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Powering America's Economy, Security, and our Way of Life: Examining the State of Grid Reliability

Subcommittee on Energy, Climate, and Grid Security Committee on Energy and Commerce United States House of Representatives

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Chairman Duncan, Ranking Member DeGette, Chair Rodgers, Ranking Member Pallone, and Members of the Subcommittee, thank you for the opportunity to testify today. My name is Neil Millar. I serve as Vice President, Infrastructure and Operations Planning at the California Independent System Operator Corporation (CAISO). In this role, I lead the division responsible for the CAISO's transmission planning, infrastructure contracts, operations engineering services, and generation interconnection processes.

The CAISO operates wholesale electricity markets for the benefit of approximately 80 percent of electric demand in California and small portion of electric demand in the state of Nevada. The CAISO also serves as a planning authority over all network transmission expansion and upgrade projects on the CAISO's system and administers interconnection processes for resources seeking to connect to those facilities. Central to our functions are the objectives of reliability and affordability.

In the broader Western Interconnection, we serve as the market operator for the Western Energy Imbalance Market, which provides real-time market services to participating balancing authorities throughout the Western Interconnection. The

Western Energy Imbalance Market has increased reliability for each of its members and has generated over $4 billion in savings since inception. We are now working to extend a day-ahead market in the West. We also provide Reliability Coordinator services to 42 entities operating in the Western Interconnection, which helps ensure we have prepared for and can manage reliability events.

Our most recent transmission plan identifies significant new transmission infrastructure needed to reliably and efficiently meet California's energy objectives over the next decade. This plan will support more than 40 gigawatts of new resources identified by the state to meet its load growth and clean-energy goals over the next 10 years. With electrification increasing in other sectors of the economy, more sources of power supply will be required. We expect our next transmission plan will identify the need for more infrastructure development to accommodate this growth and clean energy development. As part of our transmission planning processes, the CAISO also undertakes a 20 year transmission outlook to assess the feasibility and cost-effectiveness of new resources and transmission lines to serve forecasted demand and continue the transition to California's long term clean energy goals. We coordinate these transmission assessments with California state agencies, who are responsible for the state's load forecast and resource procurement strategy. This work provides the context for nearer term planning decisions and can also inform policy-makers' decisions about how best to shape resource portfolios.

We are also in the midst of enhancing our interconnection rules to streamline the process, and prioritize commercially viable projects in zones with available transmission capacity. Our goal is to see the most advanced projects move forward with more controls to prevent projects from lingering in the queue and frustrating future development. We applaud the recent Order No. 2023 issued by the Federal Energy Regulatory Commission, which advances several areas of interconnection reform nationwide.

With the resource transition in California and other western states, it is important to have transmission planning, interconnection and procurement processes work in a coordinated manner. When these processes work together, they provide the foundation for a well-functioning organized electricity market that can support state energy polices, reliability and affordability. During the resource transition, the CAISO still depends on conventional sources of supply such as nuclear, hydroelectric and natural gas resources. However, we are integrating new inverter-based resources at a rapid pace. We must ensure these new resources bring the capabilities to support electric system operations and serve electricity demand. Over the years, we have worked closely with the Federal Energy Regulatory Commission, North American Electric Reliability Corporation the Western Electricity Coordinating Council and other stakeholders to ensure new resources, including inverter-based resources, bring essential reliability services to the system.

We continually work to enhance coordination with our partners throughout the West. This coordination allows us to leverage each other's load profiles and resources to balance the system, during normal operations as well as during extreme weather events or in the event of a significant contingency. Although the West has experienced supply scarcity during extreme events, western utilities have also effectively supported each other during these events through wide-area coordination. Beyond greater coordination in resource commitment and dispatch to support transmission operations, significant opportunities also exist to coordinate resource adequacy programs, resource planning decisions, and deployment of transmission infrastructure across the western region. Working collaboratively with our partners in the West will allow us to unlock these opportunities for the benefit of customers.

Thank you again for the opportunity to testify today. I would be glad to address any questions you may have.