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California Legislature

Monday, November 14th
11:00 a.m. – 1021 O Street, Room 1100

# JOINT INFORMATIONAL HEARING

## Assembly Committees on Utilities and Energy, Natural Resources, and Budget Subcommittee #6 – Process, Oversight, and Program Evaluation

## *A 2030 Vision:*
## *Mid-term Actions Needed for the Energy Transition*

California has ambitious clean energy policies, such as the Renewables Portfolio Standard (RPS), with procurement goals that ramp quickly in the coming decades. For instance, in 2020 utilities needed to have 33% of their energy portfolio arise from renewable resources.[1] By 2030, that percentage nearly doubles to 60%. By the end of 2045, all retail electricity must be supplied with a mix of RPS-eligible and zero-carbon resources, for a total of 100% clean energy.[2] These enormous supply-side changes run parallel to anticipated changes in demand from electrifying the transportation and building sectors. Collectively, these changes represent a transition period for the energy sector (the clean energy transition) over the coming two decades; a transition where our infrastructure must evolve to meet new supply and increasing demand.

However, this clean energy transition is not happening in isolation. Rather, large climate events are occurring alongside our ambitious renewable energy integration. For the past three summers, California's electric grid has faced tight supply conditions, leading to rotating outages in August of 2020 and near misses in July of 2021 and early September of 2022. These tight supply conditions were largely a consequence of climate events, such as western-wide heat waves or wildfires, and represent periods where energy supply is most desperately needed to ensure the health and safety of many Californians. For instance, the record heat wave this past September sickened or killed many, although data on the scope of the health impacts are chronically underestimated.[3] These climate events likewise represent a huge transition period for the energy

[1] The CEC is still undergoing verification of the 2017-2020 RPS compliance period to determine if the utilities met this target.
[2] SB 100, De Leon, Chapter 312, Statutes of 2018.
[3] Hayley Smith, "Despite promises, California doesn't know how many people died in record summer heat wave," *LA Times, October 10, 2022.*

sector (the climate transition), one where our infrastructure must adapt to reliably operate during periods of extreme strain.

While the events of the last three summers have resulted in an urgent response to ensure outages do not happen again, many of the preferred solutions take long-term planning and development. Power plants are not built overnight. Similarly, accurately forecasting and planning for what should be built to address climate events remains uncertain; historical averages will likely be less predictive, and previously considered "extreme" events are likely to grow more common. It will be the job of policymakers to tackle both of these transitions expeditiously and simultaneously. The clean energy transition is meant to address the climate transition; therefore planning and solutions for one should serve the other.

Recent action this past summer raised the question of how the state can best deal with this dual transition, when last-minute action to extend the Diablo Canyon nuclear powerplant (DCPP) and to create a fossil fuel-containing Strategic Reliability Reserve (SRR) occurred. While the state had been planning since 2018 for DCPP to retire by 2025, the recent policy action could extend DCPP to 2030. Similarly, the State Water Board's once-through cooling policy that calls for the early retirement of coastal natural gas powerplants has been extended numerous times, with some of those resources potentially moving to the SRR. It remains unclear whether the extensions approved this summer will be a temporary bridge or a continually-exercised option.

As part of the action to extend the DCPP, the Legislature allocated $1 billion in future year monies to support programs and projects that accelerate the deployment of clean energy resources and increase energy reliability. This action, and budget appropriation next year, provides an opportunity to ensure the state is tackling both energy transitions together. The purpose of this hearing is to assess, with a focus on 2030, what actions have been undertaken by state agencies to meet our energy transition; what additional planning and action might be necessary; and to hear from outside experts their vision for meeting the energy transition. This hearing will provide a broad overview of the vision of 2030 and present challenges and opportunities that will be explored in depth in subsequent hearings of our committees, including transmission and distribution planning, impacts of electrifying the transportation sector, and the evolution of the natural gas sector.

***Questions for Consideration:***

- *How will electrifying buildings and transportation impact energy demand into the next decade? Have there been recent examples of load growth that our forecasts haven't predicted well? What lessons can be learned from those examples? Are there high-demand technologies that are currently excluded from our models, such as cannabis or hydrogen production? What are the consequences of including such technologies into the forecast?*

- *What infrastructure upgrades or new build are needed to meet the supply and demand forecasts in 2030? How are the energy entities working with the California Air Resources Board to ensure adequate infrastructure and reliability for the increased electric load arising from the Advanced Clean Fleets rule? How do predictions in demand response adoption shift the predicted infrastructure needs?*

- *What are current barriers to new energy resource development? Has there been any thawing of the supply chain issues that arose over the last year? Are there proactive measures that can be taken to address potential unforeseen development lags, such as prepositioning resources? What are the cost and benefits of such actions?*

- *The California Independent System Operator's (CAISO) recent 20 Year Outlook showcases how exploratory thinking can help benefit future policy discussion and action. This work is not binding, but raises the question of what additional creative work CAISO can conduct outside their tariff? What additional coordination might be necessary to spark outside-the-box thinking?*

- *Balancing affordability and availability is ever-present in considerations of future resource and infrastructure needs. How are energy entities undertaking cost management principles? How do delays in action to build needed resources or reauthorize existing resources impact cost?*

- *DCPP is expected to have its operations extended until 2030 to help bridge the energy transition. What is the current plan to ensure reliability past 2030 once DCPP is offline? How does this differ from the past plan that considered DCPP offline after 2025?*