Fact Sheet:
Decision Adopting 2021 Preferred System Plan

Background on the CPUC IRP process

- **SB 350 (De León, 2015)** directed the California Public Utilities Commission (CPUC), in coordination with the California Energy Commission and California Air Resources Board, to develop an integrated resource planning (IRP) process to ensure that California's electric sector meets its greenhouse gas (GHG) reduction goals while maintaining reliability at the lowest possible costs. The 2019-21 IRP cycle advances electric sector decarbonization to support statewide GHG reductions while maintaining system reliability.
- **IRP is a multi-year process.** The first half of the IRP cycle is designed to analyze and adopt an optimal portfolio of electricity resources as a guide for load-serving entities (LSEs) to plan for meeting their GHG, reliability, and cost objectives. The second half of the IRP cycle is designed to consider the portfolios and actions that each LSE proposes for meeting these goals, to allow the CPUC to review each LSE plan and aggregate LSE portfolios to develop a Preferred System Plan (PSP) portfolio, and to consider whether further action is needed to meet state goals.
- **This Preferred System Plan completes the second half** of the 2019-21 IRP cycle. This is the second time the CPUC has undertaken an IRP cycle.

Overview of the Decision

On February 10, 2022, the CPUC adopted a Decision on the 2021 PSP, which:

- **Preferred System Plan Portfolio**: Adopts a preferred resource portfolio, for use in planning and procurement, as well as to be analyzed by the California Independent System Operator (CAISO) in the 2022-2023 Transmission Planning Process (TPP). The TPP is an evaluation of the CAISO transmission grid to identify grid upgrades needed to address reliability, meet state policy goals, and provide economic benefits.
- **GHG Target:** Adopts a 38 million metric ton (MMT) 2030 electric sector GHG planning target, which drops to 35 MMT by 2032. This target is more stringent than the 46 MMT GHG target that was adopted earlier this cycle in D.20-03-028, and equates to 73% Renewables Portfolio Standard (RPS) resources and 86% GHG-free resources by 2032. The Decision also requires LSEs to submit plans in the next IRP cycle detailing how they will meet their share of a 30 MMT electric sector GHG target as well as a 38 MMT GHG target.
- **Long-Lead Time Resources:** Includes in the PSP portfolio out-of-state renewables and offshore wind—two resource types the CPUC will continue evaluating moving forward. The Decision also states clear policy interest in ensuring that some portion of the transmission capacity along the central coast be utilized for offshore wind and requires PG&E to consult with the Commission before taking any action that would impact the ability to use PG&E's Diablo Canyon transmission assets for future delivery of offshore wind resources.
- **Locationally Targeted Procurement:** Orders procurement of two storage resources that were identified by the CAISO as alternatives to transmission upgrades in the previous TPP cycle. The Decision also commits to additional analysis in the next IRP cycle of local resources that could help reduce reliance on the Aliso Canyon natural gas storage facility.
- **Programmatic IRP procurement**: Commits to developing a programmatic approach to IRP procurement moving forward, to ensure that LSEs optimize their procurement choices to achieve IRP's three goals of reliability, GHG reductions, and least-cost procurement.

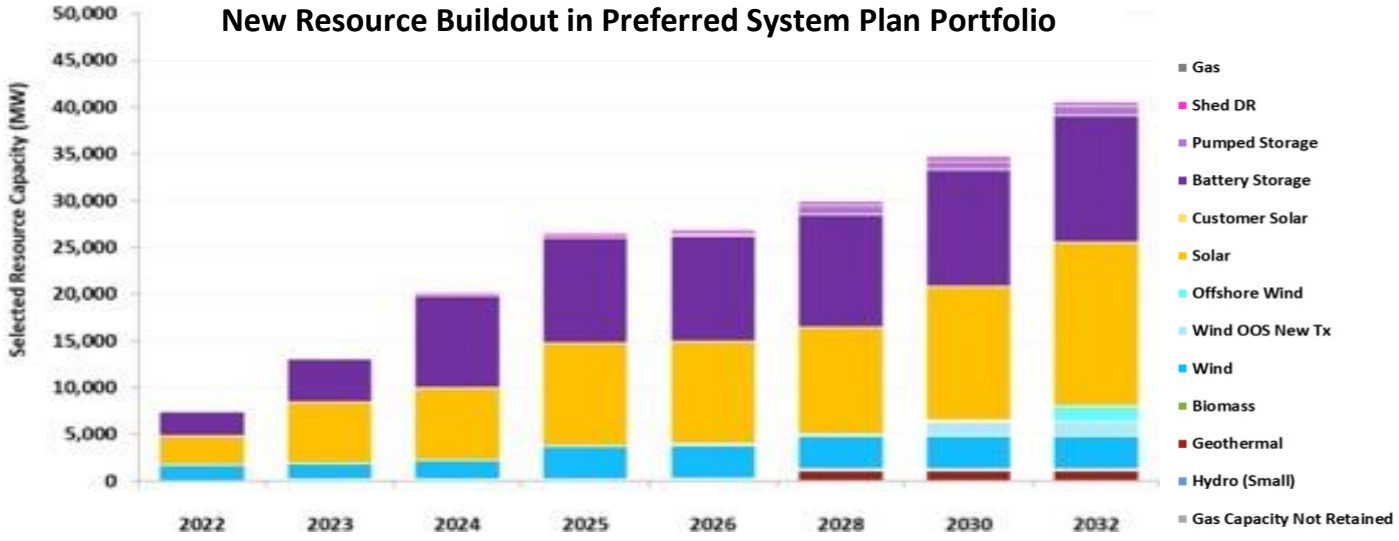
Preferred System Plan Portfolio

The PSP portfolio includes approximately 25,500 MW (nameplate capacity) of new supply-side renewables, and 15,000 MW of new storage and demand response resources, by 2032, in addition to existing resources.

- **Aggregated LSE Plans:** The PSP portfolio includes all resources that LSEs have procured or are planning to procure, according to their individual IRP filings, to meet the 38 MMT GHG target. The aggregated LSE

planned resources fell short of emissions and reliability goals, so IRP staff performed modeling analysis to identify which resources to add to the portfolio to meet those goals.

- **Differences from prior cycle:** This PSP portfolio differs from the one adopted in D.19-04-040 primarily in that it includes more solar and battery storage, as well as new long-duration storage, out-of-state wind, and offshore wind resources. The inclusion of offshore and out-of-state wind resources in the PSP demonstrates their increased viability as cost-effective resources to help meet state goals.
- **Relationship to Mid-Term Reliability (MTR) Decision 21-06-035:** In June 2021, the CPUC ordered the procurement of 11,500 MW of net qualifying capacity (NQC) by 2026 (estimated to exceed 14,000 MW of nameplate capacity depending on the technologies implemented in compliance with the order), including 2,000 MW NQC from resources with long development lead times (i.e., long duration storage and clean firm resources such as geothermal). The PSP portfolio assumes compliance with that order and includes those resources. The cumulative buildout of new resources in the PSP portfolio, including those ordered in the MTR decision, is shown below:



Transmission Development

The CPUC's preliminary analysis of the PSP portfolio points to six transmission capability exceedances in six areas in CAISO. According to CAISO estimates, these exceedances could potentially be alleviated by transmission upgrades providing an estimated additional 13,000 - 17,000 MW of transmission capability and costs an estimated $1.2 - 1.8 billion. This finding will be assessed at a more granular level, when the CAISO studies the transmission needed to accommodate the PSP portfolio in the 2022-2023 TPP.

- CAISO's TPP process ensures that PSP resources inform CAISO's transmission planning, and facilitates the buildout of a transmission grid ready to accommodate the electric generation required to meet state policy goals.
- The Decision also delegates to Commission staff to explore with California Energy Commission (CEC) and CAISO staff the development of a policy-driven sensitivity portfolio designed around a lower (30 MMT) GHG emissions limit and the use of "high electrification" demand assumptions in the 2022-2023 TPP. This portfolio would allow the CAISO to test the transmission buildout needed to accommodate higher penetrations of zero-emissions resources and increased load from the electrification of buildings and transportation.

Helpful Links to Learn More:

CPUC IRP Website: https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-power-procurement/long-term-procurement-planning

CPUC Decision: https://docs.cpuc.ca.gov/SearchRes.aspx?docformat=ALL&docid=451412947