BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Continue Implementation and Administration of California Renewables Portfolio Standard Program.	Rulemaking 11-05-005 (Filed May 5, 2011)

OPENING COMMENTS OF THE UNION OF CONCERNED SCIENTISTS ON THE ASSIGNED COMMISSIONER'S RULING IDENTIFYING ISSUES AND SCHEDULE OF REVIEW FOR 2014 RENEWABLES PORTFOLIO STANDARD PROCUREMENT PLANS

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I. Introduction and Summary

The Union of Concerned Scientists ("UCS") appreciates this opportunity to provide opening comments on the *Assigned Commissioner's Ruling Identifying Issues and Schedule of Review for 2014 Renewables Portfolio Standard Procurement Plans* ("ACR"), issued March 26, 2014. UCS's comments are limited to Section 7.3 of the ACR, which poses several very specific questions about the development and implementation of a renewable integration adder.

UCS supports a public dialog at the Commission about the value of developing and applying an integration adder to the least-cost / best-fit ("LCBF") evaluation process that retail sellers use to procure renewable energy for compliance with California's Renewables Portfolio Standard ("RPS") requirements. The investor-owned utilities ("IOUs") in California have already contracted much of the generation they will need to comply with the 33 percent RPS by 2020 requirement and the state is in the process of determining what electricity policies will be needed to meet future greenhouse gas emission reduction goals. Several analyses have been published in recent years that all emphasize the importance of decarbonizing California's electricity supply and increasing its reliance on zero-carbon forms of generation, including renewables.[1,2,3] Given the clear need for continued investment in

[1] Greenblatt, J., et al. 2011. California's Energy Future, the view to 2050: Summary report. California Council on Science and Technology. [CCST].

[2] Wei, M., et al. 2012. Deep carbon reductions in California require electrification and integration across environmental sectors. Environmental Research Letters. 7:1-9 [LBNL-1]

renewable energy resources beyond the current 33 percent RPS requirement, UCS believes a discussion about strategies to optimize procurement and minimize integration costs is timely. Moreover, the Commission has recently clarified that the RPS program represents a floor for renewable energy procurement, that retail sellers have the ability to voluntarily procure additional renewables, and that the Commission may require additional procurement under its authority granted by Assembly Bill ("AB") 327.[4] Therefore, UCS believes that any effort to design a renewable integration adder methodology must assume a future with much higher levels of renewables on the grid.

Since the long-term procurement proceeding ("LTPP"), R.13-12-010, is the venue where higher renewable energy scenarios and system-wide grid needs will be evaluated, UCS believes that the proper forum for developing a renewable integration adder methodology is the LTPP. Any results from this process could be fed back into the RPS proceeding, as part of a larger effort to revise and update LCBF methodologies.[5]

II. ACR questions related to the definition of a renewable integration adder

UCS believes it is important for the Commission to work with parties to achieve consensus on what should be included in a renewable integration adder so that the concept is applied uniformly across utility LCBF evaluations. The Commission should not simply ask the IOUs to develop their own renewable integration adder methodologies and submit them to the Commission.

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[3] Williams, J. H., et al. 2011. The Technology Path to Deep Greenhouse Gas Emission cuts by 2050: the pivotal role of electricity. Science Express [E3]

[4] *Administrative Law Judge's Ruling on Renewable Net Short*, May 21, 2014, p.11 and 18.

[5] *See* footnote 33 of the *Assigned Commissioner's Ruling Identifying Issues and Schedule of Review for 2014 Renewables Portfolio Standard Procurement Plans* ("ACR"), p.21. This footnote suggests that the Commission is planning to review LCBF methodologies in the RPS proceeding, R.11-05-005.

The ACR defines a renewable integration adder as "an addition to the criteria utilities use to select contracts that would reflect the impact a resource has on the transmission system."[6] UCS believes the phrase "the impact a resource has on the transmission system" may be overly broad. Currently, the LCBF process addresses integration costs as part of the net market value ("NMV") calculation where NMV equals the sum of a contract's energy and capacity value minus the sum of the adjusted PPA price, transmission network upgrades, congestion costs, and integration adder.[7] Since transmission network upgrades and integration adders are separate values in the NMV, UCS believes that the Commission should clarify that integration adders will not include transmission network upgrade costs.

UCS believes that an integration adder methodology should assess the costs to procure flexible resources (generation and non-generation) that are necessary to operate the grid with high levels of renewable energy penetration. These flexible resources will likely be products bid into ancillary services markets, but can also include renewable energy curtailment and increased coordination among balancing area authorities, including exporting electricity from California. UCS urges the Commission to refrain from jumping to any conclusions regarding which types of resources may impose higher integration costs, as it appears to do in question 7.3.1 of the ACR. Designing a renewable integration adder methodology is a complicated task that depends on many different variables that will change over time. The costs of integrating renewables onto the grid will likely diminish as California develops more flexible resources and improves its ability to exchange electricity with its neighbors. Therefore, UCS requests that the Commission take its time with this issue and refrain from adopting an overly simplistic approach that is not able to consider less

[6] ACR, p.21.
[7] See PG&E 2014 Renewables Portfolio Standard 2014 Solicitation Protocol, Attachment K.

traditional ancillary service products, like storage and demand response, or is unable to change over time to reflect the evolution of grid services.

III. ACR questions related to the venue for developing a renewable integration adder

Since the costs to integrate a renewable energy resource onto the grid depend upon (at minimum) the location of the facility, the generation profile of that facility, the demand curve, and what else is generating (renewable and non-renewable facilities) at the same time, UCS believes the Commission should approach this concept at the system level in order to assess how all resources on the grid contribute to integration solutions or challenges, rather than looking at the generation of one renewable energy resource in isolation. Since the LTPP proceeding, R.13-12-010, is currently modeling future electricity scenarios to determine whether the IOUs should procure additional resources to meet future energy and reliability needs, UCS suggests that the Commission use the results from LTPP modeling exercises as a foundation for the renewable integration adder discussion.

The LTPP scoping memo, issued May 6, 2014, explains that a central purpose of this proceeding is to "maintain and ensure reliability in CPUC-jurisdictional areas in California over a long-term planning horizon." The memo splits Phase 1 into two parts:

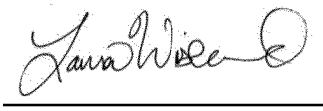
> Phase 1a will consider system reliability needs. This inquiry includes issues related to grid operational flexibility needs, which may change depending on the state's future resource portfolio and environmental regulations…Phase 1b will determine what specific resources should be procured to meet any need determined in Phase 1a…Phase 1b is expected to be concluded no later than the end of 2015.[8]

[8] R.13-12-010, *Scoping Memo and Ruling of Assigned Commissioner and Administrative Law Judge*, May 6, 2014, pp.3-4.

Since Phase 1b of the LTPP is focused on understanding the types and costs of resources necessary to integrate higher levels of renewables onto the grid, it seem logical to conclude that this information will be very relevant to any discussion about a renewable energy integration adder.

UCS thanks the Commission for its work in this proceeding and for the opportunity to submit these comments.

Respectfully submitted,



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VERIFICATION

I, Laura Wisland, am a representative of the Union of Concerned Scientists and am authorized to make this verification on the organization's behalf. The statements in the foregoing document are true to the best of my knowledge, except for those matters which are stated on information and belief, and as to those matters, I believe them to be true.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on July 2, 2014 in Berkeley, California.

Laura Wisland