



Fact Sheet:

Decision on 2019-20 Electric Resource Portfolios to Inform Integrated Resource Plans and Transmission Planning

Background on the CPUC IRP process

- **SB 350 (De León, 2015)** directed the CPUC to develop an integrated resource planning (IRP) process to act as the California electric sector's long-term electric resource planning process to ensure that California's electric sector meets its GHG reduction goals while maintaining reliability at the lowest possible costs. The 2019-20 IRP cycle targets an economy-wide GHG emissions reduction of 40% from 1990 levels by 2030 while maintaining system reliability.
- **IRP is a two-year process.** The first year of the IRP cycle is designed to evaluate the appropriate GHG emission planning target for the electric sector and load-serving entities (LSEs), and to identify the optimal mix of electricity resources to meet state GHG emissions and reliability goals. The second year of the IRP cycle is designed to consider the portfolios and actions each LSE proposes for meeting these goals, to allow the CPUC to review each LSE plan and aggregate LSE portfolios into a single system-wide portfolio, and to consider whether further action is needed to meet state goals.
- **This Decision is the culmination of the first year** of the 2019-20 IRP cycle. It adopts a resource portfolio to meet 2030 climate goals. This is the second time the CPUC has undertaken an IRP cycle.

Overview of Decision (D.)20-03-028

On March 26, 2020, the CPUC adopted its *Decision on 2019-20 Electric Resource Portfolios to Inform Integrated Resource Plans and Transmission*, which adopts:

- **Planning Portfolio:** An optimal portfolio of resources for use in long-term electricity planning, known as the Reference System Portfolio (RSP or Portfolio), to be used as guidance by all LSEs required to file individual integrated resource plans (IRPs) in 2020.
- **New Resources:** An electric resource portfolio which indicates significant new resources needed by 2030 compared to 2017-18 IRP results to stay on track to meet the State's GHG target, which is also consistent with new near-term procurement ordered in IRP Procurement Track Decision (D.) 19-11-016.
- **GHG Target:** The 46 million metric ton (MMT) 2030 electric sector greenhouse gas (GHG) planning target. This GHG target was previously adopted in the prior IRP cycle via D.18-02-018, and the target is still on track to meet state adopted goals. LSEs are required to present portfolios based on this adopted 46 MMT target as well as a 38 MMT target.

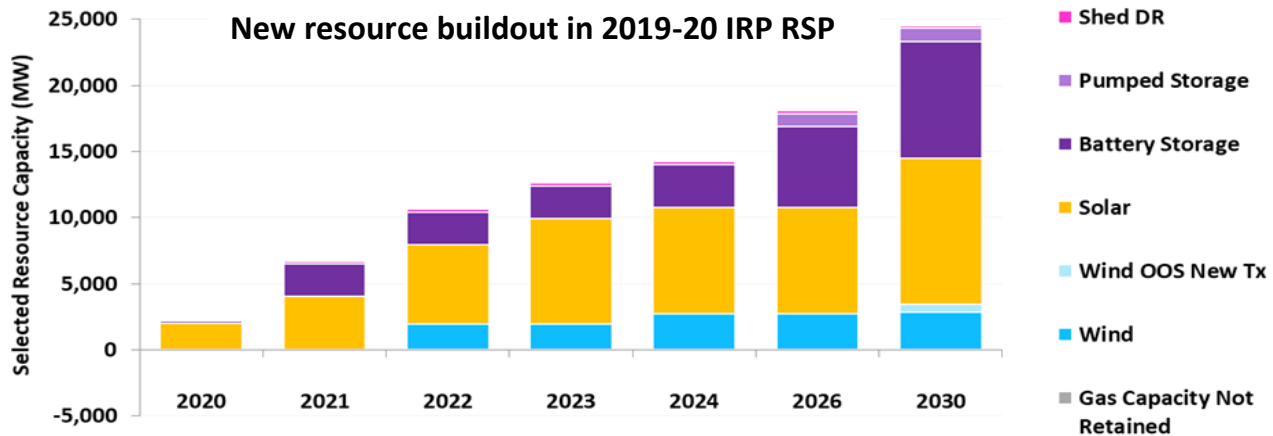
Reference System Portfolio of Energy Resources for Planning

The Decision adopts an optimal portfolio of energy resources that includes approximately 14,500 MW of new supply-side renewables, 8,900 MW of new battery storage and 1,000 MW of new long-duration storage resources by 2030, in addition to existing resources.

- **Differences from prior cycle:** This RSP differs from the one adopted in D.18-02-018 primarily in that it includes more solar and battery storage, as well as new pumped storage, or other long-duration storage with similar attributes, and out-of-state wind, but no longer includes new geothermal resources.
- **Purpose and use:** The portfolio provides general planning direction for how LSEs and policymakers can achieve State GHG reduction goals at least cost while ensuring electric service reliability. When LSEs file their individual IRPs, they must conform to the assumptions used to develop the portfolio, but actual LSE procurement may result in a buildout of a resource mix that differs from RSP.
- **Relationship to 2019 IRP Procurement Track D.19-11-016:** In November 2019 the CPUC adopted D.19-11-016, which ordered the procurement of 3,300 MW of resource adequacy capacity by 2023 and recommended the extension of several once-through-cooling (OTC) thermal generators for system reliability. Neither the 3,300 MW of procurement nor the OTC extensions were modeled as part of the baseline of the RSP adopted in this decision. This RSP identifies a need consistent with the near-term procurement order in D.19-11-016, and vice versa.



The cumulative buildout of new resources in the new RSP is shown below:



Long-lead-time and Diverse Resources

The RSP identifies the need for long-lead time resources such as long-duration storage and out-of-state wind in the 2026 and 2030 timeframes, respectively. This Decision signals the CPUC’s intent to examine the steps needed to support the development of these resources, and potentially others (such as geothermal and offshore wind), in the IRP Procurement Track starting later in 2020. The Decision encourages LSEs to initiate planning and procurement activities to bring these resources, or others with similar attributes, to market.

Proposed Electric Sector GHG Planning Target

The Decision recommends maintaining the statewide electric sector GHG Planning Target of 46 MMT by 2030. The CPUC can reevaluate the GHG planning target each IRP cycle. The 46 MMT target is:

- **Equivalent to 42 MMT from first cycle:** The 46 MMT target is equivalent to the 42 MMT target set in D.18-02-018, because it includes emissions from certain combined head and power (CHP) projects as part of the electric sector that were previously counted towards the industrial sector.
- **Within CARB established range:** This GHG target is within the 30-53 MMT range established by the California Air Resources Board for the electric sector in 2030.
- **On Track with Zero-Emissions Goal by 2045:** The 46 MMT target keeps the electric sector on a trajectory to meet the state’s zero-emissions goals for the sector by 2045, accounting for the uncertainty in electrification load growth anticipated post-2030. The Commission may consider adopting a portfolio at the end of this IRP cycle that corresponds to a deeper GHG target than 46 MMT.
- **Balances GHG reductions with reliability and affordability:** Using the total resource cost metric, the 46 MMT target has an annual cost of approximately \$45.7 billion in 2030, roughly \$1.1 billion to \$2.4 billion less than the alternative 38 MMT and 30 MMT targets under consideration, respectively.

LSE IRP Filing Requirements and Templates

The Decision extends the deadline for LSEs to file IRPs to September 1, 2020. Each LSE must propose how it will meet its 2030 GHG benchmark and other policy goals given its unique resources and local community preferences, as well as address expected impacts on disadvantaged communities.

Natural gas fleet and consideration of the year 2045

2019-20 IRP modeling has new functionality that allows the model to economically evaluate retention of natural gas generators. The RSP retains nearly all existing gas generation because natural gas capacity is needed for reliability before and immediately after 2030, despite being dispatched for relatively few hours of the day. By 2045, however, approximately 4,500 MW of gas capacity is not retained in order to achieve the SB 100 2045 goal as modeled.

CPUC Decision – <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M331/K772/331772681.PDF>