

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

Order Instituting Rulemaking to Integrate and Refine Procurement Policies and Consider Long-Term Procurement Plans.	Rulemaking 10-05-006
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**LARGE-SCALE SOLAR ASSOCIATION RESPONSE TO THE MOTION OF THE  
INDEPENDENT ENERGY PRODUCERS ASSOCIATION FOR  
RECONSIDERATION OF THE SCHEDULE FOR THIS PROCEEDING**

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**INTRODUCTION**

In accordance with Rule 11.1 of the California Public Utilities Commission’s (“Commission”) Rules of Practice and Procedure, the Large-scale Solar Association (“LSA”) submits this response to the January 26, 2011 Motion of the Independent Energy Producers Association for Reconsideration of the Schedule for this Proceeding (“IEP Motion”).

LSA supports IEP’s request to revise the schedule for Track I of this long term procurement proceeding (“LTPP”) in order to ensure that the results from the renewable integration modeling represent a reasonable view of the state’s energy future. LSA is heartened by the January 28, 2011 ruling of Administrative Law Judge Allen suspending upcoming Track I filing deadlines and indicating that a new Track I schedule will be issued shortly. LSA requests that the new schedule for Track I provide additional time to review and revise the “environmental” scoring criteria as well as complete the renewables integration work.

The current environmental scoring methodology oversimplifies the complex question of environmental performance, focusing almost entirely on a

single environmental indicator, project footprint.<sup>1</sup> The methodology misapplies the Renewable Energy Transmission Initiative (“RETI”) methodology on which it was based. The resulting scenario that was developed based on 90 percent weighting of environmental scoring is more appropriately titled the site-constrained scenario, since the scoring criteria fail to account for many critical environmental aspects of renewable facilities, including the primary aspects most customers would associate with the RPS program- i.e., the reduction of carbon and criteria air pollutants. At a minimum, LSA urges the Commission to properly label this scenario to avoid confusion about what the criteria measure, and to correct the mistakes made in applying the RETI environmental indicators. LSA recognizes that it is too late to reconstruct a “environmentally-constrained” scenario that would be based on the range of relevant environmental scoring criteria, as we understand that the California Independent System Operator Corporation (“CAISO”) has already begun renewable integration modeling of the portfolios attached to the scoping memo issued on December 3, 2010 (“Scoping Memo”). However, an extended Track I schedule should provide time to revise the environmental scoring criteria to make them better serve as a common yardstick<sup>2</sup> for assessing the environmental performance of all the proposed scenarios, both mandatory and party-sponsored, presented in this proceeding, as well as providing a foundation for assessing environmental performance in future LTPP cycles. LSA accordingly requests that the ruling adopting a revised Track I schedule include (1) an accurate label for what we believe is properly termed a “site-constrained” scenario, and (2) a process for developing new, broadly-based environmental scoring criteria.

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<sup>1</sup> Further, the other environmental indicators, extrapolated from high-level data may- or may not- reflect actual project-level impacts.

<sup>2</sup> Attachment 2 of the Scoping Memo (pp. 31-32 and Table 10) indicates that the environmental scoring criteria will be used to score scenarios. The Scoping Memo indicates that the Commission hopes to address the issue of “a renewable resource’s effect on overall system dispatch and emissions” (p. 33); revised environmental scoring criteria could provide a metric to account for the broader environmental impacts and to compare the environmental performance of different scenarios.

## **I. The Renewable Integration Modeling Effort Requires Additional Time.**

LSA urges the Commission to revise the schedule of Track I to provide sufficient time for a robust modeling analysis and review of results.<sup>3</sup> As IEP describes in its motion, CAISO has indicated that Track I schedule in the Scoping Memo did not provide sufficient time to run the required scenarios, let alone conduct the identified sensitivities needed to fully understand the uncertainties in the modeling effort. Modifying the Track I schedule at this point would allow for the Commission to conduct the sensitivity testing needed to understand the impacts of the different variables on the modeling results, which should be performed well in advance of any Commission decision relying on these modeling results so stakeholders have an opportunity to comment on this testing and how it affects interpretation of the modeling results.

## **II. Devoting Additional Time to Track I Issues Will Allow for Appropriate Stakeholder Review of the Inputs, Assumptions, and Modeling Results, Including the Environmental Scoring Criteria.**

Originally, the environmental scoring criteria were envisioned as a way to measure the scenario's contribution towards the environmental policy goal of the Renewables Portfolio Standard ("RPS").<sup>4</sup> Seeking to quantify the environmental performance of different renewable scenarios is an ambitious, but clearly imperative goal. LSA recognizes the determined efforts of Commission staff to meet the aggressive schedule and address stakeholder input, but the

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<sup>3</sup> In its previous comments, LSA raised concerns about the pace of the proceeding, the prioritization of the modeling runs and sensitivity testing, and the need to conduct a thorough analysis of different tools available to address system flexibility needs, including policy changes, market rules, and flexible resources. *See* LSA Post November 30, 2010 Workshop Reply Comments (January 26, 2011); LSA Post November 30 Workshop Comments (January 14, 2011); LSA Comments on CAISO and PG&E Renewable Integration Modeling (Nov. 22, 2010); LSA Reply Comments on Renewable Integration Models (Oct. 8, 2010).

<sup>4</sup> Administrative Law Judge's Ruling Revising the Schedule for the Proceeding and Regarding Staff's Proposals for Resource Planning Assumptions; Attachment 1 – Planning Standards for System Resource Plans – Part II Long-Term Renewable Resource Planning Standards, pp. 9-10 (June 22, 2010).

environmental scoring criteria contain fundamental flaws that need to be corrected before they can be used for their intended purpose.

According to the Scoping Memo, the environmental scoring methodology was based on the RETI methodology, which was intended only to provide comparative assessments of entire zones. The RETI data does not have the granularity to apply directly to individual projects, so the Scoping Memo methodology includes extrapolations intended convert the RETI methodology from a scoring of competitive resource zones to a scoring of individual projects. This approach assumes the competitive renewable energy zone (“CREZ”) environmental indicators apply uniformly to all locations within the CREZ. However, this fundamental assumption is unfounded and distorts the project environmental scoring. Moreover, these distortions are magnified by the Scoping Memo methodology’s use of the project footprint as a multiplier against all of the other environmental indicators. Under the RETI methodology, the amount of project ground disturbance is simply one of eight equally-weighted indicators of environmental concern. The Scoping Memo methodology converts project ground disturbance into a multiplier, resulting in a scoring methodology that is biased against larger projects.

**A. Under The Environmental Scoring Methodology in the Scoping Memo, Project Footprint Dominates All Other Environmental Indicators.**

The environmental scoring methodology attached to the Scoping Memo uses the almost the same environmental criteria as RETI, but employs a novel and markedly different weighting system.<sup>5</sup> The Scoping Memo methodology drops the project development footprint as one of eight equally weighted criteria, and,

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<sup>5</sup> The RETI methodology evaluated environmental concerns associated with CREZ energy development based on eight equally-weighted criteria (also called indicators): energy development footprint, transmission footprint, sensitive areas in CREZ, sensitive areas in CREZ buffer areas, significant species, wildlife corridors, important bird areas, land degradation. *See* Renewable Energy Transmission Initiative, Phase 1B, Final Report (January 2009), Part III Environmental Assessment of Competitive Renewable Energy Zones, prepared by the RETI Environmental Working Group; Renewable Energy Transmission Initiative Phase 2B Final Report (May 2010) (“RETI Phase 2B Final Report”), both available at <http://www.energy.ca.gov/reti/documents/index.html>

instead, uses the project footprint as a multiplier against the remaining seven environmental indicators. Under this methodology, the seven environmental indicators are used to compute CREZ rankings.<sup>6</sup> These rankings are then multiplied by a technology footprint factor.<sup>7</sup> This approach gives the project footprint a disproportionate impact relative to the other environmental assessment criteria, even though the RETI criteria are generally affected much more by location than by project size. Moreover, the project footprints are based on default footprint numbers, that weigh heavily against large solar.<sup>8</sup> Nothing in the Scoping Memo or its attachments explains how the new weighting corresponds to actual environmental concern or why project footprint is now presumed to be directly related to the other environmental indicators in the straight-line fashion adopted by this methodology.

Further, the Scoping Memo methodology improperly changes the footprint multipliers used by RETI. Specifically, the Scoping Memo methodology calculates the wind project footprint using only 3.5% of the wind project lease area.<sup>9</sup> While the RETI methodology used this approach to assess wind project development footprint as one of eight equally weighted criteria, the RETI Environmental Working Group (“EWG”) declined to apply the 3.5% factor in assessing the potential impact of wind projects on the remaining environmental indicators, and the wind industry proposed applying it to only three of the other seven indicators.<sup>10</sup> By converting the project footprint to a multiplier, the Scoping Memo methodology applies the 3.5% factor for the wind project multiplier to all of the environmental indicators. As a result, the Scoping Memo methodology inexplicably discounts wind project transmission right-of-way, and disregards the

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<sup>6</sup> Scoping Memo, Att. 2, pp. 74-54, 83 (Table 4).

<sup>7</sup> *Id.* at pp. 74-75.

<sup>8</sup> The Scoping Memo methodology accords wind projects a median footprint of 1 acre per GWhr/year of output (after 3.5% adjustment), while it assigns large-scale solar projects a median footprint of 3 acres/per GWhr/year of output. It calculates geothermal projects as having a median footprint of 0.15 acre per GWhr/year, and assumes that biomass and biogas projects have the same footprint as geothermal, while noting this assumption has little factual support. Small, remote “greenfield” solar projects received an environmental score of 80.0, based largely on the average solar score of 3.1 acres/GWhr. *See id.*, pp. 83 (Table 4), 85 (Table 5), and 86.

<sup>9</sup> *See* Scoping Memo, Att. 2, pp. 85 (note to Table 5) and 86.

<sup>10</sup> RETI Phase 2B Final Report, pp. 1-9.

above-ground impact of wind projects on significant species and important bird areas.

Since the Scoping Memo methodology multiplies the CREZ score (reflecting the sum of all the other environmental factors) by these questionable footprint numbers, large solar projects received environmental scores that were generally at least three times higher than wind projects -- with high scores indicating more severe environmental impacts -- and on the order of 20 times higher than geothermal and biomass/biogas projects. These extreme results are the artifact of incorrect and unsubstantiated initial assumptions, the effect of which is multiplied by project size. The other seven environmental factors combined to yield CREZ scores having a relatively close distribution in comparison to the final project scores.<sup>11</sup> Consequently, the methodology's use of the project footprint factor as a multiplier instead as one of eight equally weighted factors means that the project footprint factor largely dictates the final project environmental score, contrary to RETI's careful balance of the environmental indicators, the result of an extensive multi-stakeholder process.<sup>12</sup>

The RETI EWG tested the sensitivity of its methodology to various alternative assumptions, and discussed the results in its reports. There is no indication that any such testing was performed on the Scoping Memo methodology, which produced results that differ significantly from both the initially proposed methodology as well as from the RETI methodology.

**B. The Environmental Scoring Methodology Should Be Revised to Accurately Describe the Environmental Performance of Renewable Scenarios.**

Modifying the Track I schedule to provide additional time for developing a credible environmental scoring methodology will help ensure that the time spent

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<sup>11</sup> See Scoping Memo, Att. 2., p. 83 (Table 4).

<sup>12</sup> See *id.*, pp. 88-89 (Table 7). LSA notes that it requested a stakeholder process to address any changes to the RETI methodology, but request was not granted. See Reply Comments of the Large-scale Solar Association on Resource Planning Assumptions – Part 2 (July 16, 2010). The departures from the RETI process have resulted in severe distortions in the scoring methodology, which could easily have been vetted out by a process like those often employed to very good effect by the Commission.

in the following months on the system resource plan development and renewable integration analysis will produce more meaningful results. At minimum, the environmental scoring criteria should be revised to correct the inappropriate application of the 3.5% factor to all wind project environmental factors and the weighting of the environmental factors should be made less dependent on project footprint and more consistent with the RETI weighting. If there is insufficient time to reconstruct the “environmentally-constrained” scenario based on corrected criteria, it should, at the very least, be renamed to avoid misleading the stakeholders and the public about what the environmentally-constrained scenario actually represents (i.e., site-constrained).

However, from a broader perspective, the most significant environmental impacts from the RPS are from the displacement of conventional generation with renewable resources, especially when the impacts of extraction, refining, and transportation are considered. Although the environmental scoring criteria were proposed to measure the scenario’s contribution towards the environmental policy goal of the RPS, the criteria completely fail to account for the displacement of conventional generation even with respect to the air emissions that are core objectives of the RPS and AB 32, focusing narrowly at the land use impact of each renewable project.<sup>13</sup> To fully account for the environmental impacts of renewable projects, the environmental scoring should evaluate the broader environmental performance of the electrical system.

This LTPP proceeding will guide procurement decisions over the coming years and inform future LTPP cycles. Investing additional work up-front is critical to building a set of robust modeling tools for future planning efforts and developing stakeholder confidence in the modeling assumptions and results. Moving forward, LSA urges the Commission to look at environmental impacts of the scenarios more broadly, evaluating the environmental performance of all of

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<sup>13</sup> Administrative Law Judge’s Ruling Revising the Schedule for the Proceeding and Regarding Staff’s Proposals for Resource Planning Assumptions; Attachment 1 – Planning Standards for System Resource Plans – Part II Long-Term Renewable Resource Planning Standards, p. 9-10 (June 22, 2010).

the different scenarios under a robust set of environmental criteria and focusing on each scenario's overall generation profile, including conventional and renewable resources. Focusing only on the siting aspects of the renewable generation facilities is short-sighted and fails to account for the environmental impacts that result from integrating these facilities into the overall electric grid. LSA urges the Commission to take the time provided by the delay in Track I to work with the stakeholders to develop a more robust set of environmental scoring criteria to account for non-siting-related environmental impacts of renewable generation, including avoided conventional generation impacts. This environmental analysis may, by its very nature, need to occur as an assessment of the overall generation profile after the renewables integration modeling has occurred.

## CONCLUSION

LSA supports IEP's request that the Commission revise the current schedule for Track I of this proceeding to ensure that sufficient time is provided for the thorough renewables integration modeling work, sensitivity testing and scenario analyses to be performed.

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In addition, LSA urges the Commission to reexamine the environmental scoring criteria attached to the Scoping Memo, which focus too heavily on project footprint, incorporate flawed weighting factors that distort the results, and fail to account for other critical environmental attributes of renewable generation including broader system-wide impacts. If unchanged, this scoring will skew evaluation of the RPS scenarios and undermine the credibility of system resource plans based on them. LSA accordingly requests that the Commission rename the scenario derived from the flawed methodology, make the adjustments to scoring needed to ensure consistency with RETI, and institute a process for reconsidering the environmental scoring methodology moving forward as part of the revised Track I schedule.

Respectfully submitted,

By: /s/ Kristin Burford

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February 10, 2011

## CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy of the foregoing **LARGE-SCALE SOLAR ASSOCIATION RESPONSE TO THE MOTION OF THE INDEPENDENT ENERGY PRODUCERS ASSOCIATION FOR RECONSIDERATION OF THE SCHEDULE FOR THIS PROCEEDING** on all parties of record in R.10-05-006 by transmitting an email message with the document attached to their email addresses of record and, for those parties without a functioning email address of record, by mailing a properly addressed copy by first-class mail with postage prepaid to each party on the Commission's official service list for this proceeding.

This Certificate of Service is executed on February 10, 2011, at San Rafael, California.

*/s/ Kristin Burford*  
Kristin Burford