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Comment Received From: Nancy Rader
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Need for Flexibility in the Electricity System

Please accept these late-filed comments.

Additional submitted attachment is included below.

California Wind Energy Association

May 25, 2017

California Energy Commission
Docket No. 17-IEPR-07
Docket Office
1516 Ninth Street
Sacramento CA 95814
Submitted Electronically via CEC website

Re: 17-IEPR-07-- 2017 Integrated Energy Policy Report (IEPR) – Integrated Resource Planning / Need for Flexibility in the Electricity System

The California Wind Energy Association ("CalWEA") offers these comments following the May 12, 2017, workshop addressing the need for flexibility in the electricity system. The workshop focused on operational issues arising from integrating increasing amounts of renewable generation and potential tools for managing further growth of renewables.

In listening to the workshop, we felt that the most important tool was missing from the discussion: planning the growth of the resource portfolio so as to minimize the need for flexibility in the first place. At times, workshop participants seemed to view overgeneration as a blessing, or at least an opportunity to use "free energy" in creative ways.[1] But we must remember that over-generation and the related reliability issues that we're already starting to see[2] are problems that cost money to solve and that the state should seek to avoid. The IEPR should place considerable emphasis on this point, and the need to diversify the portfolio to minimize grid problems in the first place.

[1] Panel discussions addressed various tools for increasing system flexibility, including demand response and storage, options for managing excess electricity such as power-to-gas and desalinization plants, and the availability of both conventional and renewable flexible capacity.

[2] See CAISO May 4, 2017, "CAUSE OF CAISO STAGE 1 EMERGENCY FROM LAST NIGHT". "On May 3, 2017 at 7:01 p.m., the California ISO was unable to maintain the required Operating Reserve capacity and declared a Stage 1 Emergency."

The need for system flexibility is largely attributable to the concentrated daytime production of solar energy.[3] Diversifying the portfolio away from solar as we head to 50% renewables will be a lot cheaper than fixing the problems that result from a lop-sided portfolio. The CPUC, the CAISO and the investor-owned utilities have all produced studies showing that balancing the portfolio with wind energy is the most cost-effective way to avoid oversupply, and to reduce the need for flexible resources in the first place.[4,5,6]

There are two primary sources of wind energy for California, given many land-use decisions limiting wind energy development within California[7]: 1980s-vintage wind projects, and wind resources located outside of California. We discuss these briefly below.

1. California 1980s vintage wind projects are in need of long-term PPAs

CalWEA appreciated Chairman Weisenmiller's mention, at the workshop, that existing, in-state wind resources are at risk right now. Many 1980s-vintage resources are struggling without long-term contracts under very low CAISO market prices, and those prices will not sustain the continued maintenance of these aging facilities, let alone repowering them with new technologies. Given the long-term need for wind energy, this is an ironic problem that requires attention.

On May 20th, 2017, Senator Kevin de Leon sent a letter to CPUC President Picker and Chairman Weisenmiller asking them to ensure that state retail sellers of electricity procure as much wind and solar energy as possible in advance of the potential expiration of the federal tax credits. Procuring now, with the support of federal tax credits, is particularly

[3] At the workshop, we heard from an ERCOT representative that Texas has over three times the wind energy capacity that we have in California, and relatively little solar capacity, and the problems there have been manageable without the need for storage or a lot of demand response.

[4] See "A CAISO Bulk Energy Storage Case Study," CPUC/CEC Joint Workshop on Bulk Energy Storage (Nov. 20, 2015), at slide 8.

[5] See California ISO, "Final 2014 Flexible Capacity Needs Assessment, Table 2 (May 1, 2014). Available at: https://www.caiso.com/Documents/Final_2014_FlexCapacityNeedsAssessment.pdf. Similar findings were made in a more recent TPP study.

[6] See, e.g., Draft 2016 RPS Portfolios, RETI 2.0 Plenary Group Meeting, slide 12 (3/18/16) (CPUC presentation by Forest Kaser); Energy and Environmental Economics, Inc., (E3) Draft Renewable Portfolios for CAISO SB 350 Study (e.g., slide 35) presented at a February 8, 2016, CAISO Public Workshop; E3, *Investigating a Higher Renewables Portfolio Standard in California* (January 2014) (e.g., see slide 8); CalWEA, "Investigating the Investigation of a Higher Renewables Portfolio Standard in California: A Review of the Five-Utility E3 Study" (April 2014).

[7] See CalWEA, The (Limited) Wind Potential In California, prepared for the 3/16/16 RETI 2.0 Workshop.

important to ensure that California's historic wind facilities are revitalized, rather than shut down.

2. Western wind resources can be accessed at low cost

CAISO expansion, which was discussed at the workshop, does not appear to be on a fast track. Nevertheless, there are still many ways to deliver the wind that California needs to balance the portfolio from the Western region, and at a relatively low cost. There was significant discussion about that in the CPUC-CEC Renewable Energy Transmission Initiative (RETI) 2.0 report, and CalWEA encourages both Commissions to revisit that report as you continue to think about the problems addressed in the workshop. In particular, the RETI 2.0 highlighted the potential of using firm and conditional firm transmission service, CAISO dynamic scheduling, and advanced grid technologies to access Western wind resources using *existing* WECC transmission capacity, including capacity that will be freed up in coming years with retiring coal plants. The potential for low-cost delivery of wind energy is very significant, and would generate the same in-state economic benefits that were identified in the CAISO SB 350 studies on grid expansion, which were noted by NRDC's Peter Miller at the workshop. These benefits derive from the in-state consumer dollars that would be freed up through lower electric bills.

Dynamically scheduled wind energy would reduce California's electric bills and reduce in-state gas generation just the same as if the resources were in the CAISO's existing or expanded footprint.

We appreciate this opportunity to share our views.

Sincerely,

/s/
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Executive Director
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