California Independent System Operator

Comments of the California Wind Energy Association on the February 14, 2012, CAISO Straw Proposal on Cost Allocation Guiding Principles

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Date: February 28, 2012

INTRODUCTION

The California Wind Energy Association ("CalWEA") appreciates the opportunity to comment on the California Independent System Operator Corporation's ("CAISO") Cost Allocation Guiding Principles – Straw Proposal dated February 14, 2012 ("Straw Proposal"). The Straw Proposal identifies the following principles for cost allocation: (1) Causation, (2) Comparable Treatment, (3) Policy Alignment, (4) Incentivize Behavior, (5) Manageable, (6) Synchronized, and (7) Rational. As an initial matter, CalWEA notes that these principles for cost allocation are so broad and generalized that they are very likely to conflict in practice. For example, a market participant may cause or benefit from a given cost (Causation), but may be unable to manage its exposure to the cost (Manageable) or the cost may impair progress towards policy goals (Policy Alignment). The Straw Proposal does not address these conflicts. For this reason, the Straw Proposal, and related discussion of cost allocation principles, has limited value until it is applied to the allocation of a specific cost.

The Straw Proposal states that the CAISO intends to commence a stakeholder initiative later in 2012 to review current cost allocations in the CAISO markets in light of the Straw

Proposal's guiding principles. CalWEA applauds the CAISO for its recognition that cost allocation must be considered across the board, not just for renewable generation. However, the Straw Proposal also states that the CAISO will apply its new cost allocation guiding principles to its proposed new flexi-ramp product, well before the CAISO considers whether the current system properly allocates costs. Applying the new principles to flexi-ramp as soon as May of this year is much too soon for this policy to be thoughtfully developed and, more importantly, much too soon for the policy to be broadly applied as required to avoid discriminatory impacts.

To be equitable, the CAISO must pursue cost allocation reform on a market-wide basis and in a manner that avoids discriminatory treatment of classes of market participants, disproportionate impacts to existing generating resources, and implementation or transaction costs that exceed the expected benefit of the new cost allocation. With this goal in mind, CalWEA offers the following thoughts on cost allocation in the context of integration costs.

DISCUSSION

A. The New Cost Allocation Principles Must Be Applied Broadly, Not Just To New Entrants

All generation technologies impose integration costs, not just renewables. Large generating resources impose contingency reserve requirements. Block schedules resulting from the trading of standardized power products increase regulation requirements. Gas scheduling restrictions impose costs on other generators. Nuclear plants cause increased cycling of other baseload generation. Large hydro generators subject to dissolved gas limitations contribute to overgeneration conditions and increased costs for other generators.[1] However, none of the

[1] *See* Michael Milligan, Erik Ela, Bri-Mathias Hodge, Brendan Kirby (Consultant), and Debra Lew, *Cost-Causation and Integration Cost Analysis for Variable Generation* (National Renewable Energy Laboratory, Technical Report, NREL/TP-5500-51860), June 2011 ("NREL Cost-Causation Report").

integration costs associated with these types of resources is allocated back to the generators that "caused" the costs to be incurred. To ensure non-discriminatory treatment of classes of market participants, the CAISO should recognize that generation integration costs have historically been broadly shared because the benefits have been broadly shared and extend this treatment to renewable generation, which also provides broad benefits, including fuel diversity and environmental benefits. To the extent that the CAISO insists on allocating integration costs to generation, the CAISO should not allocate perceived integration costs to new types of generating resources unless and until the CAISO has revised existing cost allocations. Moreover, to the extent possible, any cost allocation must be based on measured performance or contribution to the need for the cost rather than through a simple blanket allocation to a class of resources using simplistic notions and simplistic formulae.

CalWEA recognizes that the Straw Proposal states the CAISO's intention to pursue a broad review of current cost allocations, and, again, CalWEA applauds the CAISO for this commitment. However, until such a review takes place, and revised cost allocations are implemented, the CAISO should not apply the cost allocation principles to new products, including flexi-ramp.

B. The New Cost Allocation Principles Must Avoid Disproportionate Impacts on Existing Generators

Any new allocation of costs to a generator will increase that generator's cost to produce its output. For new generators this may not be an issue because these projects are theoretically capable of "pricing-in" the new cost allocation for future energy sales. Similarly, utility-owned generation, such as existing hydro and nuclear units, will likely be able to simply pass through

these new costs to their ratepayers. In contrast, existing generators with power purchase agreements ("PPA") that lack a mechanism to pass through these new costs to the buyer will be disproportionately impacted by the new cost allocation. These projects typically have a fixed price for energy sales that will not allow the project to recover the new costs. As a result, the new costs would directly reduce the net revenue realized by the project and, depending on the magnitude of the new costs, could lead the project into insolvency. To avoid the harm presented by such a disproportionate impact, any new cost allocation should be accompanied by an exemption for projects subject to a PPA executed before the new cost allocation becomes effective.

C. The New Cost Allocation Principles Must Avoid Imposing Transaction Costs That Exceed Cost Allocation Benefits – Economic Efficiency Is Inefficient When It Costs Too Much

Much of the current debate about cost allocation seems to stem from the perception that renewable generation doesn't fit the current market – i.e., that renewable generation is a square peg trying to fit into a round hole. This disconnect should not be a surprise because the current market design has been structured around the gas- and hydro-rich generation portfolios and coal and nuclear imports much of which was developed by vertically-integrated utilities prior to formation of the CAISO (which included only a small amount of renewable generation developed pursuant to PURPA that was largely exempted from the market design upon formation of the CAISO).

Notwithstanding this perceived ill fit, renewable generation is not going away. California has one of the most ambitious renewable energy procurement goals in the country. While Senate Bill 2 (1x) codified a renewables portfolio standard ("RPS") requiring procurement of 33% of retail load from renewable sources by 2020, compliance with the greenhouse gas emissions reductions required by Assembly Bill 32 is expected to be achieved in large part through an

electricity mix consisting of 80% renewables by 2050. These legislative mandates will require the system to adapt to integrate increasing amounts of "non-dispatchable" and "less-dispatchable" renewable generation regardless of cost allocation policies that may be implemented.

Given the reality of increasing renewables penetration in a market designed for non-renewable generation, it is essential that the CAISO carefully consider the logic of its current approach to cost allocation. Many of the integration "costs" that the CAISO intends to assess may simply reflect a market that has been designed for non-renewable resources – essentially penalizing renewables for being a square peg that does not fit into a round hole. However, there are two ways to make a square peg fit into a round hole – round the edges of the square peg or straighten the edges of the round hole. The CAISO must recognize that market re-design may represent a more efficient or equitable solution to the inevitable need for integration of renewable generation.

In any case, the CAISO must avoid cost allocation proposals that increase, rather than reduce total costs. For example, if equitable allocation of a given cost requires market re-design, the CAISO must weigh the costs for the CAISO and market participants to implement the re-design against the perceived benefits of the new cost allocation. As the Straw Proposal notes, it does not make sense to mail a check for less than the cost of postage. Likewise, it does not make sense to pursue efficiency gains through market re-design if the cost of the re-design exceeds the efficiency gain.

Similarly, if the CAISO insists on implementing cost allocations designed to make variable generation try to look like gas-fired generation, the CAISO must recognize that variable generators generally lack the operational capability to respond to the "incentive" the CAISO is

trying to provide, which will result in the "incentive" devolving into little more than a penalty on renewable generation. For new projects, these penalties will need to be "priced in" for new PPAs, and because integration costs cannot be predicted precisely,[2] independent renewable power producers will have to assume worst-case scenarios, which will increase the overall cost of complying with the State's renewable energy goals without providing any additional benefit.[3] Alternatively, the renewable generator may be able to avoid the costs by "spilling" free fuel by self-curtailing, but this solution imposes incremental costs on the rest of the market through increased use of gas-fired resources and the need for development of additional renewable projects to meet the State's renewable energy goals. Spilling free energy also requires an independent renewable power producer to increase its PPA price to recover the lost revenue associated with self-curtailment. Like the penalty described above, the independent renewable power producers will have to assume worst-case scenarios, which will increase the overall cost of complying with the State's renewable energy goals without providing any additional benefit. In either case, if the risk of the cost allocation becomes too large, the developer may not be able to obtain financing for its project, which could discourage competition in the renewable energy market and raise costs accordingly.

For all of these reasons, a cost allocation designed to increase efficiency may easily result in costs that exceed the efficiency gain. Before proceeding with any cost allocation proposal, the CAISO should conduct a comprehensive analysis that clearly demonstrates that the expected benefits of the cost allocation exceed the expected costs. Moreover, the CAISO should consider whether there are simpler solutions to the issue the CAISO seeks to address. For example, rather than imposing penalties designed to provide "incentives" for renewable generation to look like

[2] *See* NREL Cost-Causation Report at p. 1.

[3] Note that the need to protect against the worst-case scenario does not apply to utility-owned generation because the utility has the ability to pass through actual costs to its ratepayers.

gas-fired generation, the CAISO should consider whether the underlying issue, deviation from schedule, can be largely eliminated by moving the forecasting and scheduling of renewable generation, as well as the demand, closer to real-time, which is the only tool of which CalWEA is aware that could significantly reduce the integration costs with which the CAISO is concerned.

Finally, the CAISO should consider whether integration costs can already be minimized through the existing processes for procurement of renewable generation by retail sellers. Unless long-term integration costs can be anticipated to vary among renewable resources by enough to affect which resources are built – a determination that the CAISO should make in advance of considering whether cost allocation should be pursued – very limited operational changes will result from imposing integration costs on generators due to the factors noted above. Once the CAISO accurately identifies the integration costs for each renewable technology type (an evaluation not yet accomplished), the objective of influencing which generators are built by taking these costs into account could be achieved in the competitive process of retail sellers. The framework for a total (direct plus indirect) cost comparison, known as the least-cost, best-fit ("LCBF") bid evaluation, has already been established as an integral part of the State's RPS statute. By providing the retail sellers with detailed information on the integration costs associated with various renewable resources, retail sellers can pursue those renewable resources that result in the highest net value (including consideration of integration cost impacts) through the LCBF process.

D. The CAISO Should Consider Lessons Learned Elsewhere, Including ERCOT

The intermittency challenges facing the CAISO are not unique. Variable generation exists throughout the country (and the world), and a great deal of effort has already been expended to evaluate the integration costs imposed by variable generation. For example, a recent

variable generation integration cost study by the National Renewable Energy Lab ("NREL") concluded that while integration analysis has progressed significantly in the past ten years, calculating integration costs remains incredibly complex "and should be undertaken carefully, if at all."[4]

Similarly, ERCOT, which has approximately 10,000 MW of wind generation integrated into its system and more on the way, evaluated, and then rejected, a wind integration cost proposal in 2010. In early 2010, an ERCOT stakeholder sub-committee proposed that a portion of the system's non-spinning reserve and regulation requirements be allocated directly to wind generators.[5] However, ERCOT declined to implement this proposal.[6]

There are many stakeholder issues that require attention within the CAISO, and a comprehensive cost allocation review will require the commitment of considerable resources by the CAISO and its stakeholders. Given the cautionary lessons learned from the NREL study and the ERCOT example, the CAISO should carefully reconsider whether contentious and open-ended cost allocation debates are a desirable use of these resources or whether those resources would be better applied to developing improvements to the market design, such as moving variable generation forecasting and scheduling closer to real-time as described above.

CONCLUSION

In summary, the CAISO must demonstrate that a given cost allocation proposal can reasonably be expected to produce benefits that clearly exceed costs, thus reducing the overall cost of achieving the state's renewable energy goals, and can be achieved without discriminating against renewables.

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[4] *See* NREL Cost-Causation Report at p. 1.
[5] *See* WCATF Discussion Document - Alternate Proposal #2 (*available at* http://www.ercot.com/calendar/2010/01/20100108-WCATF).
[6] *See* Minutes of the Technical Advisory Committee (TAC) Meeting, March 4, 2010 (*available at* http://www.ercot.com/calendar/2010/03/20100304-TAC).