BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Develop an Electricity Integrated Resource Planning Framework and to Coordinate and Refine Long-Term Procurement Planning Requirements.	Rulemaking 16-02-007 (Filed February 11, 2016)

COMMENTS OF THE CLEAN COALITION ON THE ADMINISTRATIVE LAW JUDGE'S RULING SEEKING COMMENT ON GREENHOUSE GAS EMISSIONS ACCOUNTING METHODS AND ADDRESSING UPDATED GREENHOUSE GAS BENCHMARKS

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I.INTRODUCTION

The Clean Coalition submits these comments to *Attachment A: GHG Accounting Methodology for LSE Portfolio Development in the IRP 2017-18 Cycle: A CPUC Staff Proposal* ("Staff Proposal") in response to the April 3, 2018 *Administrative Law Judge's Ruling Seeking Comment on Greenhouse Gas Emissions Accounting Methods and Addressing Updated Greenhouse Gas Benchmarks,*

We support the Clean Net Short methodology in the Staff Proposal, with some additional recommendations. The Clean Coalition appreciates the work of the California Public Utilities Commission ("Commission") staff on the Integrated Resource Planning proceeding. We recommend:

- The definition of "GHG-free" should include additional energy efficiency and demand response made by an LSE in excess of that included in the "mid Baseline mid AAEE mid AAPV" load. If our understanding is correct, load reductions from more aggressive demand response ("DR"), energy efficiency ("EE") programs, and behind the meter ("BTM") PV would not properly be credited for avoiding GHG-emissions but would instead be left in the CNS and thus be attributed with the hourly GHG-emissions associated with system power.
- Wholesale IFOM DG resources should be treated differently than transmission-connected resources to account for differences in line losses. Generally,

transmission-connected generation should be corrected for line losses on an hourly basis, since a given amount of transmission-connected generation will meet less load than the identical amount of local generation.

- We support the limitation of "GHG-free" resources to RPS Bucket 1 resources, although the definition should include all generating resources that provide renewable energy to load without needing substitute energy, even if they may fail to meet all other technical aspects of RPS-eligibility.
- The emissions rate for system power should be calculated without inclusion of the GHG-free generation subtracted out in step 2. Otherwise, the GHG emissions avoidance of owned or contracted-for GHG-free resources would be double counted.
- The aggregate LSE GHG budgets should be compared with the system-wide emissions to ensure that the two approaches arrive at roughly comparable overall totals.

II. DESCRIPTION OF THE PARTY

The Clean Coalition is a nonprofit organization whose mission is to accelerate the transition to renewable energy and a modern grid through technical, policy, and project development expertise. The Clean Coalition drives policy innovation to remove barriers to procurement and interconnection of distributed energy resources ("DER")—such as local renewables, advanced inverters, demand response, and energy storage—and we establish market mechanisms that realize the full potential of integrating these solutions. The Clean Coalition also collaborates with utilities and municipalities to create near-term deployment opportunities that prove the technical and financial viability of local renewables and other DER.

III. COMMENTS

1. *Are the basic steps of the accounting methodology described in Attachment A and the associated GHG calculator tool internally consistent and technically sound? Why or why not? Identify any flaws in the method that are likely to have a material impact on long-term planning and explain how these deficiencies should be addressed.*

The accounting methodology appears to fail to account correctly for energy efficiency, demand response, and behind the meter PV.

The CNS methodology appears not to credit LSEs for any behind the meter resources that would reduce demand and avoid GHG emissions. If our understanding is correct, the LSE will be projected to employ a baseline amount of EE and DR. While the baseline load profiles appear to include some generic projections for DR, EE, or BTM PV deployment, we anticipate that some LSEs may find that DR or EE programs to be cost-effective and develop programs to exceed the amount included in load projections. These BTM resources in excess of projections would not be credited. Since these load reductions would not be subtracted, the reduced load would remain in the CNS and be attributed with the GHG emissions for system power.

For example, consider two LSEs--Utility 1 and Utility 2--both projected to have load of 100 MW under common modeling assumptions. Utility 1 decides to use energy efficiency, demand response programs, and behind the meter generation to reduce their overall load by 50% to 50 MWs, which is then served by ISO system power. In contrast, Utility 2 decides to procure 50 MWs of renewable generation and does not reduce their load from 100 MWs. Under the CNS method, Utility 2's procurement of 50 MWs of renewables is given credit and subtracted from the projected load under the CNS method, and Utility 1's investment in energy efficiency and demand response is not given any credit under CNS.

This could establish a preference in long-term planning for renewable procurement under CNS rather than energy efficiency, demand response, or BTM PV. Any preferences given to renewable procurement over to other energy saving measures such as energy efficiency and demand response would be inconsistent with Decision 18-02-018, which called for additional energy efficiency, behind-the-meter solar, renewables and battery storage. Despite this recognition, the CNS methodology does not clearly account for the use of these resources to avoid GHG emissions. If California is going to embrace DERs in their future, they should account for their multifaceted growth in the CNS accounting method.

The accounting methodology does not distinguish between the differential performance of remote and local power.

The CNS methodology fails to account for the increased generation needed to serve a given load when served by remote generation. Distribution-connected generation is generally more efficient because it suffers less line losses and thus can serve more load for a given amount of generation. By subtracting the full generation without line losses, the CNS method gives too much credit for avoiding GHG emissions to transmission-connected resources. We recommend that at minimum transmission-connected resources be discounted by a standard percentage to account for average line losses compared to IFOM distributed generation. This will exert a small preference for transmission connected resources relative to their actual contribution to serving load.

2. What impacts might using the method described in Attachment A and the associated calculator tool have on an individual LSE's long-term resource investment decisions? Provide any suggestions for how the method could be modified to reduce or eliminate any negative impacts identified.

Beyond the disparate treatment of DR, EE, and BTM PV and the treatment of line losses, the CNS accounting method should generally perform well to provide LSEs with a reliable first-pass indication of whether they are meeting the state's GHG goals.

3. Does the method in Attachment A hinder or improve the state's ability to achieve its long-term GHG emissions reduction goals? Explain your answer.

The Clean Coalition believes this accounting method should improve the state's ability to achieve long-term goals by providing feedback directly to the LSEs driving energy procurement and by providing the Commission with information to identify whether corrections are needed going forward.

4. Do you agree or disagree with the characterization of renewable energy credits related to compliance with the renewables portfolio standard program and their relationship to IRP's GHG emissions goals in the proposed methodology in Attachment A? Explain why or why not.

Renewable Energy Credits Need to be Categorized Under RPS Bucket 1 to Maintain GHG-Free Status.

The Clean Coalition supports the notion of limiting the use of RECs to RPS Bucket 1 within the CNS methodology. RPS Bucket 1 resources (and other non-RPS eligible

resources with nonetheless deliver non-GHG emitting energy directly) are the only sources that can be guaranteed to not involve GHG-emissions in the delivery of energy to customers, and so are the only category for which GHG-free credit should be available.

Buckets 2 or 3 should not qualify, because ultimately GHGs may be emitted where substitute energy is needed to serve load. Since CNS is tied to meeting load, Bucket 2 energy should be included as GHG-free, because Bucket 2 energy may not mean that load is served by GHG-free energy, if GHG emitting energy is used to substitute. Similarly, Bucket 3 energy should also be excluded from the "GHG-free" category, because unbundled RECs have no necessary connection to serving local load. Only Bucket 1 ensures that load is served by renewable generation attached to the RECs.

5. Provide any suggestions for improving the GHG calculator tool.

The Clean Coalition does not have a comment on this question at this time.

6. Comment on any specific aspects of the methodology in Attachment A with which you disagree and explain your proposed alternative approach.

Please see the comments to Question 1 above.

7. Describe any alternative GHG accounting methodology that the Commission should consider adopting for IRP purposes and explain why the alternative is preferable to the method described in Attachment A.

We support the use of a modified CNS methodology.

8. Comment on any other aspect of the methodology in Attachment A that was not already covered in the previous questions, explaining your rationale and suggested modifications.

We have two recommendations to ensure the CNS methodology closely approximates the actual emissions of the state's energy system.

First, the emissions rate for system power should be calculated without inclusion of the GHG-free generation subtracted out in step 2. If system power includes the GHG-free owned or contracted-for power, the average system power will be too low. In principle, the systems emissions rate is the total system emissions divided by the total energy generated that produces those emissions. Consequently, the product of the CNS energy aggregated

across all LSEs and that average emissions rate should roughly equal the total emissions for the state, neglecting the emissions in step 1. However, if the GHG-free energy is included in the total energy used as the denominator in the system power emissions rate, then the product of the aggregate CNS and that emission rate will be far too low and the GHG accounting would fail to account for all or most of the total system GHG emissions. Thus, the system power emissions rate should be the total emissions divided by the non-GHG free energy such that all or nearly all emissions are accounted for appropriately.

Second, the aggregate LSE GHG budgets should be compared with the system-wide emissions to ensure that the two approaches arrive at roughly comparable overall totals. If the CNS methodology is accurate and does not fail to leave out major components of the system's GHG budget, then the GHG emissions calculated from the IRP filings really ought to approximate the overall emissions. If the IRP GHG emissions are markedly too low (or too high), then the Commission will have useful and actionable information to indicate that the methodology is not working as intended and should be revised.

Conclusion

The Clean Coalition appreciates the opportunity to submit these comments.

Respectfully submitted,

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