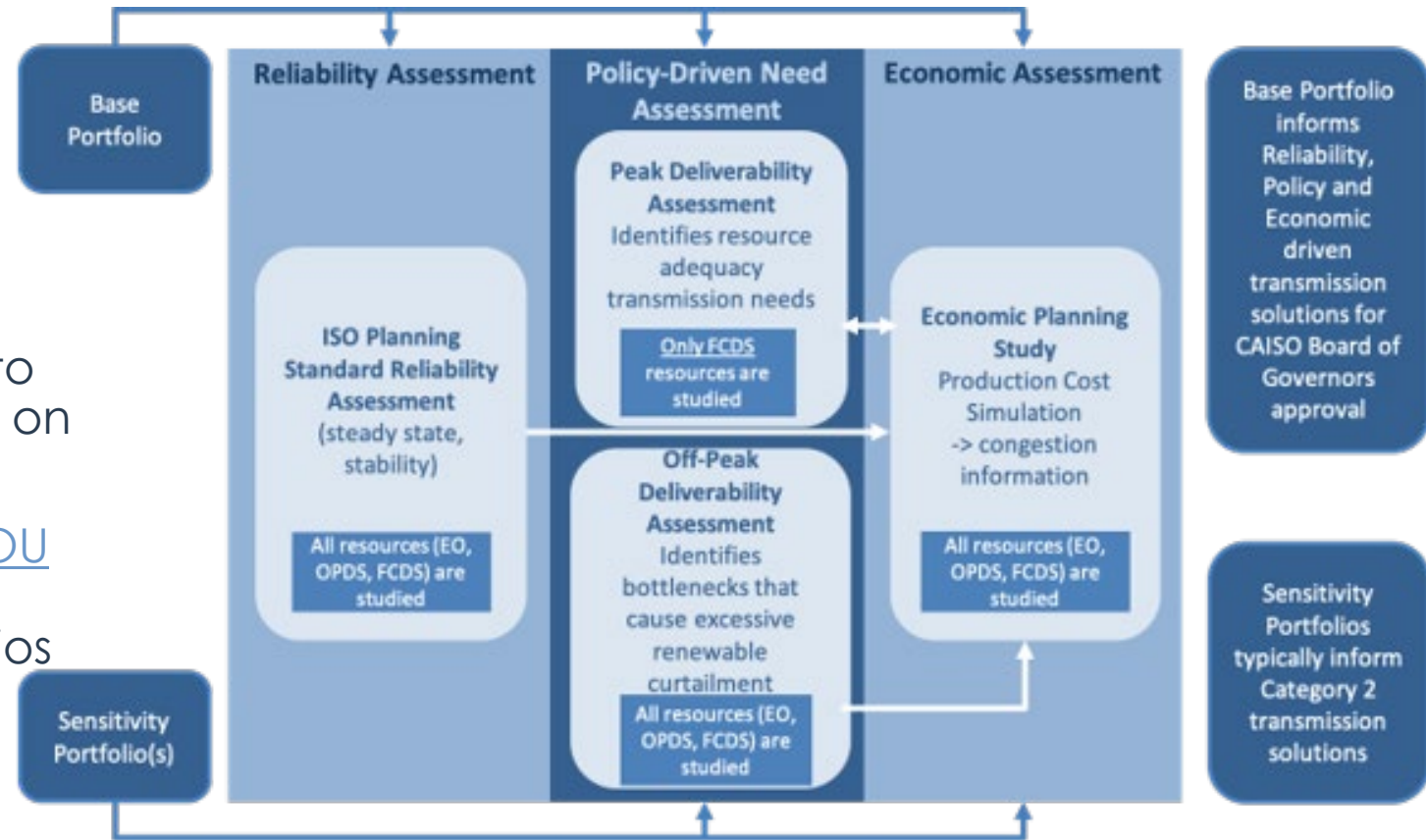
- Establishes GHG target within CARB's range for CPUC-jurisdictional LSEs
- Orders procurement + oversees compliance
- Annually transmits portfolios for CAISO transmission planning



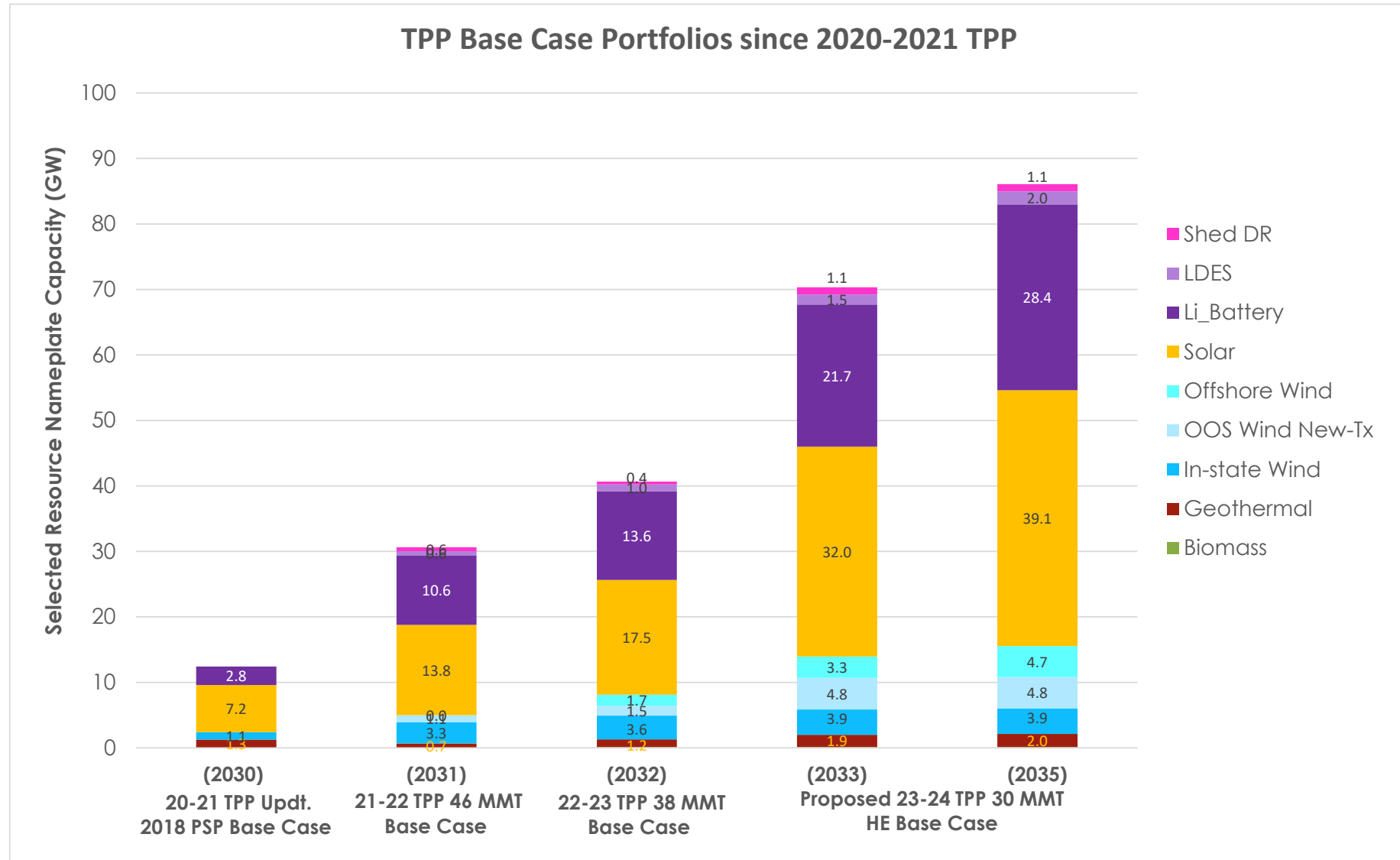
- Plans filed per SB 350 + CPUC guidance
- Procurement in compliance w/ CPUC directives

IRP Role in the CAISO's Transmission Planning Process

- The CAISO's TPP is an annual comprehensive evaluation of the CAISO's transmission grid to:
 1. Address grid reliability requirements,
 2. Identify upgrades needed to successfully meet California's policy goals, and
 3. Explore projects that can bring economic benefits to consumers.
- Historically has focused on grid needs up to 10-years into the future, but will now focus on 15-year horizon.
- In accordance with a December [2022 MOU](#) between the CAISO, the CPUC, and the CEC, the CPUC develops resource portfolios used by the CAISO in the TPP.
- The CPUC typically transmits multiple distinct portfolios developed in the IRP process:
 - Reliability and Policy-Driven Base Case portfolio
 - Policy-Driven Sensitivity portfolio(s)



Base Case Portfolios since the 2020-2021 TPP



Role of Busbar Mapping in IRP and TPP

- **Resource to Busbar Mapping** (“busbar mapping”): The process of refining the geographically coarse portfolios developed through IRP to specific interconnection locations (i.e. substations) for analysis in the CAISO’s annual Transmission Planning Process (TPP).
 - First conducted as “proof of concept” for the 2018-2019 TPP portfolio
 - Formalized into a joint effort by a working group comprised of CPUC, CEC, and CAISO staff.
 - Mapping is conducted based on stakeholder vetted methodology.
- **Busbar Mapping Scope:** Mapping focuses on utility-scale generation and storage resources that are not already in baseline.
- **Busbar Mapping Methodology:** Methodology document states guiding principles, establishes mapping criteria, and outlines the iterative inter-agency mapping process.
 - Current [Methodology](#) makes minor refinements to previous version used for the 22-23 TPP mapping efforts, but further proposed updates for 24-25 TPP are forthcoming.

