

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA



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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
CENTER FOR ENERGY EFFICIENCY AND RENEWABLE TECHNOLOGIES
ON ADMINISTRATIVE LAW JUDGE'S RULING SEEKING COMMENT ON
PROPOSED REFERENCE SYSTEM PLAN AND RELATED COMMISSION POLICY
ACTIONS**

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For: CENTER FOR ENERGY EFFICIENCY AND RENEWABLE TECHNOLOGIES

Dated: October 26, 2017

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The Center for Energy Efficiency and Renewable Technologies (CEERT) respectfully submits these Comments on the Administrative Law Judge’s (ALJ’s) Ruling Seeking Comment on Proposed Reference System Plan (RSP) and Related Commission Policy Actions issued on September 19, 2017 (September 19 ALJ’s Ruling). The Proposed RSP was attached to the September 19 ALJ’s Ruling as Attachment A. These Comments are timely filed and served pursuant to the Commission’s Rules of Practice and Procedure and the September 19 ALJ’s Ruling.

**I.
OVERVIEW**

The September 19 ALJ’s Ruling and its Attachments, specifically Attachment A, “constitute the Proposed Reference System Plan” which “contains a recommendation for the greenhouse gas (GHG) emissions target to use in the [Integrated Resource Plan (IRP)] process for the California electric sector, as well as for the load serving entities (LSEs) representing the portions of the electric sector under the Commission’s authority.”¹ The Proposed RSP also includes the following: (1) “recommended portfolio of electricity resources for the portion of the

¹ September 19 ALJ’s Ruling, at p. 2.

electric sector served by the California Independent System Operator (CAISO) portion of the California electricity grid”, (2) an associated GHG Planning Price, and (3) “several recommended near-term Commission actions ...”²

To that end, the September 19 ALJ’s Ruling requests comments from the parties on the Ruling and Proposed RSP and poses questions for party comment on several main topic areas. Specifically, the September 19 ALJ’s Ruling asks questions pertaining to modeling analysis, electric sector GHG target, Proposed RSP, LSE actions acquired in response to RSP, Commission policy actions, resource policy coordination, and production cost modeling-related issues.

CEERT is supportive of driving integrated resource planning with aggressive greenhouse gas (GHG) targets as proposed by Staff in the RSP. CEERT appreciates the challenge of “optimizing” the electric sector portfolio against the numerous statutory requirements. While there are still many challenges to be reconciled, CEERT is supportive of the direction the IRP process has taken. RESOLVE is a useful starting point for the RSP modelling exercise, but CEERT recommends a thorough vetting process in future years with meaningful party input to yield the best process for including all resources and all IRP requirements possible. CEERT urges the following near-term outcomes out of the IRP:

- 1) The Commission should adopt the 42 MMT Scenario as the floor GHG target case.
- 2) The Commission should initiate tax-eligible renewables procurement in 2018.
- 3) The Commission should re-evaluate the long-term resources using the appropriate GHG targets and at different procurement “on-line” time points.

² September 19 ALJ’s Ruling, at p. 2.

- 4) The Commission should utilize the GHG planning price and GHG targets as the primary metrics to evaluate LSE plans.
- 5) The Commission should submit a policy-driven portfolio, including out of state wind as policy case sensitivity to the CAISO's Transmission Planning Process (TPP).
- 6) The Commission should evaluate its natural gas fleet including a determination of whether the natural gas fleet can support State climate and energy goals, what types of gas-fired generators and in what locations are most valuable, how criteria pollutant reductions in disadvantaged communities can be prioritized, what market structures would best suit the transition away from natural-gas dependence, and what market structure is needed to enable preferred resources to fill the reliability services that have been traditionally filled by gas-fired generators.

II.

QUESTIONS RELATED TO MODELING ANALYSIS

1. Please comment on the appropriateness of the baseline resources included in the RESOLVE model. What changes would you make and why?

While the assumptions for initial baseline resources seem appropriate, assumptions about existing resources moving forward are not realistic. Specifically, CEERT has concerns around the retirements of thermal resources.

All thermal resources, aside from once through cooling resources, are assumed to not retire.³ While CEERT appreciates the added complication and perhaps inability of allowing resources to retire within the model, this assumption is unrealistic and is likely to have

³ September 19 ALJ's Ruling, Attachment A, at Slide 26.

significant impact on the new flexibility required for, and therefore cost of, for each portfolio. The challenge of retiring resources within the model stems from the modeling's inability to forecast what resources will retire. The "Flex Challenged Case" resulted in higher procurement of geothermal, wind, and storage resources, indicating that the availability of gas resources is directly tied to the optimal mix of renewables.⁴ In its response to Question 26, CEERT recommends intensive study of the role of the natural gas fleet. CEERT recommends the results of this be utilized in the next IRP cycle to more optimally reflect the future fleet and capture the needed flexibility and resource diversity.

2. Comment on the appropriateness of the three major scenarios modeled by staff (Default Scenario, 42 MMT Scenario, 30 MMT Scenario).

The three major scenarios are the appropriate level of GHG emissions to model as they are intended to reflect the electric sector range identified in the draft California Air Resources Board (ARB) Scoping Plan.⁵ Statute directs the Commission to "...[m]eet the greenhouse gas emissions reduction targets established by the State Air Resources Board Meet the greenhouse gas emissions reduction targets established by the State Air Resources Board."⁶ Given the lack of process established by ARB, the Scoping Plan is the best resource on which to base the GHG target.

However, in order to reflect the Scoping Plan range, it is important that ranges evaluated by the Commission account for the same sources of emissions as the Scoping Plan, or account for any discrepancies. It was noted in the September 19th ALJ Ruling that:

"Another difference between CARB and Commission assumptions that was discovered during the analysis was with respect to accounting for behind-the-meter combined heat and power facility emissions. CARB's methodology counts these emissions as part of the

⁴ September 19 ALJ's Ruling, Attachment A, at Slides 72, 74, and 76.

⁵ Public Workshop 2017 Scoping Plan Update, 17 Oct 2017, Slide 17
<https://www.arb.ca.gov/cc/scopingplan/meetings/101217/sp-october-workshop-slides.pdf>

⁶ Public Utilities (P.U.) Code Section 454.52(a)(1)(A).

electric sector, while for Commission modeling purposes they were treated as industrial emissions. This results in an approximately 4 MMT difference in all scenarios, which should be kept in mind when comparing results.”⁷

Therefore, the most appropriate high end of the range was 38 MMT and the low end of the range was 26 MMT as modelled by RESOLVE. Given the significant differences in resource portfolios selected between the GHG targets modelled, a difference of 4 MMT could make a significant impact on the on the selection of resources, especially resources that can generate or shift generation in non-daylight hours. For example, several of the 42 MMT sensitivities and all of the 30 MMT sensitivities selected 1,500 MW of geothermal. Had a true 42 MMT scenario been modelled, its likely significantly more geothermal would have been selected in the base scenario. At a minimum, long lead time resources should be reevaluated using the appropriate GHG targets. CEERT recommends that discrepancies in GHG accounting be accounted for prior to modeling in the next round of the IRP.

3. Provide any comments or reactions to the cost metrics analyzed and the estimated cost results.

CEERT does not respond to this question at this time, but reserves the right to address this issue in its Reply Comments.

4. Comment on the viability of renewable curtailment as a grid integration strategy.

Curtailment is a reasonable and needed tool for grid integration, as long as its balanced with the cost of overbuild and the cost of added intra-hour and intra-day flexibility and ramping. It would be valuable to compare levels of curtailment actually seen on the grid this Spring compared to those expected by modelling in order to determine if the results are reasonable or if there are limiting factors not captured by RESOLVE. In future cycles of the IRP, any model

⁷ September 19 ALJ’s Ruling, at p. 5.

utilized should be validated against previous models used and against real data to the extent possible.

While curtailment is necessary and useful at high levels of solar penetration, the Commission should actively pursue cost-effective strategies to utilize otherwise curtailed solar energy to reach higher levels of decarbonization in the rest of the Western grid and California economy. Exporting solar can be achieved through regional coordination. Time-of-Use rates and load shifting can incentivize productive usage of excess solar while decreasing the evening ramping needs. Finding methods to quantify these solutions in an IRP analysis would be valuable in determining a more optimal, truly “integrated” plan.

Curtailment is the only grid integration issue addressed in modelling for high levels of variable renewable energy. While the RESOLVE model does enforce energy demands being met at all times, it may not account for market mechanisms and costs utilized to ensure flexibility is available to the grid operator. It is important to consider the additional costs of intra-hour and intra-interval flexibility required as the system begins to increasingly rely on solar photovoltaic (PV). This issue has become a high priority for the CAISO, where the operational impacts of procurement are seen. As the CAISO works with stakeholders to identify market solutions and flexible resource adequacy (RA) criteria⁸, the Commission should work with the CAISO to integrate these solutions into planning frameworks and procurement metrics.

⁸ For example, the CAISO Flexible Resource Adequacy Criteria and Must Offer Obligations 2 stakeholder process
<https://www.caiso.com/informed/Pages/StakeholderProcesses/FlexibleResourceAdequacyCriteria-MustOfferObligations.aspx>

5. Comment on the advisability of early procurement of renewables to take advantage of federal ITC and PTC availability.

CEERT is strongly supportive of advanced procurement of renewables to take advantage of the Investment Tax Credit (ITC) and Production Tax Credit (PTC). CEERT previously commented:

“Near-term procurement authorization should also be considered and authorized to include investments to “minimize impacts on ratepayers’ bills” and take advantage of the Wind Production Tax Credits (PTC) and Solar and Storage Investment Tax Credits (ITC). It is clear that wind energy, solar energy, and storage will each be pieces of the “diverse and balanced” portfolio necessary and required by statute. The solar and storage ITC begins sun-setting in 2020, while the wind PTC’s sun-setting period is 2016-2020. However, a PPA signed in 2018 for a wind project would still allow for the full benefit of the PTC to be passed on to ratepayers, even if the energy is not delivered for several years after signing due to the ability of developers to utilize flexibility in the sun-setting and “safe harbor” Internal Revenue Service (IRS) provisions.”⁹

Modelling further demonstrates the economic benefits to ratepayers and need to begin procuring these resources as soon as feasible.¹⁰ Procurement should be initiated out of the IRP, in an expedited process that addresses cost allocation issues.

6. Comment on the impact of banked RPS procurement on this analysis.

CEERT does not respond to this question at this time, but reserves the right to address this issue in its Reply Comments.

7. Comment on the impact of import/export constraints on this analysis.

Multiple studies have demonstrated the importance of regional coordination in order to cost effectively and reliably decarbonization the electric sector. Practically, this requires effective use of imports and exports to balance load. Unfortunately, it is challenging to effectively model the administrative friction between balancing authorities and the wide variety of regional resources that can provide flexibility to the CAISO balancing authority.

⁹ Comments of the Center for Energy Efficiency and Renewable Technologies on Staff Proposal on Process for Integrated Resource Planning, 28 June 2017 at p. 11

¹⁰ September 19 ALJ’s Ruling, at p. 12-13

One such example of the challenges of modeling regional coordination is the assumption of import carbon intensity of 0.428 MT/MWh. In reality, imports can have a specified carbon intensity and may have a lower carbon intensity, as in the case of Pacific Northwest hydro. A recent study conducted by E3 for the Public Generating Pool demonstrates significant cost and GHG savings for California to coordinate with the Pacific Northwest hydro system.¹¹ While it may be challenging to model these aspects the IRP should consider, with the CAISO, how low carbon regional resources can effectively coordinate to provide flexibility, both in intra-hour and in day-ahead shaping timeframes.

8. Comment on the impact of the three long-lead-time resource studies summarized in this analysis:

a. Pumped Storage

b. Geothermal

c. Out-of-state Wind

The modeling around the three long-lead-time resource is a starting point to evaluate the value of these resources. It is clear from the modelling that each of the resources become more valuable as the GHG target becomes more aggressive. Given the lack of alignment between the ARB Scoping Plan electric sector target and IRP modelled GHG targets, it is likely the economics are more favorable for the long lead time resources to meet the electric sector if properly modelled. CEERT recommends remodeling the long lead time resources with appropriate GHGH targets, in line with the ARB Scoping Plan. It would also be helpful for parties if the range uncertainty of revenue requirement be included in the results. A previous study evaluating the cost effectiveness of 1250 MW of geothermal in an otherwise high solar

¹¹ http://www.publicgeneratingpool.com/wp-content/uploads/2015/01/CA-and-NW-Hydro_Jul-Aug-2017_8-11-17-version-1.pdf

portfolio with 55% renewables determined a cost savings of \$75 /MWH of geothermal.¹² Even with the falling cost of solar PV, it seems unlikely that this would not have a role in achieving cost-effective GHG reductions.

Examining a range of build years would likely lead to significantly more valuable information than arbitrarily choosing single years. For example, the modelling results indicate building 1500 MW of new geothermal in 2022 would increase costs for the 42 MMT Scenario, but the modelling also selects new geothermal in 2030 when unconstrained. This indicates that the timing of resources significantly impacts the modelling results and that evaluating just one build year is not sufficient to provide information to guide procurement.

III. QUESTIONS RELATED TO ELECTRIC SECTOR GHG TARGET

9. Do you agree with the recommendation to utilize the 42 MMT Scenario for IRP planning purposes? Why or why not?

CEERT strongly agrees with the recommendation to utilize the 42 MMT Scenario for IRP planning purposes. This scenario is near the middle of the updated draft ARB Scoping Plan electric sector GHG emission range and is therefore most appropriate given the uncertainty of exogenous factors impacting GHG emissions, such as weather and natural gas prices. Given that the IRP GHG targets are in fact less aggressive than the ARB Scoping Plan electric sector range because combined heat and power is not included, utilizing any target less aggressive than the 42 MMT Scenario would jeopardize the electric sector's ability to meet Scoping Plan range.

¹² J Caldwell, L Anthony, "The Value of Salton Sea Geothermal Development in California's Carbon Constrained Future", March 2016 at p. 15 http://lowcarbongrid2030.org/wp-content/uploads/2016/PDFs/160322_Geothermal-Analysis.pdf

IV.
QUESTIONS RELATED TO PROPOSED RSP

10. Do you support the use of the Reference System Portfolio associated with the 42 MMT Scenario as the model for LSE portfolio planning for their individual IRPs? Why or why not?

CEERT suggests the RSP be informative for the LSE portfolio planning but not a strict requirement. The statute guiding the IRP states:

“454.52. (a) (1) Commencing in 2017, and to be updated regularly thereafter, the commission shall adopt a process for each load-serving entity, as defined in Section 380, to file an integrated resource plan, and a schedule for periodic updates to the plan, to ensure that load-serving entities do the following:

(A) Meet the greenhouse gas emissions reduction targets established by the State Air Resources Board, in coordination with the commission and the Energy Commission, for the electricity sector and each load-serving entity that reflect the electricity sector’s percentage in achieving the economywide greenhouse gas emissions reductions of 40 percent from 1990 levels by 2030.

(B) Procure at least 50 percent eligible renewable energy resources by December 31, 2030, consistent with Article 16 (commencing with Section 399.11) of Chapter 2.3.

(C) Enable each electrical corporation to fulfill its obligation to serve its customers at just and reasonable rates.

(D) Minimize impacts on ratepayers’ bills.

(E) Ensure system and local reliability.

(F) Strengthen the diversity, sustainability, and resilience of the bulk transmission and distribution systems, and local communities.

(G) Enhance distribution systems and demand-side energy management.

(H) Minimize localized air pollutants and other greenhouse gas emissions, with early priority on disadvantaged communities identified pursuant to Section 39711 of the Health and Safety Code.”¹³

At this time, there are many variables that cannot be co-optimized in the modelling framework but should be part of integrated resource planning, such as demand-side resources,

¹³ P.U. Code Section 454.52.

electrification, and the locational value of resources. Given the substantial task of addressing *all* statutory requirements and the inability to address several of the requirements in the portfolio produced by RESOLVE, the RSP portfolio should be taken as directional. It is also unclear how LSEs would specifically use the RSP portfolio, except for selecting a proportional amount of each resource identified with the RESOLVE model. The GHG Planning price and GHG target should be the primary metrics used in LSE plans.

11. Do you support transmitting the Default Scenario and associated portfolio to the CAISO for use as the reliability base case in the TPP for 2018? Why or why not?

CEERT does not respond to this question at this time, but reserves the right to address this issue in its Reply Comments.

12. Do you support transmitting the 42 MMT Scenario and associated portfolio to the CAISO for use as the policy-driven case in the TPP for 2018? Why or why not?

CEERT supports transmitting a policy-driven case as soon as feasible to the CAISO TPP. Transmission planning and development can be a long a process. If new transmission is needed for meeting the 2030 GHG target, development must begin soon. However, CEERT does have questions as to how the Scenario would be translated geographically for the TPP. Transmission needs are clearly dependent on the location of resources and the RESOLVE results do not have a locational aspect.

13. Should the RETI 2.0 work or other available information be incorporated into the TPP recommendations for 2017? If so, how?

CEERT does not respond to this question at this time, but reserves the right to address this issue in its Reply Comments.

V.

QUESTIONS RELATED TO LSE ACTIONS ACQUIRED IN RESPONSE TO RSP

14. Do you support the staff recommendation for how LSEs should utilize the GHG Planning Price in preparing their individual LSE IRPs? Why or why not?

CEERT does not respond to this question at this time, but reserves the right to address this issue in its Reply Comments.

15. Do you support the staff recommendation for how LSEs should utilize the Reference System Portfolio in preparing their individual LSE IRPs? Why or why not?

Please see CEERT's Response to Question 10 above.

16. Do you agree with the above-described relationship between the Reference System Portfolio and the GHG Planning Price? Why or why not?

CEERT does not respond to this question at this time, but reserves the right to address this issue in its Reply Comments.

17. Do you support the staff recommendation for calculating and assigned a GHG Emissions Benchmark for LSEs to use in preparing their individual LSE IRPs? Why or why not? Would you recommend an alternative means of developing a similar benchmark? Explain.

CEERT is supportive of the usage of the Cap and Trade Electric Distribution Utilities (EDU) allocation to assign a GHG Emissions Benchmark. While the IRP is a planning exercise with GHG planning targets, GHG emission reductions are enforced through the ARB Cap and Trade program. Aligning emissions reductions proportionally to the EDU allocation is the most practical method to set benchmarks in order to be best in line with enforcement.

18. Do you support the staff recommendation for requiring IOUs filing Standard IRPs to submit revenue requirement and system average rate forecasts to evaluate the impact of IRP costs on ratepayer costs of the IRP process? Why or why not?

CEERT does not respond to this question at this time, but reserves the right to address this issue in its Reply Comments.

19. Are there additional components that would need to be explored in order to develop a more comprehensive approach to conducting ratepayer impact analysis in later IRP cycles, for both IOUs and other LSEs? Explain.

CEERT does not respond to this question at this time, but reserves the right to address this issue in its Reply Comments.

20. Do you agree with the proposed requirements for LSEs to address the impact of their IRPs and any planned procurement on disadvantaged communities?

CEERT does not respond to this question at this time, but reserves the right to address this issue in its Reply Comments.

VI. QUESTIONS RELATED TO COMMISSION POLICY ACTIONS

21. Should the Commission raise the RPS compliance requirement for 2030 and/or intervening years for all LSEs?

- a. If so, to what percentage?**
- b. If so, in this proceeding or as a recommendation to be considered in the RPS rulemaking (or another venue: please specify)?**

CEERT recommends additional renewable procurement, beyond RPS requirements, in order to meet electric sector GHG goals be initiated outside the RPS proceeding. In addition, CEERT recommends that the RPS requirement be raised to be in line with results from the 42 MMT Scenario to the extent that the Commission has the authority to do so.

22. Should the Commission require additional renewable procurement outside of the RPS program?

- a. Why or why not?**
- b. If so, how?**
- c. If so, at what level?**
- d. If so, from whom?**

CEERT recommends that additional renewable procurement, beyond renewables for RPS compliance, be conducted or initiated directly out of the IRP in 2018. Additional renewables identified in the IRP are specifically identified to reduce GHG emissions. RPS procurement weighs heavily on “least cost” and does not explicitly consider the GHG reduction impacts. It has been demonstrated in the 2030 California Low Carbon Grid Study that two portfolios with equal amounts of delivered renewable energy can result in different levels of GHG emission reductions due to differences in the total renewable production profile and ability of resources to provide reliability services.¹⁴ The Least Cost Best Fit (LCBF) methodology used for RPS procurement does not currently reflect GHG impacts. For this reason, it is essential that new renewable procurement reflect the portfolio in the RSP and explicitly consider GHG impacts.

Additional renewable procurement should be initiated in 2018. Modelling indicates that advanced procurement of resources in order to realize the PTC and ITC has a benefit to ratepayers.¹⁵ Waiting beyond 2018 would not allow ratepayers to reap these benefits. Issues around near-term procurement, such as cost allocation, should be addressed immediately in order to facilitate procurement in 2018.

23. Should the Commission initiate activities with the CAISO or others to investigate further development of out-of-state wind?

- a. Why or why not?**
- b. If so, what specific steps should be taken?**
- c. Should out-of-state wind be included in a special study or as part as a policy-driven scenario for TPP? Why or why not?**

¹⁴ G Brinkman, J Jorgenson, A Ehlen, J Caldwell, “Low Carbon Grid Study: Analysis of a 50% Emission Reduction in California”, 2016 January http://lowcarbongrid2030.org/wp-content/uploads/2016/01/1601_Low-Carbon-Grid-Study-Analysis-of-a-50-Emission-Reduction-in-CA.pdf

¹⁵ September 19 ALJ’s Ruling, at p. 12-13.

The Commission should initiate activities with the CAISO to investigate the development of out-of-state (OOS) wind. The RESOLVE model demonstrated the value of OOS wind as the GHG target is increasingly more aggressive.¹⁶ Staff also states that OOS wind is a resource that may represent a low-cost insurance policy against various risks of a high-PV portfolio.¹⁷ Without determining the transmission needs and costs and beginning the development process, OOS wind will not be an option for California to achieve its GHG goals for the electric sector. This should be done on an expedited basis so the wind resources identified in RESOLVE for 2018 can become available as soon as feasible.

24. Should the Commission utilize the GHG Planning Price as an input to the IDER avoided cost calculator, as described in this ruling?

a. Why or why not?

b. Do you have specific recommendations for the appropriate methodology for use of the GHG Planning Price in IDER or other demand-side resource proceedings/activities? Describe in detail.

CEERT is supportive of using the GHG Planning Price as an input in the integrated distributed energy resources (IDER) avoided cost calculator in Rulemaking (R.) 14-10-003 (IDER). The IRP is intended to integrate all resource planning across LSEs. Given that demand-side resources were not included as a potential solution in the RESOLVE model, inclusion of the GHG Planning Price in the IDER would help identify more cost-effective demand-side resources to reduce GHG emissions than those identified by the RESOLVE model.

25. If the Commission were to engage in development of a CRVM:

a. What resource areas should be prioritized for incorporation into the CRVM?

b. Do you have specific recommendations for the appropriate structure of a CRVM? Include examples from other jurisdictions where possible.

¹⁶ September 19 ALJ's Ruling, Attachment A, at Slide 104.

¹⁷ September 19 ALJ's Ruling, Attachment A, at Slide 107.

c. What would be the appropriate application of such a method?

CEERT is generally supportive of the development of a Common Resource Valuation Methodology (CVRM). The purpose of the IRP is to integrate planning and procurement of resources across LSEs. To achieve this, it is essential that the procurement be connected to planning and that the costs and benefits of resources can be compared through the procurement process. The Commission has attempted to achieve this through the LCBF methodology in the RPS proceeding. CEERT cautions that the LCBF has weighed heavily on the “least cost” aspect and that as the system decarbonizes, “best fit” becomes increasingly important. In the development of CVRM, it is important that the resource capabilities and attributes required to cost-effectively and reliably operate a low-carbon grid be identified and properly valued. Should the CVRM utilize LCBF, CEERT strongly urges the Commission to reform the methodology to adequately account for and value “best fit”.

26. Should the Commission initiate activities with the CAISO or others to analyze the type and viability of the natural gas fleet? What activities should be undertaken and why?

CEERT strongly supports the Commission undertaking an evaluation of the natural gas fleet. This evaluation should include a determination of to what extent the natural gas fleet can support State climate and energy goals, what types of gas-fired generators and in what locations are most valuable, how criteria pollutant reductions in disadvantaged communities can be prioritized, what market structures would best suit the transition away from natural-gas dependence, and what market structure is needed to enable preferred resources to fill the reliability services that have been traditionally filled by gas-fired generators.

CEERT strongly recommends that this evaluation take consider the needed changes in the RA market structure and processes. RA policies must be amendable to preferred resources taking the reliability lead and must not be oriented towards natural gas “backing up” zero- and

low-carbon resources. Transparency and clearly and accurately defining the grid needs should be core principles. Regional coordination, such as with the Pacific Northwest hydro system, should also be addressed to minimize redundancy in the Western interconnection and to develop least cost solutions for flexibility needs in California.

The Commission should also coordinate closely with the CAISO. The CAISO has already begun evaluating the potential impacts of wide-spread natural gas retirements through a Special Study in the 2016-2017 TPP.¹⁸ This study determined that approximately 4,000 to 6,000 MW natural gas generator capacity could retire before capacity insufficiency occurs. The study did not however identify what types of natural gas generators had the most beneficial attributes as the grid decarbonizes.

CEERT recommends a joint study process between the Commission and CAISO to evaluate the natural gas fleet and identifying specific changes to the RA market structure to allow an orderly retirement of the natural gas fleet and enable dependence on low-carbon resources, within California and regionally, for reliability needs.

VII. QUESTIONS RELATED TO RESOURCE POLICY COORDINATION

27. Please comment on the slides in Attachment A titled “Path to Future All-Resource Planning” with respect to the following:

- a. Are any of the conclusions, implications, or action items inappropriate? If so, how would you amend them?**
- b. Are any conclusions, implications, or actions missing that the Commission should consider? Explain.**

CEERT does not respond to this question at this time, but reserves the right to address this issue in its Reply Comments.

¹⁸CAISO 2016-2017 Transmission Plan, 17 March 2017 at p. 219

VIII.
QUESTIONS RELATED TO PRODUCTION COST MODELING-RELATED ISSUES

28. Please comment any aspect on the staff proposal included as Attachment E to this ruling. Explain the reasoning behind any recommended revisions. Please organize your comments according to the major topics of the proposal.

CEERT does not respond to this question at this time, but reserves the right to address this issue in its Reply Comments.

29. Please comment on the results and recommendations from the CES-21 grid integration project final report filed on September 12, 2017 in this proceeding. Note that the CES-21 project is complete and is not seeking comment to conduct additional work. The Commission seeks comment on:

- a. The technical merits of the analytical framework used in the CES-21 project.**
- b. What aspects of the CES-21 project (e.g., directional findings or recommendations, or modeling techniques) can be used to improve the staff proposal in Attachment E, in the current or future IRP proceedings, and how.**

CEERT does not respond to this question at this time, but reserves the right to address this issue in its Reply Comments.

IX.
CONCLUSION

CEERT is appreciative of the opportunity to comment on issues related to the Proposed RSP. CEERT urges the Commission to adopt the 42 MMT Scenario as a floor GHG target case, while considering remodeling the long lead time resources with the appropriate GHG targets in line with the ARB Scoping Plan. CEERT also urges the Commission to move swiftly in identifying a framework to facilitate advanced procurement of tax-eligible resources in 2018.

As the IRP proceeds forward, it is important to identify means of truly integrated all resource planning. The plan proposed by Staff appears reasonable and a step in the right direction. CEERT views the natural gas fleet analysis as a critical step to identify the role of the natural gas fleet in the low-carbon grid and the steps needed to maintain appropriate resources

and transition to reliance on clean resources for the grid's reliability needs. CEERT urges a comprehensive study be conducted in coordination with the CAISO and be made available to inform the IRP and RA as soon as possible.

Respectfully submitted,

October 26, 2017

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