

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Develop  
Additional Methods to Implement the  
California Renewables Portfolio Standard  
Program.

Rulemaking 06-02-012  
(Filed February 16, 2006)

**REPLY COMMENTS OF THE  
CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**

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Dated: January 25, 2010

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Pursuant to Rule 14.3 of the California Public Utilities Commission (“Commission”) Rules of Practice and Procedure, the California Independent System Operator Corporation (“ISO”) submits these reply comments on the revised Proposed Decision of Administrative Law Judge Simon (“Revised PD”). The purpose of these reply comments is to express the ISO’s concern regarding the limitations the Revised PD would put on purchases by load serving entities of renewable energy credits (“RECs”) bundled with energy from Renewable Portfolio Standard (“RPS”) eligible out-of-state resources. In particular, the ISO is concerned that classifying such transactions as REC-only transactions may serve to limit the amount and geographic diversity of renewable energy imported into California and discourage the future development of out-of-state renewable generation resources for the California market. In addition, these reply comments provide clarification regarding “Pseudo Ties” and Dynamic Scheduling.”

**I. LIMITS PLACED ON OUT-OF-STATE GENERATION**

In response to the Revised PD, a diverse group of parties have explained how designating out-of-state renewable generation as REC-only subject to a procurement cap may limit renewable energy imports into California and discourage the future

development of out-of-state renewable generation resources for the California market.<sup>1</sup> Any policy or regulation that potentially limits the importation or availability of out-of-state renewable generation to California -- particularly to the extent such limitation reduces the geographic diversity of intermittent renewable energy supplied to California - - raises significant operational and economic concerns for the ISO. In general, the ISO believes that renewable development coupled with efficient renewable integration through more open and transparent wholesale markets in California and the rest of the West will greatly facilitate the challenges of meeting high levels of RPS across the region.

From an operations perspective, procurement of renewable resources with complimentary variable generation characteristics reduces the impacts of intermittency. Renewable resources in different geographic locations have varying seasonal generation peaks. For example, wind from states such as Wyoming or Montana will achieve peak generation in the winter months, compared to California solar resources that achieve peak generation in the summer months. Additionally, electrical output from the same type of renewable resource may vary by geographic location and time of day. For example, solar resources in New Mexico can begin generating up to an hour before California solar

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<sup>1</sup> See e.g., Comments of Pacific Gas and Electric Company (U 39 E) on December 23, 2009 Revised Proposed Decision Authorizing Use of Renewable Energy Credits For Compliance with the California Renewables Portfolio Standard at 4; Comments of San Diego Gas & Electric Company (U 902 E) on Proposed Decision Authorizing Use of Renewable Energy Credits for Compliance with the California Renewables Portfolio Standard at 13; Southern California Edison Company's (U 338-E) Comments on the Proposed Decision Authorizing Use of Renewable Energy Credits for Compliance with the California Renewables Portfolio Standard at 3-4; Sacramento Municipal Utility District's Comments on the December 23, 2009 Revised Proposed Decision Authorizing the Use of Renewable Energy Credits for Compliance with the California Renewables Portfolio Standard at 6-8; Comments of Lakeview Light & Power, LL&P Wind Energy, Inc., and Lakeview Green Energy, Inc. on Further Revised Proposed Decision On Rulemaking to Authorize the Procurement and Use of Tradable Renewable Energy Credits at 8; Comments of Naturener USA, LLC on Further Revised Proposed Decision on Rulemaking to Authorize the Procurement and Use of Tradable Renewable Energy Credits at 4-5; Comments of LS Power Associates, L.P. on Revised Proposed Decision at 5.

resources begin generating due to the rising of the sun. The inherent and unavoidable intermittency of solar and wind resources can be reduced by diversifying the geographic location of these resources, which in-turn reduces the need for the increased use of fossil-fuel generation to provide essential services needed to maintain grid reliability.

From an economic perspective, limiting the use of resources whose first point of interconnection is not in a California balancing authority could increase the costs borne by ratepayers for implementing the RPS program by restricting load serving entities' access to cost-effective regional resources.

Using out-of-state renewable generation - instead of in-state fossil-fuel generation - to maintain grid reliability is also consistent with California's efforts to reduce greenhouse gas emissions. Bundled purchases of RECs and energy from out-of-state renewable generation further helps load serving entities to maintain a diverse resource mix and can help reduce the cost of compliance with RPS requirements. The benefits of geographic diversity become increasingly important as California raises its Renewables Portfolio Standard.

## **II. CLARIFICATION REGARDING PSEUDO TIES AND DYNAMIC SCHEDULING**

A number of parties discuss Pseudo Ties and Dynamic Scheduling as examples of how generation located outside of the ISO balancing authority area can be treated by the ISO as the electrical equivalent to generation located within the ISO's balancing authority area.<sup>2</sup> To assist the Commission in better understanding Pseudo Ties and Dynamic

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<sup>2</sup> See e.g., Comments of The Large Scale Solar Association on the December 23, 2009 Revised Proposed Decision at 7-8. Comments of The Independent Energy Producers Association on the Proposed Decision at 5-6; Comments of the California Wind Energy Association on Revised Proposed Decision Authorizing Use of Renewable Energy Credits for Compliance with the California Renewables Portfolio Standard at 3-4.

Scheduling, the ISO would like to clarify and further explain how these arrangements work.<sup>3</sup>

Dynamic Scheduling is a type of scheduling between Balancing Authority Areas (“BAAs”) that dynamically equalizes the energy delivered to the ISO BAA to all, or a portion of, the actual, real-time output of a specific generating unit or aggregation of generators. The dynamic schedule is automatically adjusted between the respective source BAA (including out-of-state BAAs) and the ISO so that energy deliveries to the ISO BAA are adjusted in real time to reflect the external resource’s actual production. Dynamic Scheduling also facilitates the provision of ancillary services and energy to the ISO for reliability purposes by giving the ISO real-time dispatch control over the dynamically scheduled portion of the generation resource.

Pseudo Ties provide additional functionality above and beyond that provided through Dynamic Scheduling. Specifically, a Pseudo Tie allows the ISO to treat a generating resource located out of its BAA area as if the resource is located within the ISO BAA. As a result, a Pseudo Tie arrangement gives the ISO real-time dispatch control over an entire generating unit (not just the dynamically scheduled portion of the generation unit) that is similar to the ISO’s dispatch control over generating units located in its BAA. This level of dispatch control provides the ISO with critical dispatch flexibility to help better ensure grid reliability.

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<sup>3</sup> Although it is not technically correct to say that external resources utilizing Dynamic Scheduling or Pseudo-Tie arrangements are electrically equivalent to internal generating resources, these arrangements do provide the ISO with important operational benefits that other external resources do not provide.

Finally, the ISO notes that parties have referred to a number of technical terms in their comments. Some potentially relevant terms, including Dynamic Schedule, Dynamic System Resource, Scheduling Point, Intertie and Pricing Node are defined in the ISO tariff.<sup>4</sup>

Respectfully submitted,

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<sup>4</sup> The Master Definitions supplement to the ISO tariff can be found at:  
<http://www.caiso.com/2495/249593a26110.pdf>

**CERTIFICATE OF SERVICE**

I hereby certify that, pursuant to the Commissioner's Rules of Practice and Procedure, I have this day served a true copy of

**REPLY COMMENTS OF THE CALIFORNIA INDEPENDENT SYSTEM  
OPERATOR CORPORATION**

on all parties identified in the attached service list(s).

Transmitting the copies via e-mail to all parties who have provided an e-mail address. First class mail will be used if electronic service cannot be effectuated.

Executed this 25th day of January, 2010, at Folsom, California.

*Anna Pascuzzo*

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