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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)

OPENING COMMENTS OF PACIFIC GAS AND ELECTRIC COMPANY (U 39E) TO THE MARCH 18, 2019 PROPOSED DECISION ADOPTING PREFERRED SYSTEM PORTFOLIO AND PLAN FOR 2017-2018 INTEGRATED RESOURCE PLAN CYCLE

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SUBJECT INDEX OF RECOMMENDED CHANGES

Pursuant to Rule 14.3 of the California Public Utilities Commission's (CPUC or Commission) Rules of Practice and Procedure, Pacific Gas and Electric Company (PG&E) provides the following Subject Index of Recommended Changes in support of its comments on the Proposed Decision (PD). At a high level, the issues set forth below should be addressed in a final decision adopted by the Commission:

1. The Commission should initiate a stakeholder process to address key questions related to the IRP procurement track.

2. The Commission should ensure that each LSE within the CAISO balancing authority area addresses the Diablo Canyon retirement in its IRP filing.

3. The Proposed Decision should be modified to reflect the uncertain reliability of the Preferred System Plan.

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I. INTRODUCTION

Pursuant to Rule 14.3 of the Commission's Rules of Practice and Procedure, Pacific Gas and Electric Company (PG&E) respectfully submits these opening comments on Administrative Law Judge Fitch's proposed "Decision Adopting Preferred System Portfolio and Plan for 2017-2018 [IRP] Cycle" (Proposed Decision or PD) issued on March 18, 2019.

PG&E generally supports the Proposed Decision, which is well-reasoned for the most part and addresses some of the key process improvements needed to empower the Integrated Resource Plan (IRP) process to assist the state in achieving a clean, reliable, and affordable electric system. The Proposed Decision seeks to ensure a robust, centralized planning process that can guide the resource decisions that will inevitably be made in the state's new paradigm of decentralized retail load provision. The IRP process should lead to thorough and consistent review of the IRPs of all LSEs, including investor-owned utilities (IOUs), Community Choice Aggregators (CCAs), and Energy Service Providers (ESPs). Based on evidence gathered during the planning process, the Commission should address resource procurement needs related to greenhouse gas (GHG)-free resources, reliability, and renewable integration. In particular, PG&E agrees that Senate Bill (SB) 350 (2015) provides the Commission authority to order long-term procurement from CCAs to address identified renewable integration needs. As the

Proposed Decision notes, CCAs are likely to represent the vast majority of new resource procurement needed by the state, and the Commission's ability to guide each LSE's resource choices through the IRP process is critical to ensure development of the optimal system portfolio under California Public Utilities Code Section 454.51(a).[1/]

PG&E suggests minor changes to the PD to clarify factual conclusions regarding the lack of analysis performed on the proposed Preferred System Portfolio (PSP), to commit to the process improvements that are needed to support LSE plan aggregation into a PSP the next cycle, and to provide Staff with greater flexibility in the procurement track to focus on demonstrated system needs, rather than focus on specific resource types.

II. PG&E SUPPORTS CRITICAL ELEMENTS OF THE PD

A. The PD Provides a Thorough, Consistent, and Fair Review of LSE IRPs and Appropriately Approves PG&E's IRP Plan.

The PD provides a thorough review of each LSE IRP filed in August 2018, noting for each component of the filing requirements whether LSE filings were exemplary, adequate, or inadequate. This consistent review across all LSE types is aligned with SB 350 and the Commission's directives in D.18-02-018, which clarified the Commission's authority over the planning activities of all LSEs.[2/] PG&E appreciates the PD's recognition of PG&E's innovative approach to address the various new planning components in the IRP, including criteria pollutants and disadvantaged communities. The PD appropriately approves PG&E's IRP.

1/ *See* Pub. Util. Code § 454.51(a) ("Identify a diverse and balanced portfolio of resources needed to ensure a reliable electricity supply that provides optimal integration of renewable energy in a cost-effective manner.").

2/ *See, e.g.*, Pub. Util. Code § 454.52 (giving the Commission the authority to "ensure" that IRPs prepared by all other LSEs are done consistently and are usable and to set up a process that approves or certifies, as appropriate, that each LSE's IRP meets certain goals specified in Pub. Util. Code § 454.52(a)(1)); D.18-02-018, Conclusion of Law 8 ("The Commission's role with respect to review of CCA IRPs is substantive and requires the Commission to certify the CCA's plan as consistent with all of the requirements of Section 454.52(b)(3), as well as Section 454.51(d) and (e), which includes the Commission's authority over certain procurement-related activities of CCAs, as well as their renewable integration responsibilities.").

D.18-02-018 also clarified that the Commission's review of CCA IRPs is "substantive" and that "Commission 'certification' of CCA plans is a discretionary action."[3/] Given this substantive and discretionary authority to review plans of all LSEs, it is appropriate for the Commission to require that those LSEs that show deficiencies in their filings refile their IRPs to remedy the deficiencies. While the Proposed Decision asks CCAs and ESPs who did not provide best available quantitative estimates of air pollution emissions to refile to include that information, the Proposed Decision also notes that certain plans have other substantive deficiencies.[4/] Additionally, to ensure that LSEs provide all required information at the time of their IRP filing, and in light of the concerns raised by the Commission's with respect to the form and content of the CCAs' IRPs, the Commission should explore development of an IRP enforcement process that includes requirements for the timely submittal of plans that meet the Commission's filing requirements and potential citations for LSEs that fail to satisfy these requirements.

B. PG&E Supports the PD's Conclusion That Reliability and Cost Considerations Should Be "Co-Equal" with GHG Emissions Goal as Part of the IRP Process.

The Proposed Decision reaffirms that reliability and cost considerations are coequal goals with the GHG emissions goals in IRP.[5/] PG&E agrees, as these are the core tenets of the SB 350 legislation.[6/] To ensure reliability is assessed in an adequate manner, PG&E has offered several concrete recommendations on how to refine the reliability framework in previous comments.[7/] PG&E continues to believe that a robust reliability analysis is foundational to the IRP process

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3/ D.18-02-018, Conclusion of Law 8 and p. 29.
4/ Proposed Decision at pp. 39-40 (MCE), 69-70 (King City Community Power).
5/ Proposed Decision, Finding of Fact 26 and pp. 128, 133.
6/ *See, e.g.*, Pub. Util. Code § 454.51 (mandating that the Commission, among other requirements, "[i]dentify a diverse and balanced portfolio of resources needed to ensure a reliable electricity supply that provides optimal integration of renewable energy in a cost-effective manner"); Pub. Util. Code § 454.52(a)(1)(A-E).
7/ *See, e.g.*, "Opening Comments of Pacific Gas and Electric Company (U 39E) On Ruling Of Assigned Commissioner And Administrative Law Judge Seeking Comment On Policy Issues And Options Related To Reliability," dated December 20, 2018.

and that, without it, the validity of the IRP planning results, let alone any corresponding procurement need determination, will be challenged. Additionally, cost-effectiveness is clearly a core component of the IRP process, with the Legislature requiring the Commission to meet the electric sector's RPS and GHG goals through "optimal integration of renewable energy *in a cost-effective manner*."[8/]

C. The CPUC Must Ensure That All LSEs, Including CCAs, Are Procuring for Renewable Integration.

After finding that CCAs are likely to be the entities acquiring the most electricity resources between now and 2030 and that the IRPs for most CCAs focused heavily, if not exclusively, on the acquisition of renewable and storage resources, the Proposed Decision concludes that "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."[9/] Against this backdrop, the Proposed Decision reiterates that the Commission has the authority to order long-term procurement of renewable integration resources by CCAs.[10/] PG&E agrees. Section 454.51(a) of the Public Utilities Code directs the Commission to identify a diverse and balanced portfolio of resources needed to ensure a reliable electricity supply that provides optimal integration of renewable energy in a cost-effective manner. Section 454.51(d) authorizes the Commission to require that CCAs make long term commitments for the resources found to be necessary for satisfying their portion of the renewable integration need identified in section 454.51(a). As the Proposed Decision notes, CCAs have not yet shouldered their proportionate burden of reliability resources, particularly natural gas, despite their increasing share of the load.[11/] PG&E agrees with the Commission that

8/ *See, e.g.*, Pub. Util. Code § 454.51(a) (emphasis added).
9/ Proposed Decision, Finding of Fact 28-31.
10/ Proposed Decision, Finding of Fact 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."); Conclusion of Law 18 ("The Commission should consider exercising its authority to require long-term commitments to renewable integration resources by CCAs in a new 'procurement track' of this IRP proceeding.").
11/ Proposed Decision, p. 132.

responsibility for reliability resources and renewable integration need must be shared fairly among all LSEs serving load within the CAISO balancing authority area. PG&E supports the Commission's exercise of its jurisdiction over CCAs to that end, including its ability to order long-term procurement commitments for renewable integration and its development of appropriate regulatory enforcement mechanisms to ensure that reliability and renewable integration commitments in each LSE's IRP are met.[12/]

D. PG&E Supports the PD's Adoption of a Procurement Track That Examines LSE Needs, but Suggests Additional Stakeholder Input to Determine its Scope.

PG&E recognizes the need for IRP to address procurement needed for both reliability and the electric sector GHG target. As detailed in the Proposed Decision, PG&E agrees that there are likely reliability and renewable integration procurement needs that are not currently being addressed by the near-term Resource Adequacy (RA) process. However, PG&E is unclear on the basis in the record for the four specific resource types proposed for the procurement track in the Proposed Decision. PG&E notes that the 2019-20 cycle will utilize updated cost inputs for candidate resources that could lead to different conclusions than those from the 2017 Reference System Plan modeling. PG&E therefore suggests that the Proposed Decision be modified to instruct Commission Staff to consider system procurement needs based on the updated modeling commencing for the 2019-2020 IRP cycle and to remove references to the specific resource types currently in the Proposed Decision.[13/] Any procurement directives should be based on a clear demonstration that these specific resource types are needed by the system. Additionally, LSE responsibility for this procurement should be based on a clear demonstration of particular LSEs' needs. LSEs with no incremental procurement need should not be required to procure or pay for resources needed by other LSEs.

12/ Proposed Decision, Conclusion of Law 23 ("The Commission should consider the implementation of a citation program to ensure compliance with Public Utilities Code Sections 454.51 and 454.52.").

13/ PG&E notes specific proposed changes to Ordering Paragraph 11 in Attachment A of this filing.

Regarding near- to medium-term reliability challenges, PG&E appreciates the PD's inclusion of these issues into the IRP's procurement track and suggests this track address resources needed to maintain system and local reliability and address renewable integration challenges. PG&E notes that the CAISO's energy market has recently experienced abnormally high market prices and scarcity pricing events that may be a leading indicator of reliability challenges. As part of a robust reliability assessment, the 2019-2020 IRP cycle should consider what resource retention or new resource development may be part of the least-cost optimal plan to meet future operational needs. PG&E urges close coordination with the Commission's RA proceeding, which is expected to set up a central buyer for multi-year local RA needs. PG&E supports a designated special purpose entity whose procurement decisions are subject to Commission approval as the central buyer. The approach the Commission ends up utilizing for a central buyer in the RA proceeding should inform the IRP procurement track and future LSE planning processes. Additional coordination with the California Independent System Operator's (CAISO) Transmission Planning Process is needed, including to address local reliability needs and transmission-based alternatives.

Upon determining needs for reliability and renewable integration in the 2019-2020 IRP cycle, the Commission can then determine what proceeding and what procurement mechanism most efficiently meets these resources needs. For example, the Commission could consider the use of LSE requirements or a central buyer approach in the RA proceeding as well as the use of the IRP's LSE Planning Process, a flexible reliability trigger mechanism as proposed by SCE, or a central buyer approach in the IRP. The optimal mechanism will depend in part on the timing and nature of the resource need identified (near-term vs. long-term, system vs. local vs. flexible, resource retention vs. new resource development, etc.). PG&E suggests a stakeholder process be initiated to address the key questions related to initiating the IRP procurement track.

E. PG&E Supports the PD's Treatment of Diablo Canyon's Retirement.

The Proposed Decision concludes that the Reference System Portfolio (RSP) adopted in D.18-02-018, as well as the PSP recommended in the Proposed Decision, puts the electric sector on a trajectory to satisfy the 2030 GHG emissions target even with the retirement of Diablo Canyon.[14/] The Proposed Decision further concludes that the retirement of Diablo Canyon, using a 2024/2025 retirement planning assumption, will not prevent the electric sector from meeting its portion of the statewide GHG emissions reductions between now and 2030.[15/] PG&E supports these conclusions and supports the PD's incorporation of Diablo Canyon's retirement into the existing IRP GHG planning framework to ensure the 2030 electric sector GHG target is achieved even with Diablo Canyon's retirement.

Nevertheless, to ensure that there is explicit attention to this issue, the Proposed Decision would require "each LSE that serves load in PG&E distribution territory to include a section in its next IRP filing explicitly addressing its plans to address the Diablo Canyon retirement."[16/] PG&E believes that planning for the resources needed to meet the 2030 GHG target should be the responsibility of all LSEs throughout the CAISO balancing authority area, and not only LSEs in PG&E's service territory, as the plant is a CAISO system resource[17/] and the IRP is focused on achieving a CAISO-wide GHG target. Diablo Canyon's operation as a CAISO system resource is supported by the fact that it does not reside in a locally constrained area and is routinely able to provide energy south of Path 26.[18/]

In the context of meeting this CAISO-wide GHG target, utilizing the IRP's existing GHG planning process will allow the Commission to assess which LSEs actually show a need for incremental GHG-free procurement to meet their LSE GHG target and their resource plan to

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14/ Proposed Decision, Finding of Fact 38.
15/ Proposed Decision, Finding of Fact 39.
16/ Proposed Decision, Conclusion of Law 12 and p.145.
17/ D.18-01-022, p. 9. DCPP provides system capacity benefits to the CAISO, helping maintain a CAISO-wide system capacity supply pool. *See* A.16-08-006, Exh. PG&E-1, p. 2-21, lines 6-7.
18/ Diablo Canyon's ability to send energy north to south across Path 26 is rarely constrained. In 2017, Path 26 north-to-south was constrained approximately 11 out of 8,760 hours (Path 26 was binding 0.5% of the intervals in Q1) in the CAISO's 15-minute market. See CAISO Department of Market Monitoring's 2017 Annual Report on Market Issues and Performance, p.183.

address this need. To ensure that the IRP effectively addresses Diablo Canyon's retirement, PG&E recommends the Commission consider an oversight process to enforce compliance with LSE resource plans and ensure that each LSE within the CAISO balancing authority area addresses the Diablo Canyon retirement in its IRP filing.

III. THE PROPOSED DECISION SHOULD BE MODIFIED TO REFLECT THE UNCERTAIN RELIABILITY OF THE PREFERRED SYSTEM PLAN.

While PG&E supports the vast majority of the PD, it has identified one area that it requests the Commission address in its final decision. Specifically, PG&E is concerned that the PSP was not fully vetted and may not result in a reliable system.

PG&E agrees that the record indicates that the Hybrid Conforming Portfolio (HCP), as constructed by Commission staff, does not meet the 2030 GHG target or a 60% RPS in 2030. As PG&E noted in previous comments on the proposed PSP, additional work is needed to determine the cause of this deficiency, which may be caused by a combination of modeling differences between RESOLVE and SERVM, undercounting of emissions in the Clean Net Short (CNS) calculator, the lack of alternative LSE or publicly-owned utility resource additions in the HCP, or a deficient mix of renewables in the aggregated LSE portfolio. There is not yet a sufficient record to determine why the HCP did not meet the 2030 GHG target. Staff should work to better understand this deviation and set up the 2019-20 IRP process to ensure that LSE IRPs can be aggregated into a PSP that meets the state's GHG goals and maintains reliability with minimum cost impacts.

Unfortunately, there is also not a sufficient record to determine whether the PD's proposed PSP, which creates a new portfolio based on the RSP—with updates to match the 2017 Integrated Energy Policy Report (IEPR) loads, add 40-year, age-based thermal generation retirements, and adjust transmission availability—is reliable or whether it meets the State's Renewables Portfolio Standard (RPS) and GHG goals. The RSP updated to 2017 IEPR loads

reaches 58.3% RPS in 2030.[19/] It also shows 38.2 million metric tons (MMT) when run in SERVM, compared to the 34 MMT CAISO-wide target associated with 42 MMT statewide.[20/] Regarding reliability, the PD suggests that the proposed PSP is "likely reliable" and admits that "such a portfolio was not run through a production cost model by Commission staff."[21/] This is an insufficient threshold of review for the IRP process, which inherits the role of ensuring system and local reliability formally held by the Long-Term Procurement Plan proceeding. Indeed, based on the fact that the proposed PSP's portfolio contains less wind, less solar, and less 4-hour storage, the proposed PSP may actually be less reliable than the HCP.

The Commission should not be left in a situation to infer that the adopted system plan is "likely reliable"; instead, future cycles should ensure any system plan adopted via Commission decision has been validated through a robust, loss-of-load expectation-based reliability assessment. PG&E suggests changes to the PD's Findings of Fact, Conclusions of Law and Ordering Paragraphs to reflect the process challenges associated with the proposed PSP and the need for process improvements in future cycles.

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19/ January 11, 2019 ALJ Ruling with proposed PSP, Attachment A, slide 85.
20/ Proposed Decision, p. 105.
21/ Proposed Decision, p. 107.

IV. CONCLUSION

PG&E supports the Commission's adoption of the PD with the modifications stated herein and as indicated in Attachment A.

Respectfully Submitted,

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Dated: April 8, 2019

PACIFIC GAS AND ELECTRIC COMPANY
Integrated Resource Plan Proceeding (R.16-02-007)

ATTACHMENT A
Proposed Changes to Findings of Fact, Conclusions of Law, and Orders

Pursuant to Commission Rule 14.3, this attachment shows PG&E's proposed changes to the Proposed Decision's findings of fact, conclusions of law and ordering paragraphs in strikeout and underlining. PG&E has included only the paragraphs in which it proposes changes.

- **Finding of Fact 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 with generally similar reliability as ~~than~~ the HCP. Due to timing limitations, the Commission was unable to perform a loss-of-load expectation-based assessment of the PSP prior to this decision.
- **Finding of Fact 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 come closer to meeting SB 100's 60% ~~the~~ RPS requirement~~s~~ in 2030 and would come closer to meeting the Commission's target for the electric sector of 42 MMT of GHG emissions by 2030 than the HCP.
- **Conclusion of Law 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. However, based on Commission staff being unable to perform detailed modeling of the PSP, the Commission should undertake process improvements in the

next IRP cycle to ensure staff fully validates the GHG emissions and reliability of any system plan being considered for adoption.

- **Conclusion of Law 19**. The Commission should focus a procurement track of the IRP proceeding on all resources needed to meet the IRP's objectives, and allow flexibility to incorporate future IRP modeling outputs. ~~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.~~ Any procurement directives should be based on a clear demonstration that specific resource types are needed by the system. Load-serving entity responsibility for this procurement should be based on a clear demonstration of LSE need.
- **Conclusion of Law 22**. The Commission should require each LSE serving load within the ~~PG&E territory~~ CAISO balancing authority area to explicitly address in its individual IRP its plans to address the retirement of Diablo Canyon.
- **Ordering Paragraph 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. Since Commission staff was unable to perform detailed production cost modeling of the adopted PSP in this cycle, the Commission should undertake process improvements in the next IRP cycle to ensure Commission staff has

adequate time to validate the GHG emissions target and reliability of any PSP being considered for adoption.

- **Ordering Paragraph 11**. The Commission hereby institutes a procurement track, alongside the planning activities in this proceeding, in order to evaluate the need for resources needed to meet the IRP's objectives. Commission staff should initiate a stakeholder process to gather input on the scope and design of the procurement track. ~~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.~~
- **Ordering Paragraph 12**. All entities serving load within the ~~territory of Pacific Gas and Electric Company~~ CAISO balancing authority area 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.