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Assemblyman Chris Holden Chair, Assembly Committee on Utilities and Energy State Capitol PO Box 942849 Sacramento, CA 94249-0041 assemblymember.holden@assembly.ca.gov

Re: AB 813: Support

Dear Chairman Holden:

I strongly support evolving the CASIO into a fully functioning western regional transmission organization (RTO). And it is clear to me that if one tried to maintain the governing board of the CASIO as one appointed by the state of California, multi-state integration simply will not happen. Any pathway towardcreating a fully functioning western RTO will require a balanced participation by all states that would be part of the organization. Thus I support AB 813 as an important step toward the overriding objective.

When I wrote the book, "The California Electricity Crisis" in 2001/2002, I saw opportunities for California and the entire U.S. West to improve the overall resilience of the electric system by fully integrating the western power grid. Those opportunities have become more compelling now with the growth of intermittent renewables, not simply in California, but throughout the West.

By integrating our western power grid – including the Pacific Northwest, the Southwest and California, as well as western Canada and Mexico – we could reduce greenhouse gas emissions and energy costs for consumers, while increasing reliability. This integration would allow California's in-state wind and solar plants – that often lack timely access to customers elsewhere in the West – to operate at much closer to full capacity. In turn, clean electricity would become less expensive, allowing for more development of wind and solar power plants, rather than those relying on fossil fuels. It would not preclude community choice aggregators or others desirous of a greener energy system from entering into long-term contracts to obtain their electricity from renewables, but rather it would make it easier for them to balance their time-varying loads with available electricity supplies.

There have been some, most recently in a New York Times article July 20, that raise the specter of the California electricity crisis, suggesting that the creation of this single authority to manage the electric grid for most of the West might again may be very costly for consumers. As the author of "The California Electricity Crisis," I understand the need to prevent a repeat of that terrible time. However, the idea that a fully integrated Western grid could make another California electricity crisis possible is total nonsense. The full pricing transparency and operating efficiencies of a West-wide integrated grid would help

safeguard against another crisis in an affordable, sustainable way. System operators would be able to dispatch electricity quickly and dependably to wherever it is needed throughout the West. A fully integrated Western electricity grid could not avoid high prices if there were to become another West-wide electricity shortage, as we had in the years 2000/2001. But a fully integrated Western electricity grid would not make such a shortage more likely nor could it make the consequences of such a shortage worse. A fully integrated Western electricity grid would go a long-way toward avoid rolling blackouts by allowing electricity to be quickly and easily dispatched to California if it were needed.

The importance of the integrated grid however is more likely to be seen during regular conditions, with solar and wind resources bidding into the broader market at a zero price. With a fully integrated western power system, cheaper emissions-free electricity could be efficiently dispatched from another state where the sun is shining, the wind is blowing, or hydropower resources are available. These renewable resources, whether they generate electricity in California or elsewhere in the West, will be dispatched a greater fraction of the time, increasing their capacity factor. Their dispatch would imply that other electric generating plants having a larger marginal cost – particularly fossil-fueled plants – will be dispatched a smaller fraction of the time throughout the West. A fully integrated grid would therefore aid in further decarbonizing the Western electricity system.

Importantly, such an integrated grid would still allow every participating state – including California – to control its own electricity policies while cooperating with neighboring states and provinces, and lowering utility bills within them.

Some progress has occurred: An "electricity imbalance market" has been established, which helps reduce the cost of handling shifts in participants' short-term generation needs. This is a step in the right direction, but it's a far cry from complete integration. Complete integration could well be created by evolving the CAISO into such a Western regional transmission organization.

Sincerely,

James L. Sweeney Professor, Management Science and Engineering Director, Precourt Energy Efficiency Center Stanford University