



Integrated Resource Planning Procurement for Mid-Term Reliability & GHG Reductions Summary of May 21, 2021 Proposed Decision and Alternate Proposed Decision

Overview of Proposed Decision (PD) and Alternate Proposed Decision (APD)

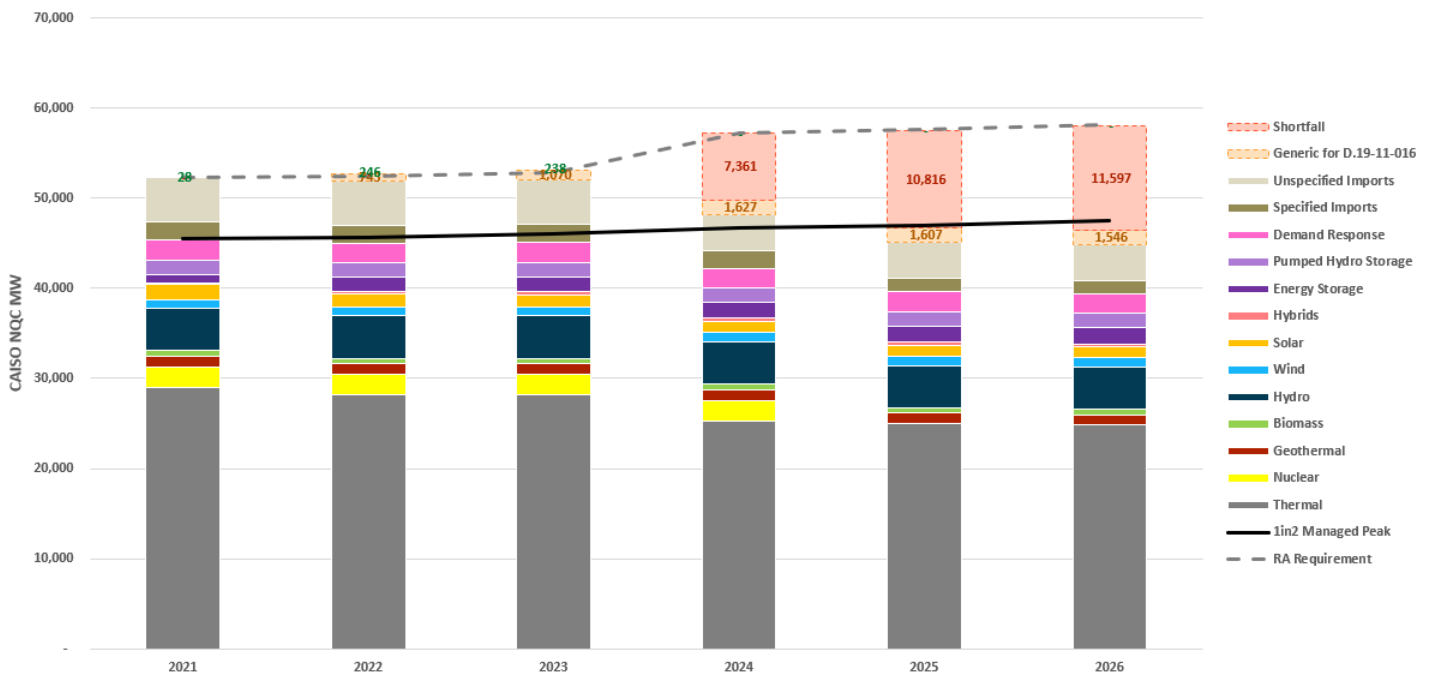
- The CPUC's Integrated Resource Planning (IRP) proceeding ([R.20-05-003](#)) ensures that there are sufficient resources available to ensure reliability and to meet the state's greenhouse gas (GHG) emission reduction goals for the electricity sector in a cost-effective manner.
- The PD and APD order the procurement of 11,500 MW of new net qualifying capacity (NQC) to come online in the years 2023-2026 enough to power approximately 2.5 million homes, with almost all of the resources procured coming from zero-emitting sources. The resources are needed to respond to more extreme weather events and replace electricity generation from more than 3,700 MW of retiring natural gas plants and 2,200 MW from Diablo Canyon Power Plant. (NQC refers to the ability of a power plant to meet the reliability needs of the grid, especially at peak times. For some resources like variable renewables without storage, the "nameplate" or "installed" MW capacity will be significantly higher than the NQC value.)
- Of the 11,500 MW NQC required, over 90% must be from clean (non-fossil fueled) resources, including 2,000 MW from resources with long development lead times. This procurement will increase resource diversity and enhance grid reliability. At least 1,000 MW must be obtained from *long duration storage resources (eight hours or greater)*, and at least 1,000 MW from *firm or dispatchable zero-emitting resources such as geothermal*. ("Firm" means providing power whenever needed, for as long as needed.)
- The PD and APD require 2,500 MW from firm, zero-emitting resources by 2024 to fully replace capacity from Diablo Canyon, which will retire both units in 2024 and 2025. Resources such as geothermal and renewables-plus-storage provide firm energy because they can be dispatched at any time of day.
- The PD and APD require a small amount of procurement of natural gas resources, but in different amounts and with different limitations. Neither the PD nor the APD allow for new natural gas plants at new sites.
 - The PD orders between 1,000 – 1,500 MW from efficiency improvements, upgrades, expansions or repowering at existing or mothballed plants. Projects located in a disadvantaged community are limited to projects that will reduce GHG and criteria pollutant emissions by requiring specified amounts of green hydrogen or by adding storage.
 - The APD orders 500 MW from efficiency improvements, upgrades, or expansions at existing sites, and requires all fossil improvements to increase efficiency and reduce the rate of GHG emissions. The APD precludes any fossil-fueled projects in disadvantaged communities, and also does not allow repowering at mothballed or retired sites. The APD also authorizes but does not require the investor-owned utilities (IOUs) to procure an additional 300 MW of fossil-fueled capacity at existing sites with a commitment to fuel with 30% green hydrogen by 2026 and 50% green hydrogen by 2031. Finally, the APD would initiate a coordinated planning effort in the IRP proceeding for gas resource retirement to inform an orderly and equitable path to Senate Bill 100 goals.
- The PD and APD require the balance of the required 11,500 MW to be fulfilled with non-fossil fueled resources.
- The PD and APD assign procurement responsibility to all LSEs based on their share of peak demand, with the exception of fossil-fueled resources which will be procured by the IOUs on the behalf of all customers. In the event of non-compliance, penalties could be assessed on the non-compliant LSEs and IOUs would procure on their behalf.
- The PD and APD endorse reducing the 2030 GHG target from 46MMT to 38 MMT in the next IRP decision later this year.

Next Steps: The [PD](#) and [APD](#) were released on 5/21/2021, ahead of the CPUC Voting Meeting on 6/24/2021. Opening comments are due on 6/10/2021. Reply comments are due on 6/15/2021.



The figure below shows the CPUC staff analysis of available electricity resources that led to the procurement required in the PD and APD.

CAISO RA Stack by Resource Type (High Need (2020 IEPR))

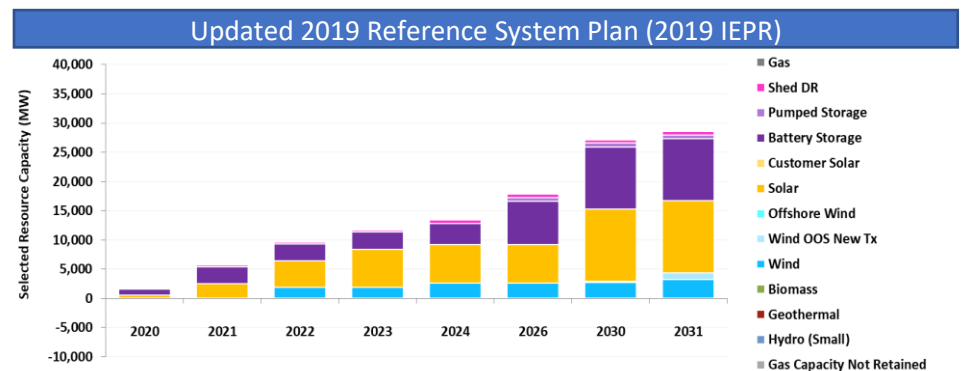


The 11,500 MW ordered in this decision is in addition to the approximately 10,000 MW interconnecting between 2020-2024 from prior CPUC decisions

- The procurement proposed in the PD and APD is in addition to the 3,300 MW that the CPUC ordered to come online 2021-2023 (see Decision [D.19-11-016](#)), the 1,325 MW of energy storage that the Legislature has required by 2020 (See [AB 2514 \[2010\]](#)), and the 4,000 MW from resources already contracted to come online between now and August 2024 associated with other state energy programs such as the Renewables Portfolio Standard (RPS) (See [Status of New Resources Expected](#), 11/23/2020). In addition, the CPUC estimates over 1,500 MW will be procured pursuant to two recent decisions adopted to address extreme weather events and summer reliability.

Assessing Reliability and Need for New Procurement

- Relationship to Planning Track of IRP:** As part of each IRP cycle, CPUC adopts a greenhouse gas planning target for the electric sector and identifies a portfolio with the optimal mix of resources needed to meet state policy goals. In March 2020, the CPUC adopted a Reference System Plan (RSP) that identified the need for nearly 18,000 MW of new clean energy nameplate capacity by 2026 (see figure above and Decision, [D.20-03-028](#)) on the path to achieving 46 million metric ton (MMT) statewide electric sector emissions by 2030. The 7,500 MW NQC proposed in the ruling leading up to this PD, when combined with the 3,300 MW NQC



needed for nearly 18,000 MW of new clean energy nameplate capacity by 2026 (see figure above and Decision, [D.20-03-028](#)) on the path to achieving 46 million metric ton (MMT) statewide electric sector emissions by 2030. The 7,500 MW NQC proposed in the ruling leading up to this PD, when combined with the 3,300 MW NQC



ordered in D.19-11-016, closely approximates the 18,000 MW of new nameplate capacity included in the RSP. In response to stakeholder feedback the PD and APD now recommend the high need scenario of 11,500 MW NQC.

- **Analysis of Need:** To conduct the analysis of potential procurement needed by mid-decade, CPUC staff assessed the reliability need in each year based on the mid-demand forecast from the California Energy Commission's 2019 Integrated Energy Policy Report (CEC's 2019 IEPR). The analysis found a "mid need" of at least 7,500 MW NQC. Staff also considered "high need" and "low need" scenarios using different need and resource addition/retirement assumptions. The PD and APD are based on the high need scenario of 11,500 MW NQC, updated with the forecast from the CEC's 2020 IEPR.