

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



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04/08/19
04:59 PM

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 SAN DIEGO GAS & ELECTRIC COMPANY (U 902 E)
ON PROPOSED DECISION ADOPTING PREFERRED SYSTEM PORTFOLIO
AND PLAN FOR 2017-2018 INTEGRATED RESOURCE PLAN CYCLE**

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April 8, 2019

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I. INTRODUCTION

Pursuant to Rule 14.3 of the Rules of Practice and Procedure of the California Public Utilities Commission (the “Commission”), San Diego Gas and Electric Company (“SDG&E”) provides these comments concerning the proposed *Decision Adopting Preferred System Portfolio and Plan for 2017-2018 Integrated Resource Plan Cycle* (the “PD”) issued on March 18, 2019, in the above-captioned proceeding.

The PD furthers the Commission’s implementation of the integrated resource planning (“IRP”) process, the statewide approach to electric resource planning established by Senate Bill (“SB”) 350.^{1/} The PD evaluates the first round of individual integrated resource plan (“IIRPs”) filed by Commission-jurisdictional load-serving entities (“LSEs”) and describes the Commission’s analysis of the Hybrid Conforming Portfolio (“HCP”), which aggregates the IIRPs of all LSEs. The PD adopts a Preferred System Portfolio (“PSP”) for the 2017-2018 IRP cycle and initiates a “procurement track” to facilitate procurement of specified resources.

^{1/} Senate Bill 350 (Stats. 2015, Ch. 547). Codified at Public Utilities Code §§ 454.51 and 454.52. All statutory references herein are to the Public Utilities Code unless otherwise noted.

As discussed in more detail below, SDG&E generally supports the PD, while proposing certain limited modifications. SDG&E strongly agrees with the PD’s finding that the co-equal goals of reliability, cost-effectiveness and achievement of environmental objectives together form the underpinning of the IRP planning process; this is an important foundational point that warrants emphasis. While SDG&E does not object to use of the Reference System Plan (“RSP”) to develop the PSP in the current “dry run” cycle of the IRP, it believes that the HCP should be used as the basis for the PSP in future IRP cycles and suggests that the PD be revised to provide this direction. SDG&E also proposes that PD be revised to direct adoption of a citation program and further consideration of the role of a central buyer to ensure compliance with IRP requirements. Finally, SDG&E supports the proposal to establish a “Procurement Track” of the IRP, but recommends that the PD be revised to clarify the relationship between the IRP and the “Procurement Track” and to identify additional issues to be considered.

II. DISCUSSION

A. The PD Properly Focuses on Reliability Issues

SDG&E supports the PD’s recognition that the IRP proceeding must be focused equally on reliability, cost-effectiveness and achievement of environmental goals. SDG&E agrees with the observation that “[n]either reliability nor cost is an afterthought or secondary to the environmental goals. Rather they are coequal and integral to a successful IRP process.”^{2/} The PD properly characterizes the IRP proceeding’s role in ensuring system reliability and the need for the Commission to consider a broad range of reliability issues, including both near-term and long-term reliability, as well as the need for both new and existing resources.^{3/} While SDG&E supports the state’s policy goals related to greenhouse gas (“GHG”) emissions reduction – and, indeed, is at

^{2/} PD p. 128.

^{3/} See *id.*, pp. 128-129.

the forefront of efforts to achieve the state’s clean energy vision – increased reliance on intermittent resources and limits on traditional reliability resources creates potential reliability concerns that cannot be ignored, as the PD acknowledges. The PD correctly recognizes that the Commission must have flexibility to address the reliability issues that may arise in the future.

Historically, the need for new resource adequacy (“RA”) resources was identified in the Commission’s Long-Term Procurement Plan (“LTPP”) proceeding. A separate track within the LTPP proceeding was established to study and identify long-term need for capacity resources on both local and system levels. A typical showing would compare the projected peak load and reserve margin requirements with projected future generation resources. Any forecasted capacity shortfall would be identified as a need to be filled with new resource contracts at some point in the future. Given long lead-times for permitting and construction, the establishment in the LTPP of a forecasted system and/or local capacity need was necessary to ensure that a future identified RA need could be filled by the construction of a new resource in a timely manner.

The RA proceeding, by contrast, focuses on near-term capacity need (1-3 years) to be met through contracts with *existing* resources. Thus, the RA proceeding is not the vehicle for identifying long-term procurement needs. As the PD correctly notes, the RA proceeding “does not provide a comprehensive look at all of the operational resource needs across all time periods addressed by the IRP process.”^{4/} Going forward, the IRP proceeding will essentially replace the LTPP proceeding as the venue for forecasting long-term capacity need and authorizing procurement of new reliability resources. The IRP proceeding must consider future long-term capacity need, with the goal of ensuring the existence of adequate reliability resources to allow LSEs to meet the requirements established in the RA proceeding.

^{4/} *Id.*, p. 129.

B. The PD Should Make Clear that the PSP will be Based Upon the HCP in Future IRP Cycles

In prior comments submitted in the instant proceeding, SDG&E supported use of the HCP as the basis for the PSP, as well as in the Transmission Planning Process (“TPP”) of the California Independent System Operator (“CAISO”), reasoning that the HCP “represents the best data available at this point and there exist no long-term reliability needs that must be addressed in this IRP cycle.”^{5/} SDG&E pointed out that since the 2017-2018 IRP cycle is a proof-of-concept cycle, reliance on the HCP as the basis for the PSP posed little concern, but that several improvements to the HCP development process would be necessary in the future to allow use of the HCP to guide long-term procurement and/or transmission decisions. SDG&E noted that such improvements could be considered in the next IRP cycle.^{6/}

The PD adopts a modified version of the RSP as the PSP, rather than the HCP. While SDG&E believes that the RSP is also flawed, it supports the PD’s decision to select the modified RSP rather than the HCP as the PSP, given the deficiencies the PD points out with the HCP.^{7/} Neither portfolio represents an ideal solution; neither should serve as the basis for procurement decisions. However, the modified RSP does provide a useful starting point for both the Commission and the CAISO, along with additional data and improved analysis being developed now as part of the 2019-2020 IRP, to develop a strategy for defining resource and transmission needs. Going forward, however, SDG&E believes that the HCP developed in each IRP cycle should serve as the basis for the RSP. To that end, SDG&E supports the PD’s proposal for

^{5/} *Comments of San Diego Gas & Electric Company in Response to Ruling Seeking Comment on Proposed Preferred System Portfolio and Transmission Planning Process Recommendations*, filed January 31, 2019 (“SDG&E PSP/TPP Comments”), p. 2.

^{6/} *Id.* at pp. 2-4.

^{7/} *See, e.g.*, PD at pp. 105-106.

additional data collection requirements^{8/} to increase the accuracy of the HCP so that it can be relied upon as the basis of the PSP in future IRP rounds. The PD should make clear that the Commission's intent is to use the HCP as the basis for the PSP in future cycles of the IRP.

C. The PD Should be Revised to Direct Adoption of a Citation Program and Further Consideration of the Role of a Central Buyer to Ensure Compliance with IRP Requirements

The PD accurately characterizes the ambitious nature of the IRP, observing that “[w]ith more than 40 entities (and counting), the Commission is charged with evaluating whether resource procurement by all of these entities collectively will result in a reliable and affordable electric system that meets the GHG emissions reduction requirements of state law and policy.”^{9/} The PD correctly points out that “the Commission is the only entity in a position to ensure an optimal portfolio that meets the environmental goals, while also allowing the electric system to operate reliably and at least cost to ratepayers.”^{10/}

Given the scope of the Commission's responsibility under the IRP, it is critical that all LSEs comply with IRP-related requirements and provide necessary information to the Commission in a timely manner. To this end, the PD identifies process improvements to be implemented going forward, including requiring additional data in IIRPs regarding contractual and development status of resource choices,^{11/} and consideration of a citation program to serve as a compliance enforcement mechanism.^{12/} SDG&E supports these proposed improvements and agrees with the conclusion that Community Choice Aggregators (“CCAs”) must engage more

^{8/} See *id.*, pp. 101-102.

^{9/} *Id.*, p. 103.

^{10/} *Id.*, p. 103.

^{11/} PD, p. 102.

^{12/} *Id.*, p. 146.

fully in the IRP process. SDG&E also submits that the central buyer construct should be explored as a potential means of ensuring satisfaction of state energy policy objectives.

As the PD correctly observes, “the majority of new resources in California are expected to be acquired by CCAs in the next decade [so] this puts additional focus on [CCAs’] contributions to the IRP process.”^{13/} Although the Commission has clear jurisdiction over CCAs’ compliance with IRP requirements,^{14/} a number of CCAs failed to submit compliant IIRPs, seeking in some case to rely instead on voluntary plans approved by their local governing boards.^{15/} The failure by these CCAs to take IRP compliance seriously threatens the integrity of the entire IRP process. Similarly, many CCAs’ IIRPs ignored system reliability considerations, focusing solely on procurement of renewable resources and energy storage. Balancing the system is the responsibility of *all* LSEs, not just the IOUs whose slice of load is rapidly decreasing; the CCAs’ IIRPs failed, however, to acknowledge their obligation to ensure the reliability of the system.

Given the central role to be played by the CCAs in the coming years in achieving not only clean energy policy goals, but also system reliability and cost-effectiveness objectives, it is critical that the CCAs participate meaningfully in the IRP process. While, in years past, CCAs have represented a *de minimus* portion of statewide load and their compliance or non-compliance with regulatory requirements was perhaps not a primary concern, circumstances have changed markedly. The CCAs have sought, collectively, to displace the IOUs as principal providers of retail energy service; with that role comes the responsibility of ensuring system reliability and meeting other critical policy imperatives. CCAs must act responsibly to fulfill this obligation; as the PD makes clear, “[i]t will not be sufficient or appropriate for new CCAs to lean on

^{13/} *Id.*, p. 102.

^{14/} See D.18-02-018, pp. 25-30.

^{15/} PD, p. 102-103.

[conventional] resources procured by IOUs, and provide the public with messages about their cleaner resource mix, while focusing their resource procurement efforts only on renewable and storage resources.”^{16/}

Accordingly, the PD should be revised to direct adoption of an enforcement mechanism to ensure that all LSEs meet their IRP-related compliance requirements, rather than merely proposing “consideration” of such a mechanism.^{17/} Given many non-IOU LSEs’ seeming disregard for IRP process requirements – indeed, one LSE (Commercial Energy of California) filed no IIRP *at all* – it is clear that a compliance enforcement mechanism is necessary. The citation framework adopted in the RPS proceeding, detailed in Resolution E-4720, could serve as a template for an IRP citation program. The RPS citation program establishes penalties for non-compliance with specified requirements and provides Commission staff with a means of ensuring that it is able to extract the information it requires from all Commission-jurisdictional LSEs.

In addition to establishing a citation program, the PD should direct further consideration of the central buyer construct as a potential means of addressing challenges in the statewide resource planning process caused by increasing fragmentation within the procurement function.^{18/} The PD acknowledges parties’ discussion of the central buyer construct in the context of the IRP, but does not explore this topic in depth.^{19/} The issues arising from load departure caused by Direct Access (“DA”) and CCA are well-known. These alternative service provider options are chipping away at the traditional IOU procurement role, creating the potential for reliability gaps, with no plan in place for the failure of small, unregulated LSEs.^{20/} Centralized procurement through a state

^{16/} See *id.*, p. 146.

^{17/} *Id.*, p. 133.

^{18/} See D.19-02-022, p. 42.

^{19/} PD, pp. 127-128, 147.

^{20/} See comments by President Picker at the California State Senate Energy Informational Hearing on the Changing Electricity Landscape, held March 19, 2019.

special purpose entity (“SPE”), potentially with Provider of Last Resort (“POLR”) responsibility, could offer a solution. As this initial IRP round demonstrates, the current approach of integrating the resource planning of a multitude of individual LSEs with varying degrees of procurement proficiency may not ensure that the state meets its reliability and other energy policy goals.

The urgency of this issue cannot be overstated. In SDG&E’s service territory, for example, the recent announcement by the City of San Diego that it plans to move forward with formation of a CCA through establishment of a Joint Powers Authority, and to include other jurisdictions in the county, means that SDG&E could be left serving as little as 20 percent of the load in its territory within the next few years. This trend is not inconsistent with what is occurring across the state. It is beyond debate that in this new environment, it is not feasible to rely on the IOUs and their bundled service customer minority to undertake procurement on behalf of the majority of customers in the region. In other words, it is impractical to require bundled customers to take on multimillion-dollar commitments for customers that have elected to be served by a different energy provider. It is also not clear that newly-formed CCAs are up to the task of procuring the mix of resources necessary to ensure reliability and satisfaction of policy goals. Accordingly, the Commission should provide express direction to consider in the next IRP cycle what role a central buyer SPE might play in providing a reliability backstop and, potentially, meeting the state’s GHG-reduction goals and serving as the POLR.

D. The PD Should be Revised to Clarify the Relationship Between the IRP and the “Procurement Track” and to Identify Additional Issues to be Considered

SDG&E agrees with the PD’s proposal to establish a “procurement track” of the IRP proceeding and to require CCAs to enter into long-term commitments for renewable integration resources.^{21/} The PD correctly points out that “[w]hile the IOU customers have historically

^{21/} PD, Conclusion of Law 18.

shouldered the burden of reliability resources, particularly natural gas, the load is departing rapidly for alternative providers, particularly CCAs, and the responsibility has not appeared to shift proportionally.”^{22/}

SDG&E supports retail choice and, as discussed above, anticipates continued significant growth in CCA over the next several years. It agrees that it is likely that most of the state’s resource procurement will be conducted by CCAs in the next decade.^{23/} In order to achieve the state’s policy goals within this new paradigm, the Commission must retain authority over the resource planning process, and ensure that CCAs are fulfilling their planning obligations and that critical resources are being procured. Indeed, the Legislature recognized the Commission’s central role in this undertaking, expressly conferring jurisdiction over CCAs to direct procurement of resources, including renewable integration resources.^{24/}

While SDG&E supports establishment of a procurement track, it notes that the PD should be revised to more clearly explain the relationship between the IRP process and the procurement track. In other words, SDG&E’s expectation is that the procurement undertaken in the procurement track would be based upon a need determination made in the corresponding IRP cycle, and that it can address issues related to both procurement process and volume; the PD should make this connection clear. In addition, the PD should clarify that while the procurement track will be established as the result of the final decision adopted by the Commission in this proceeding, there will not be procurement undertaken in response to the 2017-2018 IRP cycle as this round is a proof-of-concept exercise.

^{22/} *Id.*, p. 132.

^{23/} *Id.*, 130-131.

^{24/} *See* § 454.51(d).

In addition, SDG&E notes that the PD identifies several issues that must be considered in the procurement track.^{25/} SDG&E concurs with the issues identified, and suggest that the PD be revised to include a few additional topics. First, the Commission must consider the definition of renewable integration resources. Historically, renewable integration resources have been considered to be traditional flexible resources like gas-fired plants and energy storage. However, in a world where 100 percent clean energy is the ultimate goal, this definition will likely need to be expanded to allow intermittent resources to provide integration support for other intermittent resources. For example, a wind resource could help to integrate a solar resource by providing generation in evening hours when solar is unavailable. A more expansive definition of renewable integration resources would provide the Commission with broad jurisdiction to direct procurement, which will help to ensure that reliability and clean energy goals are met. The Commission would be able to direct the general types of procurement needed to ensure compliance, while CCAs would continue to have autonomy in choosing the specific resources to procure in a solicitation.

Second, the Commission should consider whether reserve margins require adjustment to ensure reliability in light of additional intermittent resources, and whether existing capacity is sufficient to meet reliability needs without risk of market power. Current reserve margins were established with today's electric grid in mind, where conventional gas-fired generation provides an inexpensive, dependable and flexible resource to ensure that reliability needs are met. The state may need to re-visit the methodology of reserve margin development to better reflect the transition away from gas-fired plants and the increased penetration of energy-limited and intermittent resources.

^{25/} PD, pp. 136-137.

The Commission may also need to consider whether there is enough existing capacity to ensure that generators are not incented to withhold generation based on the expectation that decreasing supply will lead to increased prices. The PD notes that “the initial cycle lead us to conclude that we need to put more emphasis on analysis focused on existing resources needed for reliability and their economic viability, particularly natural gas resources.”^{26/} While economic viability of existing resources is important, the Commission should not plan to have only sufficient capacity to meet the planning reserve margin in the short-term, as this could allow merchant resources to exert market power.

Finally, although the Commission has broad authority to require CCA procurement, there may be value in considering a central buyer structure, as discussed in more detail above.

III. CONCLUSION

For the reasons set forth herein, the Commission’s final decision should adopt the recommendations described above and shown in Attachment A hereto.

Respectfully submitted this 8th day of April, 2019.

/s/ Aimee M. Smith

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^{26/} *Id.*, p. 129.

ATTACHMENT A
*Proposed Findings of Fact,
Conclusions of Law and Ordering Paragraphs*

Proposed Findings of Fact

1. All LSEs required by D.18-02-018 to file an individual IRP or documentation substantiating eligibility for an exemption did so, with the exception of Commercial Energy of California, an ESP.
2. The following entities provided the appropriate information to justify an exemption from filing an individual IRP: Anza Electric Cooperative, EnergyCal USA (dba YEP Energy), Gexa Energy California, Liberty Power Delaware, Liberty Power Holdings, Plumas Sierra Cooperative, Praxair Plainfield, Surprise Valley Electric Cooperative, and VEA.
3. The individual IRP filings of the following IOUs provided all of the information required by D.18-02-018 to an adequate degree: Bear Valley Electric Service, Liberty Utilities, Pacific Gas and Electric, PacifiCorp, San Diego Gas & Electric, and Southern California Edison.
4. The individual IRP filings of the following ESPs provided all of the information required by D.18-02-018 to an adequate degree: 3 Phases Renewables, Agera Energy, American PowerNet Management, Calpine Energy Solutions, Calpine PowerAmerica CA, Direct Energy Business, EDF Industrial Power Services, Just Energy Solutions, Regents of the University of California, and Tiger Natural Gas.
5. The individual IRP filings of the following CCAs provided all of the information required by D.18-02-018 to an adequate degree: Desert Community Energy, Peninsula Clean Energy Authority, Redwood Coast Energy Authority, and Solana Energy Alliance.
6. The following ESPs included inadequate information on criteria pollutants associated with generation used to serve their loads in their individual IRPs, as required by D.18-02-018: Constellation NewEnergy and Shell Energy.

7. The following CCAs included inadequate information on criteria pollutants associated with generation used to serve their loads in their individual IRPs, as required by D.18-02-018: Apple Valley Choice Energy, Clean Power Alliance of Southern California, CleanPower San Francisco, East Bay Community Energy, King City Community Power, Lancaster Choice Energy, Marin Clean Energy, Monterey Bay Clean Power Authority, Pico Rivera Innovative Municipal Energy, Pilot Power Group, Pioneer Community Energy, Rancho Mirage Energy Authority, San Jacinto Power, San Jose Clean Energy, Silicon Valley Clean Energy Authority, Sonoma Clean Power Authority, and Valley Clean Energy Alliance.

8. Additional information about criteria pollutants associated with serving load is a required part of the Commission's responsibility to ensure compliance with Public Utilities Code Section 454.52 (a)(1)(H).

9. Liberty Utilities (CalPeco Electric) in its individual IRP sought authorization to solicit energy resources on a short-term basis to replace the full requirements contract that it previously had with NV Energy, delivering a combination of renewable and non-renewable power to serve its load. In D.19-02-007 in the RPS proceeding, the Commission handled the renewable-related portions of Liberty Utilities' request. The non-renewable portion of the request for short-term bridging authority is reasonable.

10. Liberty Utilities (CalPeco Electric) does not currently operate with a bundled procurement plan structure similar to the larger IOUs and thus must typically handle cost recovery requests via individual applications.

11. Commission staff analysis to aggregate the portfolios included in the individual LSE IRPs and check their feasibility, including adjustments where resource potential or transmission availability in particular geographic areas was exceeded, was reasonable and necessary.

12. In the 2018 IRPs of many LSEs, we were unable to distinguish between resources that represented existing contractual obligations and generic aspirational choices made by LSEs to round out their portfolios.

13. The Commission's primary responsibility, in implementing the provisions of Public Utilities Code Sections 454.51 and 454.52, is to ensure an electric resource portfolio, for the aggregated LSEs within its purview, that meets the state's GHG emissions, reliability, and cost requirements, as well as other state goals.

14. The aggregated LSE IRP resources, referred to herein as the hybrid conforming portfolio (HCP), did not meet the CARB or Commission GHG emissions target for the electric sector for 2030, and was also less reliable than the RSP adopted in D.18-02-018, as updated with the 2017 IEPR assumptions.

15. The HCP did not achieve the 60% RPS requirement in 2030.

16. All of the LSEs collectively showed a deficiency in the area of reliability and renewable integration resources necessary to achieve the 2030 GHG or reliability needs of the system.

17. The HCP included less geothermal energy than the RSP with 2017 IEPR assumptions, resulting in less high capacity factor renewable energy.

18. The HCP had more renewable capacity but produced less renewable energy than the RSP with 2017 IEPR assumptions, which is contrary to the state's environmental goals.

19. The HCP contains longer duration batteries but less capacity overall than the RSP with 2017 IEPR assumptions.

20. **The HCP is the preferred alternative for adoption as the PSP, however the** ~~The~~ RSP adopted in D.18-02-018, with adjustments updated to reflect the 2017 IEPR assumptions, is a

reasonable alternative for adoption as the PSP for the 2017-2018 cycle, but its The main shortcoming of the RSP is in the assumption that natural gas resources would exist in perpetuity.

21. It is possible to infer based on analyses conducted by Commission staff, CAISO, and SCE, that the RSP adopted in D.18-02-018, with adjustments updated to reflect the 2017 IEPR assumptions and including a new assumption of a 40-year life for natural gas resources, would represent a more reliable portfolio than the HCP in the 2017-2018 cycle.

22. The RSP, with adjustments updated to reflect the 2017 IEPR assumptions and including a new assumption of a 40-year life for natural gas resources, would meet the RPS requirements in 2030 and the Commission's target for the electric sector of 42 MMT of GHG emissions by 2030.

23. Each year the CAISO's TPP produces updated information on transmission availability and cost of upgrades.

24. Study of two distinct portfolio choices as policy-driven sensitivities in the CAISO's TPP in 2019-20 would provide valuable information for future planning activities. Those two choices are a heavily in-state renewable development portfolio and a portfolio based more heavily on out-of-state renewable development, primarily wind from New Mexico and Wyoming.

25. The IRP process is not just an advisory planning exercise. Procurement is likely to be required from the IRP process in the near future.

26. Reliability and cost considerations are coequal goals with the GHG emissions goals in IRP, and are integral to a successful IRP process.

27. The IRP process is intended to be integrated, with focus on renewable and non-renewable resources, as well as existing and new resources.

28. The IRP proceeding is the only venue where the Commission comprehensively examines environmental, reliability, and cost issues for all LSEs.

29. CCAs, because of load migration, are likely to be the entities acquiring the most electricity resources between now and 2030.
30. The IRP filings of the majority of the CCAs were focused heavily, if not exclusively, on the acquisition of renewable and storage resources.
31. Renewable and storage resources alone are not sufficient, at present, based on existing technologies and costs, to provide enough renewable integration services to result in electric system reliability at the system level.
32. Currently, all non-renewable resources available on the CAISO system are needed for renewable integration.
33. Some natural gas generation resources will still be needed to preserve system reliability in 2030. The Commission is in the process of continuing to study the likely amount of such resources needed to remain online.
34. Renewable resources and hybrid resources may be able to provide additional ramping and load following services to decrease renewable integration challenges at the system level.
35. The Commission has the authority to order long-term procurement of renewable integration resources by CCAs, provided in Section 454.51(d) of the Public Utilities Code.
36. FOE, NRDC, CURE, and PG&E filed a Joint Petition for Modification of D.18-02-018 seeking direction on replacement power for the Diablo Canyon Power Plant, with its two units set to retire in 2024 and 2025.
37. SB 1090 (Monning, 2018) required the Commission to ensure that the IRPs are designed to avoid any increase in emissions of GHGs as a result of the retirement of Diablo Canyon.

38. The RSP adopted in D.18-02-018, as well as the PSP recommended in this decision, puts the electric sector on a trajectory to satisfy the 2030 GHG emissions target even with the retirement of Diablo Canyon.

39. The retirement of Diablo Canyon will not prevent the electric sector from meeting its portion of the statewide GHG emissions reductions between now and 2030.

Proposed Conclusions of Law

1. The Commission should approve the request for exemption from filing an individual IRP in 2018 for the following entities: Anza Electric Cooperative, EnergyCal USA (dba YEP Energy), Gexa Energy California, Liberty Power Delaware, Liberty Power Holdings, Plumas Sierra Cooperative, Praxair Plainfield, Surprise Valley Electric Cooperative, and VEA.

2. The Commission should approve the individual IRPs of the following IOUs: Bear Valley Electric Service, Liberty Utilities, Pacific Gas and Electric, PacifiCorp, San Diego Gas & Electric, and Southern California Edison.

3. The Commission should approve the individual IRPs of the following ESPs: 3 Phases Renewables, Agera Energy, American PowerNet Management, Calpine Energy Solutions, Calpine PowerAmerica CA, Direct Energy Business, EDF Industrial Power Services, Just Energy Solutions, Regents of the University of California, and Tiger Natural Gas.

4. The Commission should certify the individual IRPs of the following CCAs: Desert Community Energy, Peninsula Clean Energy Authority, Redwood Coast Energy Authority, and Solana Energy Alliance.

5. The Commission should not approve the individual IRPs of the following ESPs, pending them resubmitting information about the criteria pollutant emissions associated with generation to serve their load: Constellation NewEnergy and Shell Energy.
6. The Commission should not certify the individual IRPs of the following CCAs, pending them resubmitting information about the criteria pollutant emissions associated with generation to serve their load: Apple Valley Choice Energy, Clean Power Alliance of Southern California, CleanPower San Francisco, East Bay Community Energy, King City Community Power, Lancaster Choice Energy, Marin Clean Energy, Monterey Bay Clean Power Authority, Pico Rivera Innovative Municipal Energy, Pilot Power Group, Pioneer Community Energy, Rancho Mirage Energy Authority, San Jacinto Power, San Jose Clean Energy, Silicon Valley Clean Energy Authority, Sonoma Clean Power Authority, and Valley Clean Energy Alliance.
7. The Commission should require the entities that did not provide adequate information about criteria pollutants associated with serving their load to refile their individual IRPs via Tier 2 Advice Letter by no later than June 14, 2019.
8. The Commission should approve the request of Liberty Utilities (CalPeco Electric) to conduct a solicitation for replacement power in a short-term bridging arrangement and file the resulting contract(s) as a Tier 2 Advice Letter, with cost allocation details to be handled in its next upcoming energy cost adjustment clause proceeding.
9. The Commission should require LSEs in their individual IRPs in the future to distinguish contractual obligations and development status of individual resource choices within their portfolios. LSEs should also be required to provide this information to Commission staff no later than June 14, 2019. Such information may be filed confidentially, subject to the Commission's confidentiality rules, if requested by the individual LSE.

10. The Commission should not adopt the hybrid conforming portfolio as the preferred system plan **in the 2017-2018 IRP cycle**, because it does not meet the GHG emissions goals or the RPS requirements in 2030, and also represents a less reliable portfolio than the RSP adopted in D.18-02-018, as updated to reflect the 2017 IEPR assumptions.

11. The Commission should update the RSP adopted in D.18-02-018, with adjustments to reflect the 2017 IEPR assumptions and including an assumption of a 40-year life for fossil-fueled resources.

12. The updated RSP, with adjustments to reflect the 2017 IEPR assumptions, including an assumption of a 40-year life for fossil-fueled resources, and reflecting the most updated information about transmission availability and cost of upgrades gleaned from the most recent TPP, should be adopted as the preferred system plan for 2019.

13. The Commission should recommend to the CAISO that the PSP adopted in this decision should be its reliability base case and policy-driven base case for its 2019-20 TPP.

14. The Commission should recommend that the CAISO study, as its policy-driven sensitivity cases, two distinct portfolios representing: a heavily in-state renewable development future and a portfolio based on reliance on out-of-state wind, primarily from New Mexico and Wyoming.

15. The Commission should continue to examine GHG emissions, reliability, and cost issues on an integrated basis in the IRP process.

16. The Commission should consider whether a central buyer Special Purpose Entity (SPE) would further the goals of reducing GHG emissions, ensuring reliability and achieving cost-effectiveness.

176. The IRP process should continue to focus on all types of resources, including renewables and non-renewables, as well as existing and new resources, in an integrated manner.

~~187~~. The Commission should continue to explore the ability of renewable resources and hybrid technologies to provide ramping and load following service to decrease renewable integration challenges.

~~198~~. The Commission should ~~consider exercising~~ **exercise** its authority to require long-term commitments to renewable integration resources by CCAs in a new “procurement track” of this IRP proceeding.

~~2019~~. The Commission should focus a procurement track of the IRP proceeding on the following types of resources: diverse renewable resources in the near term at levels sufficient to reach the 2030 optimized portfolio, in coordination with the RPS program; near-term resources with load following and hourly or intra-hour renewable integration capabilities; existing natural gas resources; and long-duration (8 hour) storage resources.

~~210~~. The Commission should maintain its focus on keeping California control over the electricity resource choices to serve load in the state in the retail energy markets.

~~221~~. The Commission should continue to utilize an assumption of 2024 and 2025 for retirement of the Diablo Canyon nuclear units in its GHG analysis for meeting the electric sector emissions targets by 2030.

~~232~~. The Commission should require each LSE serving load within the PG&E territory to explicitly address in its individual IRP its plans to address the retirement of Diablo Canyon.

~~243~~. The Commission should **implement** ~~consider the implementation of~~ a citation program to ensure compliance with Public Utilities Code Sections 454.51 and 454.52.

~~254~~. It is reasonable to grant the September 12, 2018 motion of Cal Advocates to file its initial comments under seal.

256. It is reasonable to grant the January 31, 2019 motion of SCE to file its comments on the PSP under seal.

Proposed Ordering Paragraphs

1. The following load serving entities are approved as exempt from the requirement in Decision 18-02-018 to file an individual integrated resource plan in 2018: Anza Electric Cooperative, EnergyCal USA (doing business as YEP Energy), Gexa Energy California, Liberty Power Delaware, Liberty Power Holdings, Plumas Sierra Cooperative, Praxair Plainfield, Surprise Valley Electric Cooperative, and Valley Electric Association.

2. The individual integrated resource plans filed in 2018 in compliance with Decision 18-02-018 are hereby approved for the following investor-owned utilities: Bear Valley Electric Service, Liberty Utilities, Pacific Gas and Electric, PacifiCorp, San Diego Gas & Electric, and Southern California Edison.

3. The individual integrated resource plans filed in 2018 in compliance with Decision 18-02-018 are hereby approved for the following electric service providers: 3 Phases Renewables, Agera Energy, American PowerNet Management, Calpine Energy Solutions, Calpine PowerAmerica CA, Direct Energy Business, EDF Industrial Power Services, Just Energy Solutions, Regents of the University of California, and Tiger Natural Gas.

4. The individual integrated resource plans filed in 2018 in compliance with Decision 18-02-018 are hereby certified for the following community choice aggregators: Desert Community Energy, Peninsula Clean Energy Authority, Redwood Coast Energy Authority, and Solana Energy Alliance.

5. The following electric service providers' individual integrated resource plans (IRPs) are not approved in this decision and they shall refile their individual IRPs, with supplemental numerical information about the criteria pollutant emissions (nitrous oxides and particulate matter) associated with serving the load in their portfolios, in at least the four study years of 2018, 2022, 2026, and 2030, via a Tier 2 Advice Letter no later than June 14, 2019: Constellation NewEnergy and Shell Energy.

6. The following community choice aggregators' individual integrated resource plans (IRPs) are not certified in this decision and they shall refile their individual IRPs, with supplemental numerical information about the criteria pollutant emissions (nitrous oxides and particulate matter) associated with serving the load in their portfolios, in at least the four study years of 2018, 2022, 2026, and 2030, via a Tier 2 Advice Letter no later than June 14, 2019: Apple Valley Choice Energy, Clean Power Alliance of Southern California, CleanPower San Francisco, East Bay Community Energy, King City Community Power, Lancaster Choice Energy, Marin Clean Energy, Monterey Bay Clean Power Authority, Pico Rivera Innovative Municipal Energy, Pilot Power Group, Pioneer Community Energy, Rancho Mirage Energy Authority, San Jacinto Power, San Jose Clean Energy, Silicon Valley Clean Energy Authority, Sonoma Clean Power Authority, and Valley Clean Energy Alliance.

7. Liberty Utilities (CalPeco Electric) is authorized to conduct a solicitation for short-term electricity resources and file the resulting contract(s) as Tier 2 Advice Letters for Commission consideration. The resulting cost allocation issues, if any, may be handled in its next upcoming energy cost adjustment clause proceeding.

8. All load-serving entities shall provide, by June 14, 2019 informally to Commission staff and thereafter in each subsequent individual integrated resource plan filed, detailed information about

the contractual status and development status of each individual electricity resource included in their portfolios.

9. The Preferred System Portfolio shall be based on the Reference System Portfolio adopted in Decision 18-02-018, updated with adjustments to reflect the 2017 Integrated Energy Policy Report assumptions, utilizing a 40-year life assumption for fossil-fueled generation, and updated with the most recent transmission cost and availability information from the California Independent System Operator's 2018-19 Transmission Planning Process.

10. The Commission transmits to the California Independent System Operator (CAISO) for use in its 2018-19 Transmission Planning Process (TPP) the Preferred System Portfolio adopted in Ordering Paragraph 9 above, as both the reliability base case and the policy-driven base case. The Commission also transmits to the CAISO for use in its 2018-19 TPP two distinct portfolios for study as policy-driven sensitivities: one portfolio representing heavily in-state development of renewables and another representing reliance on out-of-state renewables, primarily wind from New Mexico and Wyoming. All portfolios are available at:

<http://www.cpuc.ca.gov/General.aspx?id=6442460548>.

11. The Commission hereby institutes a procurement track, **to be informed by** ~~alongside~~ the planning activities in this proceeding, in order to evaluate the need for the following types of resources: diverse renewable resources in the near term at levels sufficient to reach the 2030 optimized portfolio, in coordination with the RPS program; near-term resources with load following and hourly or intra-hour renewable integration capabilities; existing natural gas resources; and long-duration (eight hour) storage resources.

12. All entities serving load within the territory of Pacific Gas and Electric Company shall include in each individual integrated resource plan filed between the date of this decision and

2030 a section describing its plans to address the retirement of the Diablo Canyon Generation Plant.

13. The September 12, 2018 motion of the Public Advocates at the California Public Utilities Commission to file its comments under seal is granted.

14. The January 31, 2019 motion of Southern California Edison Company to file its comments on the Preferred System Portfolio under seal is granted.