

Federal Energy Regulatory Commission

Technical Conference on Environmental Regulations and Electric Reliability, Wholesale Electric Markets, and Energy Infrastructure

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Thank you to FERC for inviting me to join this technical conference, and to offer thoughts on how EPA's proposed Clean Power Plan may affect western energy and carbon markets. The California Air Resources Board has developed a productive working relationship with FERC as we have implemented our carbon market, and we look forward to FERC's continuing work to support a clean and reliable power grid nationally.

This statement focuses on three areas: (1) California's existing carbon market; (2) The Air Resources Board's (ARB's) current assessment of how the Clean Power Plan may interact with our policies; and (3) Potential opportunities for enhanced coordination among Western states. These comments are informed by the ARB's close working relationship with the California state energy regulators, including the California Energy Commission (CEC), and the California Public Utilities Commission (CPUC), as well as with the California Independent System Operator Corporation (CAISO).

I. California Carbon Policies and the Western Grid Today

As the largest power market in the West, California is creating strong market incentives for a lower-carbon western grid. Our policies include:

- (1) A 33% renewable portfolio standard requirement for power supplied in 2020. Although our renewables policies have led to development of renewable resources in California, they also encourage investment in resources throughout the region.
- (2) A long-term contracting emissions performance standard for power plants that has contributed to our utilities divesting from the large, aging, coal-fired power plants that previously supplied substantial amounts of power to California and, especially, to southern California. This performance standard continues to steer the California market away from high-carbon investments.
- (3) A mandate to fully account for all carbon associated with the energy supplied to Californians. Pursuant to California Assembly Bill 32 (AB 32), the California Global Warming Solutions Act, we must account for carbon emissions associated with all electricity consumed by Californians. Accordingly, the first jurisdictional deliverers of power to California are responsible for the emissions associated with that power,

and are covered by our Mandatory Emissions Reporting Regulation and our Cap-and-Trade Regulation. The result is that emissions from imported power are addressed with the same price signal, and compliance obligations, as in-state generators, encouraging lower carbon generation from all of our suppliers

We have also been careful to align our resource shuffling prohibitions with the wholesale energy market. In response to comments from Commissioner Moeller and some stakeholders, as well as our own internal analyses, ARB adopted more detailed resource shuffling rules, which were finalized last year. The rules prohibit shuffling while providing well-defined “safe harbors” that explicitly enable non-shuffling market and reliability transactions to occur. ARB continues to closely monitor our markets to ensure that market participants do not “shuffle” higher-carbon emissions to consumers elsewhere.

(4) The new energy imbalance market (EIM). The EIM, recently approved by FERC, will provide significant economic benefits to participants by supporting more efficient provision of imbalance energy across a wider footprint. That mechanism will also support renewables integration in California and across the west by allowing for rapid purchases of imbalance energy across an expanded geographical footprint. We expect the EIM to continue to expand as balancing authorities assess its benefits. We have integrated EIM imports and exports into our carbon market and reporting programs.

In short, California has designed a comprehensive system to accurately account for greenhouse gas emissions from power plants, in and out of state, that supply us with electricity. Our carbon market integrates these policies, and ensures that emissions are accounted for properly. Thus far, that system has worked smoothly. Emissions from California’s electricity demand have generally declined over the life of the program (with a brief uptick associated with a major nuclear plant retirement) and we expect them to continue to decline.

During that emissions decline, we have not experienced any significant reliability challenges, or market disruptions, associated with our carbon programs and pricing efforts. Thanks to strong cooperation between ARB, the CPUC, CEC, and CAISO, we have maintained grid reliability even as we integrate a steadily increasing share of intermittent renewable resources. CAISO has also helped in the smooth integration of carbon pricing by generating a greenhouse gas allowance index price informed by the daily carbon permit prices. This index price helps provide price transparency in the electricity market processes when accounting for compliance in the carbon market program.

II. The Clean Power Plan and California

ARB strongly supports the Clean Power Plan, and expects that California will readily be able to comply with no disruptions to our carbon or power markets. Indeed, our in-state carbon policies are likely to result in emission reductions that exceed U.S. EPA’s

emission reduction targets. We remain focused, however, on smoothly integrating the federal and state programs, and have thus far had a very positive experience working with U.S. EPA. We are focused on the following issues with regard to our in-state programs:

1. Minimizing the effects of coverage differences between the state and federal programs. California's carbon market is economy-wide, covers both new and existing power plants, and includes carbon pollution emissions from imported power. The federal program focuses only on specific existing units at those power plants, and California's federal responsibilities extend only to plants within our borders. By introducing additional carbon constraints just for a subset of the power sector, the federal program could, if not managed carefully, introduce constraints on the ability to most efficiently reduce emissions economy-wide.

We therefore expect to work with U.S. EPA to demonstrate that California's market programs, and complementary energy sector programs, satisfy the federal standards without major changes to their design solely for the purposes of federal compliance. Specifically, we are exploring plan design options and analyses that can show an entity's participation in our broader programs can also guarantee compliance with the narrower federal mandate. We expect that we can readily make that demonstration: California's programs are rapidly decarbonizing our power sector as part of our overall emissions reductions program, meaning that they will also deliver compliance with the relatively less-stringent federal standards.

2. Mutually reinforcing federal and state rules for interstate power. As part of the Clean Power Plan, EPA is considering setting default accounting rules to address the interstate effects of renewable energy and energy efficiency policies. ARB is closely following this effort to help ensure that any default rules are consistent with our market designs.

There are several areas worth careful attention. First, renewable energy: EPA has suggested that under the Clean Power Plan, credit for renewable energy should be allocated to the states whose policies caused the energy to be generated – essentially, following existing consumption and crediting patterns in the Renewable Energy Certificate (REC) market. Maintaining that default rule would align federal and state markets.

Second, energy efficiency. EPA has been less clear on how investments in energy efficiency will be credited in the Clean Power Plan if they lead to carbon reductions across state boundaries. EPA has suggested that these out-of-state reductions may not be credited for compliance. Though ARB has not yet taken a final position on energy efficiency crediting, the lack of clarity here is a matter of some concern, because it may discourage investment in energy efficiency policies to some degree.

Thus, ARB expects the effects of the Clean Power Plan on our carbon market to depend substantially on EPA's continuing efforts to align federal compliance

requirements and default accounting rules with our existing market design. We expect that EPA will continue to work with us to align our two programs.

As California has designed and implemented its carbon market program, FERC and California staff has held periodic discussions to coordinate and ensure that reliability planning and enforcement can continue to adapt to the changing grid, including our implementation of the carbon market program. California will continue to inform FERC staff of program developments and observations related to the carbon and related electricity markets as the Clean Power Plan is implemented.

Our own experience cooperating with FERC suggests a productive path forward for FERC as a resource for EPA and the states. We would expect that FERC can be particularly helpful as a source of technical analysis and regulatory authority (via Order 1000, among other sources of authority) for careful reliability, transmission, and market planning that accounts for the effects of public policies that states may adopt to implement the Clean Power Plan. These planning efforts will be especially important to help capture west-wide benefits, as I next discuss.

III. Opportunities Across the Western Grid

The Clean Power Plan's carbon pollution targets have important implications for western grid reliability and transmission planning, as well for pollution control. We see a western grid at an important hinge point: Some large, aging, and inefficient coal-fired power plants are on the verge of retirement, many western jurisdictions are making major investments in renewable energy and energy efficiency, and market flexibility is improving as the energy imbalance market begins its operations. The Clean Power Plan's carbon targets could help to extend these trends towards a cleaner grid that is less dependent on a handful of large fossil plants, instead relying, increasingly, on renewable power dynamically supplied from across the region. State air and energy regulators can work together with EPA, and with FERC, to realize these benefits and to ensure that state plans interact in ways that support the overall reliability and cost-effective functioning of the grid.

Thanks to FERC's Order 1000, which underlined the importance of considering public policy mandates in the context of transmission planning, grid planners throughout the west are already accounting for many of these issues in their planning activities. We expect that these planning procedures, already in place, will help to support Clean Power Plan implementation.

As states across the West consider their planning options, California welcomes conversations with other states, stakeholders, and federal regulators, including on:

1. Possibilities for linkage and for coordination. Jurisdictions that establish power sector emission markets in response to the Clean Power Plan, or as part of their own state-level policies, have the option of linking to California's carbon market, if rigorous linkage requirements are satisfied. An expanded carbon market would help

support economically efficient reductions, and would also obviate seams issues between jurisdictions that could otherwise complicate market dynamics. We are always interested in exploring this option with other jurisdictions.

That said, we understand that many states may pursue other avenues for compliance. We nonetheless remain interested in other forms of coordination. For instance, aligning energy accounting strategies for renewable energy and energy efficiency will help to avoid double counting within the federal plan, and can support expanded market opportunities for these resources. We are also interested in exploring agreements with our neighbors regarding allocation of credit for energy efficiency and renewables programs, where those agreements are mutually beneficial. Similarly, using similar carbon metrics (e.g. similar mass-based or rate-based systems) between states with significant power import/export relationships could be an important coordination point. We have encouraged EPA to support “modular” approaches to regional planning that could include such focused collaborations. Similarly, using similar carbon metrics (e.g. similar mass-based or rate-based systems, including systems with potentially trade-able units) between states with significant power import/export relationships could be an important coordination point. We expect that FERC-mandated planning processes and technical analyses can support states that are exploring these regional coordination options.

2. Management of seams issues. If the coordination we seek does not fully occur, we may have to navigate seams between different carbon pricing and accounting regimes in the west, including our continued statutory mandate to account for carbon associated with imported electricity. Here, we support a strong role of U.S. EPA to consider interactions between state plans in the context of the larger federal program. We expect EPA to carefully review plans for these issues in coordination with state regulators. FERC could play a useful consultative role with regard to the effect of seams on electricity markets.

It is important to note that California’s system for pricing carbon from imported power may well help to ease seams challenges in the West. Because of that carbon price, importers to California feel an incentive to reduce overall mass emissions, and will continue to feel that incentive regardless of how federal compliance plans are designed. The presence of this carbon price in the West’s largest power market should help exert downward pressure on emissions across a range of plan designs in regions that export substantial amounts of power to California.

We look forward to continuing to explore these issues in the planning process. We also believe that FERC can support these efforts through its planning mandates, its continuing efforts to diversify the power mix through better renewable energy and demand response integration into electricity markets, its support for focused transmission planning where needed to support western coordination efforts.

IV. Conclusion

Carbon pricing and increasing renewable generation in California, the largest section of the western grid, is going smoothly. We expect that the Clean Power Plan, which will enhance these incentives, can be implemented smoothly as well, particularly with effective collaboration among the states. We continue to work with EPA to ensure that state and federal policy are aligned, and also look forward to continuing our relationship with FERC, as we carefully monitor our programs' electricity market effects.

Over the next year, as EPA's rule is finalized and states begin to submit plans to the agency, we welcome the regional conversation.