

CPUC Integrated Resource Planning (IRP)

Scoping Plan Workshop

June 2021



California Public
Utilities Commission

Integrated Resource Planning (IRP) in California Today

- The objective of integrated resource planning is to reduce the cost of achieving GHG reductions and other policy goals by looking across individual LSE boundaries and resource types to identify solutions to reliability, cost, or other concerns that might not otherwise be found.
- Goal of 2019-21 IRP cycle is to ensure that the electric sector is on track to help California reduce economy-wide GHG emissions 40% from 1990 levels by 2030, and to explore how achievement of SB 100 2045 goals could inform IRP resource planning in the 2020 to 2030 timeframe.
- California today is a complex landscape for resource planning:
 - Multiple Load Serving Entities (LSEs) including:
 - Investor-Owned Utilities (IOUs)
 - Community Choice Aggregators (CCAs)
 - Energy Service Providers (ESPs)
 - Multiple state agencies (CPUC, CEC, Air Resources Board) and CAISO.

Statutory Basis of IRP: SB 350 (De León, 2015)

The Commission shall...

PU Code Section 454.51

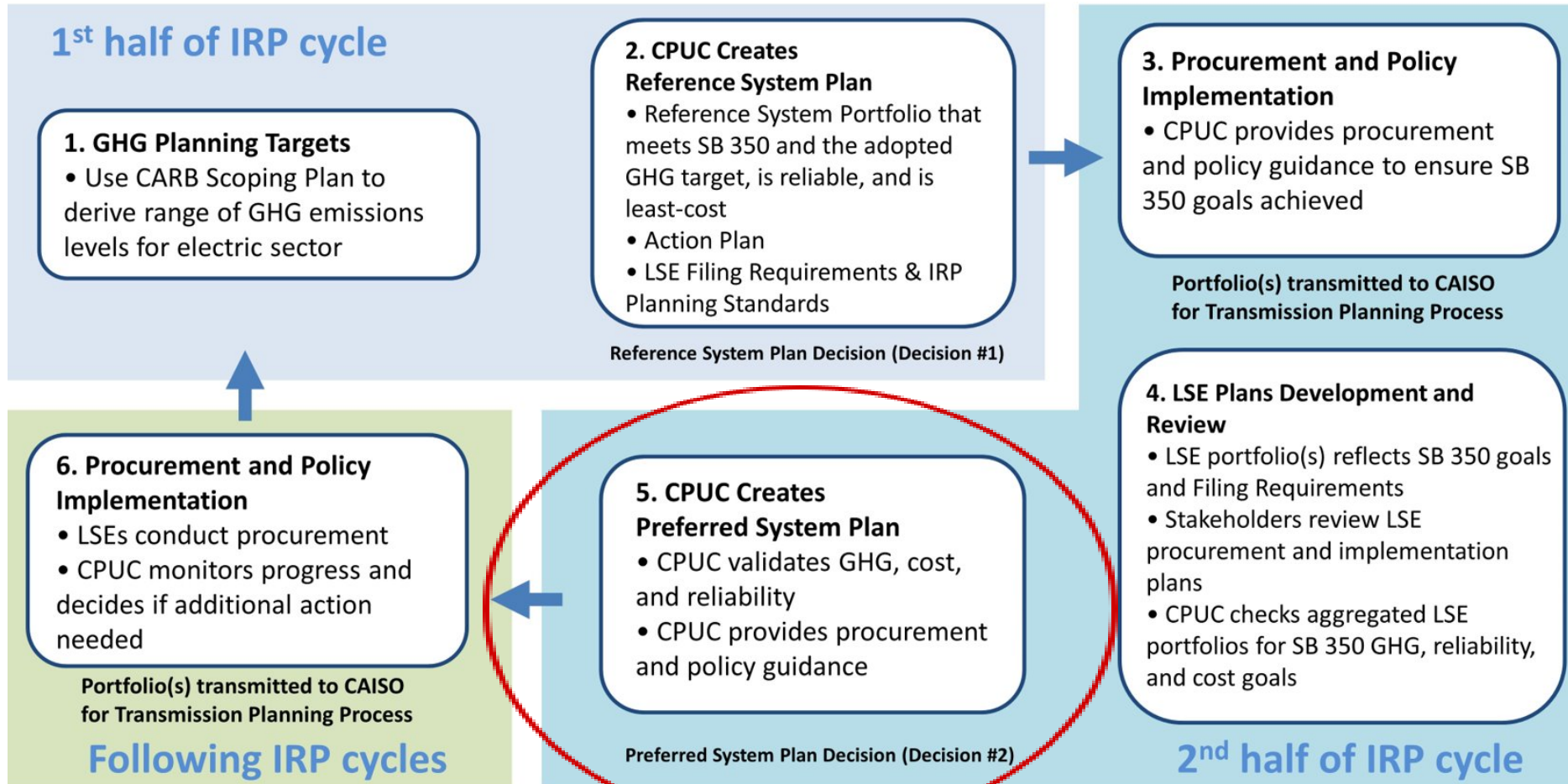
Identify a diverse and balanced portfolio of resources... that provides optimal integration of renewable energy in a cost-effective manner

PU Code Section 454.52

...adopt a process for each load-serving entity...to file an integrated resource plan...to ensure that load-serving entities do the following...

- Meet statewide GHG emission reduction targets
- Comply with state RPS target
- Ensure just and reasonable rates for customers of electrical corporations
- Minimize impacts on ratepayer bills
- Ensure system and local reliability
- Strengthen the diversity, sustainability, and resilience of the bulk transmission and distribution systems, and local communities
- Enhance distribution system and demand-side energy management
- Minimize air pollutants with early priority on disadvantaged communities

Where we are in the IRP Process

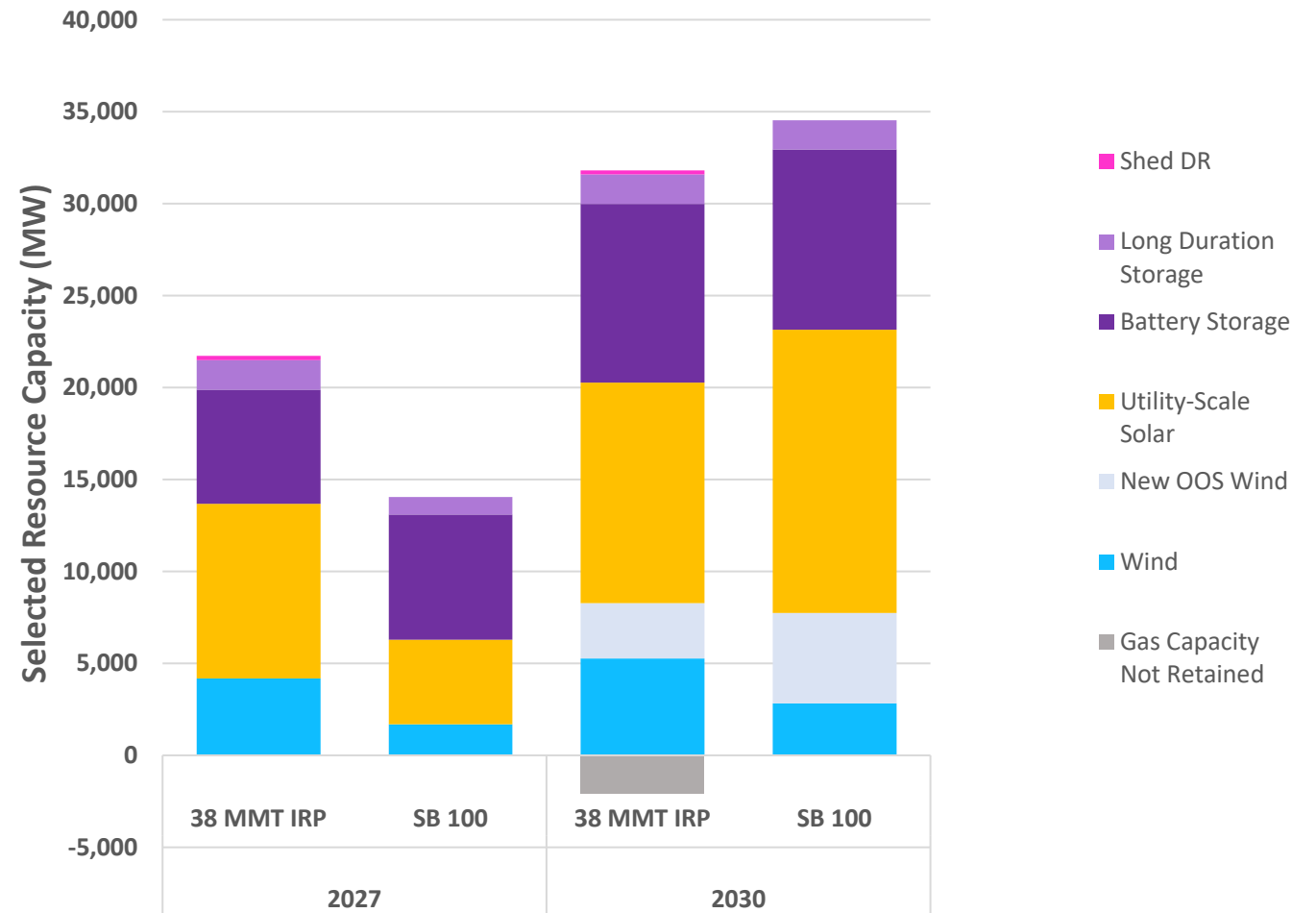


Background on the CPUC IRP 2019-21 Cycle

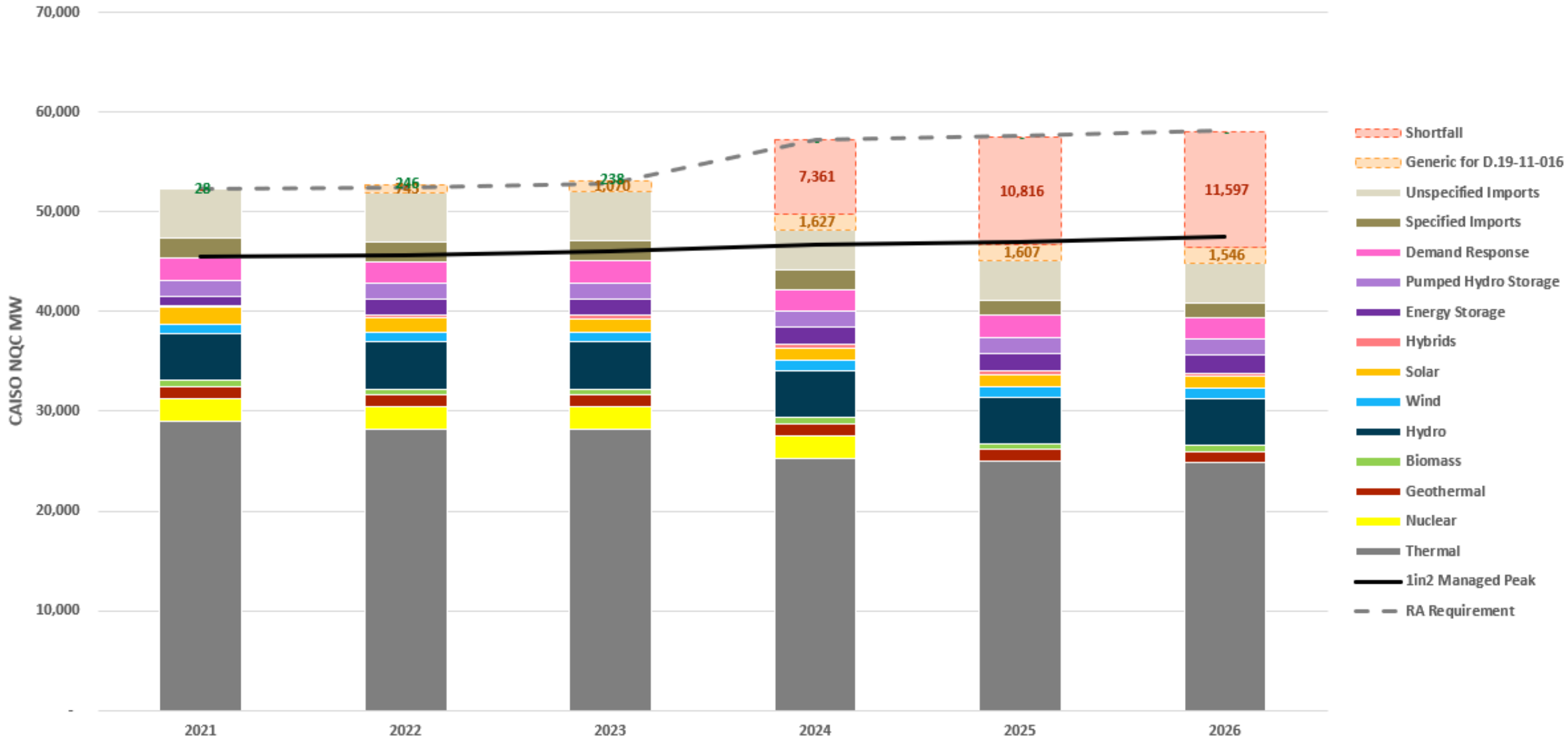
- The first year of the current IRP cycle was spent developing the Reference System Plan using the RESOLVE and SERVM models
- In March 2020, the Commission adopted D.20-03-028, establishing an optimal “Reference System Portfolio” of resources to meet an electric sector GHG planning target of 46 MMT by 2030
- The RSP decision also included an optimal portfolio based on a 38 MMT GHG planning target, asking LSEs submit IRPs aligning with both a 46 MMT and 38 MMT planning target to help the CPUC better consider both targets when putting together the PSP
- LSEs used the guidance provided in the Commission’s decision to develop individual IRPs (“LSE Plans”), and they filed their IRPs with the Commission on September 1, 2020
- CPUC staff is aggregating and adjusting the portfolios submitted in LSE Plans to create aggregated 46 MMT and 38 MMT system portfolios, to be further analyzed for reliability and GHG through production cost modeling

SB 100 and IRP 38 MMT Comparison

- The SB 100 “Core Scenario” results align closely with the 38 MMT scenario in the IRP RSP decision throughout this decade
- Differences in resource additions largely explained by technical differences
 - IRP 2027 are an interpolation between 2026 and 2030 modeled years, which may overstate 2027 IRP resource additions and explain differences in that year
 - OOS Wind additions by 2030 were capped in IRP modeling at 3,000 MW, and unconstrained in SB 100 modeling
- IRP and SB 100 assumed the same amount of customer solar additions, but the amounts are excluded here because they are an input rather than an output of the model



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



Conclusions

- The CPUC will continue to coordinate with CARB, the CEC, and other stakeholders to ensure that the electric sector stays on track toward achieving SB 100 and supporting the state's economy-wide GHG reduction goals
- IRP planning supports the findings of the SB 100 Joint Agency Report, identifying a similar scale and composition of resources needed over the next decade
- IRP's procurement track has ordered or proposed the development of nearly 15 GW of new "net qualifying capacity" over the next 5-7 years to maintain system reliability and support the state's transition to a 100% renewable and zero-carbon grid
- Future IRP procurement orders may lead to further development of new GHG-free resources to support the achievement of SB 100 and state climate goals
- The next IRP cycle starts in 2022 and will evaluate GHG planning targets based on CARB's Scoping Plan Update and provide another opportunity to evaluate the state's SB 100 implementation progress