Background on the CPUC IRP process
- **SB 350 (De León, 2015)** directed the CPUC to develop an integrated resource planning (IRP) process to ensure that California’s electric sector meets its GHG reduction goals while maintaining reliability at the lowest possible costs. The 2019-21 IRP cycle targets electric sector decarbonization to support statewide greenhouse gas (GHG) efforts while maintaining system reliability.
- **IRP is a multi-year process.** The first half of the IRP cycle is designed to identify an optimal portfolio of resources for meeting GHG, reliability and cost objectives through a Reference System Plan (RSP) and encourages the Load-Serving Entities (LSEs) to plan towards that future. The second half of the IRP cycle is designed to consider the portfolios and actions that each LSE proposes for meeting those 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 Ruling
On August 17, 2021, the CPUC issued an *Administrative Law Judge’s Ruling Seeking Comments on Proposed Preferred System Plan*, which proposes:
- **Proposed Preferred System Plan:** Recommends 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:** Proposes a 38 million metric ton (MMT) 2030 electric sector GHG planning target. This target is more stringent than the 46 MMT GHG target that was adopted in earlier this cycle in D.20-03-028, and equates to 74% Renewable Portfolio Standard (RPS) resources and 87% GHG – free resources by 2032.
- **Potential Procurement:** Considers various procurement options and seeks party feedback on how to both further enhance reliability and achieve deeper GHG reductions, including potentially requiring specific procurement of GHG-free resources by LSEs.

Proposed Preferred System Portfolio
The proposed portfolio includes approximately 21,000 MW of new supply-side renewables, and 15,500 MW of new storage and demand response resources, by 2030, in addition to existing resources.
- **Aggregated LSE Plans:** The proposed 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. Because the aggregated LSE planned resources fell short of emissions and reliability goals, additional resources were added to the portfolio by IRP staff using modeling analysis.
- **Differences from prior cycle:** This proposed PSP 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 a proposed PSP demonstrates their increased viability as cost-effective resources to help meet state goals.

Relationship 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, including 2,000 MW from resources with long development lead times (i.e., long duration storage and clean firm resources such as geothermal). The proposed PSP portfolio assumes compliances with that order and includes those resources. The cumulative buildout of new resources in the proposed PSP portfolio, including those ordered in the MTR decision, is shown below:

9/24/2021
Transmission Development
The CPUC’s preliminary analysis of the proposed PSP portfolio indicates there is sufficient space for new resources on the existing transmission system, with only small and limited transmission upgrades needed by 2032. This finding will be validated 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 goals.
- The ruling also proposes the option of transmitting a policy-driven sensitivity portfolio to CAISO designed around an even lower (30 MMT) GHG emissions limit and the use of “high electrification” demand assumptions. This portfolio would allow the CAISO to study the transmission needed to accommodate higher penetrations of zero-emissions resources as load increases due to the electrification of buildings and transportation as California pursues a carbon neutral electricity system by 2045.

Procurement and/or other Potential PSP Actions
Adoption of the PSP will provide a clear signal to LSEs about how much and what types of resources they should be procuring. However, to provide additional certainty, the ruling considers various options:

- **Potential Actions to Enhance Reliability:** The ruling considers a suite of additional reliability-oriented actions including the retention of existing resources, accelerating the MTR decision’s procurement requirements, authorizing or ordering thermal plant upgrades to count toward MTR procurement, and/or requiring geographically-targeted procurement to enable the phase out of the Aliso Canyon natural gas storage facility.

- **Potential GHG Reduction Actions:** The ruling finds that individual LSE plans, if actualized, along with the Commission’s existing procurement orders, should largely achieve the 38 MMT GHG target. However, it is uncertain whether existing markets and programs will support LSE plan achievement or if additional CPUC action is required. The ruling asks whether additional CPUC action is required to ensure that all the procurement proposed in LSE plans will actually occur.

- **Long-Lead Time Resources:** The ruling considers what CPUC actions may be needed to support the development of long-lead time resources, including offshore wind and out of state renewables/wind. These measures may include preserving transmission deliverability rights in the central coast area for offshore wind, and supporting transmission to deliver out of state renewables.

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