BEFORE THE
PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Application of Pacific Gas and Electric Company (U 39E) for Approval of Amended Purchase and Sale Agreement Between Pacific Gas And Electric Company and Contra Costa Generating Station LLC and for Adoption of Cost Recovery and Ratemaking Mechanisms	Application No. 12-03-026

PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 E) OPENING POST-HEARING BRIEF

[CONFIDENTIAL VERSION]

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SUMMARY OF RECOMMENDATIONS

Pursuant to California Public Utilities Commission Rule 13.11, Pacific Gas and Electric Company ("PG&E") provides the following summary of its recommendations:

- The Commission should approve the Amended and Restated Purchase and Sale Agreement ("Amended PSA") for the Oakley Generating Station ("Oakley Project") and find that the Amended PSA is just and reasonable and in the best interests of PG&E's customers;

- The Commission should determine that the Oakley Project satisfies the requirements of either Decision ("D.") 10-07-045, D.07-12-052, and/or a need to procure the Oakley Project outside of the Commission's ongoing Long-Term Procurement Plan proceedings consistent with the Commission's regulatory authority under Public Utilities Code section 701, *et. seq.*

- The Commission should approve the ratemaking and cost recovery mechanism proposed by PG&E for the Oakley Project in Chapter 6 of PG&E's Initial Testimony (Exhibit 1), which includes the following elements:

    - Initial Revenue Requirement: Adoption of the Initial Revenue Requirement in Table 6-1 of Exhibit 1 for the first eight years of the Oakley Project's operation. PG&E proposes to adjust the initial revenue requirement prior to commercial operation, and at the end of each subsequent calendar year, to reflect changes in: (1) the initial operations and maintenance ("O&M") expense estimate as discussed below; (2) the capital cost recovery as discussed below; and (3) Commission-authorized cost of capital and franchise, uncollectibles and property tax factors. PG&E will begin accruing the revised initial revenue requirement for Year 1 in the Utility Generation Balancing Account ("UGBA") as of the closing date of the Amended PSA for the Oakley Project. The UGBA accrual will be adjusted annually to reflect that latest revised initial revenue requirement, and the appropriate proration to the calendar year, in each Annual Electric True-Up ("AET") proceeding following commercial operation.

    - O&M Expenses: The initial O&M expense estimate for the Oakley Project shall be equal to the amounts shown in Exhibit 1, Chapter 6, Confidential Attachment 1. PG&E proposes that the initial O&M expense estimate be adjusted for escalation as follows: (1) O&M labor expenses would be adjusted to reflect the annual change in negotiated International Brotherhood of Electrical Workers ("IBEW") Labor Rates; and (2) O&M non-labor expenses would be adjusted based on the annual change in

the material index used for the Long-Term Service Agreement ("LTSA") with General Electric. The procedural vehicle for implementing these annual escalation adjustments would be PG&E's AET proceeding. PG&E also proposes that it be authorized to request changes to its O&M estimate, and the Oakley Project initial revenue requirement, by expedited advice letter prior to the end of the eight-year period for changes needed for the following reasons: (1) delays in closing the Amended PSA; (2) increased O&M expenses caused by governmental agency requirements or changes in permitting assumptions; and (3) changes in the Oakley Project's operating profile from that assumed in developing the initial O&M expense estimate (*i.e.*, 333 starts/year and 4,329 operating hours/year). In addition to these reasons, PG&E would be permitted to update its forecast of LTSA costs in developing the initial O&M expenses on a one time basis to reflect the terms and conditions of the executed LTSA contract with General Electric. Following the conclusion of the initial eight-year period, PG&E may propose revised O&M expenses for the Oakley Project beginning with PG&E's 2024 General Rate Case ("GRC") application or a later applicable Test Year GRC. Alternatively, PG&E may propose revised O&M expenses for the Oakley Project by submitting an application for an increase in electric rates effective January 1, 2024 or later. An allocation of certain labor-related overheads and insurance costs are included in the revenue requirements for the Oakley Project. These costs will be excluded from PG&E's GRCs for rates effective during the period prior to January 1, 2024 to prevent double-recovery.

- Initial Capital Costs: The initial capital cost estimate is included in the Confidential Attachment 1. PG&E proposes to include in rate base and recover in rates the actual costs of the Oakley Project up to the initial capital cost estimate without the need for an after-the-fact reasonableness review. PG&E proposes the recovery of costs in excess of the initial capital cost estimate as follows: (1) First $20 Million – 100 Percent Recovery – PG&E would be permitted to include in rate base and recover in rates 100 percent of actual capital costs up to $20 million in excess of the I initial capital cost estimate without the need for an after the fact reasonableness review; (2) Next $20 Million – 90 Percent Recovery – PG&E would be permitted to include in rate base and recover in rates 90 percent of actual capital costs between $20 million and $40 million in excess of the initial capital cost estimate without the need for an after the fact reasonableness review; and (3) Next $20 Million – 80 Percent Recovery – PG&E would be permitted to include in rate base and recover in rates 80 percent of actual capital costs between $40 million and $60 million in excess of the initial capital cost estimate without the need for an after-the-fact

reasonableness review. If the actual capital costs of the Oakley Project exceed the initial capital cost estimate by more than $60 million, PG&E requests that it be permitted to file an application with the Commission seeking to recover additional amounts. PG&E would be allowed to recover these additional amounts only if approved by the Commission upon a showing of reasonableness.

- Changes to Initial Capital Cost Estimate: PG&E proposes that it be permitted to request changes to the initial capital cost estimate by expedited advice letter under the following limited circumstances: (1) delays in closing the Amended PSA; (2) operational Performance Enhancements; and (3) changes beyond PG&E's control (including new permit or regulatory requirements, greenhouse gas changes, and costs incurred under the Major Legal Change mechanism in the Amended PSA. Incentive Payments and Penalties under the Amended PSA are not included in the initial capital cost estimate and will be fully recovered in the case of an incentive, or fully returned to customers in the case of a penalty based upon actual incurred charges or payments.

- Capital Additions: The initial revenue requirement assumes the capital additions and related revenue requirements shown in Exhibit 1, Chapter 6, Table 6-2. Prior to January 1, 2024, capital additions to the Oakley Project will be placed in rate base and booked for accounting and ratemaking purposes but the revenue requirements associated with such capital additions shall be recovered in rates in GRCs for rates effective prior to January 1, 2023, only under the following circumstances: (1) the capital additions improve safety, enable PG&E to comply with regulatory requirements, and/or reduce costs (such as capacity enhancement or efficiency improvements); or (2) for other capital additions, the revenue requirement shall not exceed the capital additions revenue requirements as shown above. For rates effective January 1, 2024 or later, PG&E proposes there be no limitations on PG&E's ability to propose recovery of capital additions for the Oakley Project in a GRC or other application.

- The Commission should direct that, beginning on the closing date for the Amended PSA and ending December 31, 2023, PG&E will prepare an annual report describing monthly and annual plant availability, average monthly and annual heat rates, and monthly hours of scheduled maintenance for the Oakley Project and the Colusa Generating Station, Gateway Generating Station and Humboldt Bay Generating Station. The annual report shall be provided to the Division of Ratepayer Advocates, The Utility Reform Network, and the Commission's Energy Division on a confidential basis. The report will include availability based upon forced outages

(*i.e.*, excluding scheduled maintenance). The report will also track the number of start-ups for these four combined cycle facilities.

- The Commission should determine that a Certificate of Public Convenience and Necessity ("CPCN") is not required for Commission approval of the Amended PSA because, under the Amended PSA, neither PG&E nor any other electrical corporation will ever "begin the construction of" the Oakley Project (*see* Pub. Util. Code § 1001, CPUC General Order 131-D, Section III.A.); and,

- The Commission should determine that the Amended PSA is not barred by D.12-04-046, D.07-12-052 and/or D.10-07-045.

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OF THE STATE OF CALIFORNIA

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PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 E) OPENING POST-HEARING BRIEF

In the very near future, the California electrical grid will face unprecedented operational challenges. Within the next few years, thousands of megawatts ("MW") of intermittent, renewable generation will be coming on-line as a part of California's implementation of a 33% Renewables Portfolio Standard ("RPS"). At the same time, thousands of MW of aging, inefficient once-through cooling ("OTC") facilities will be retiring, significantly reducing the amount of dispatchable capacity in California. The Commission, Legislature and Governor are also pursuing efforts to aggressively increase the amount of distributed generation in California. While all of these programs and proposals are laudable, together they create an enormous challenge for maintaining the reliability of the electric system in California. As the California Independent System Operator ("CAISO") recently explained, nothing "will undermine the state's policy goals more quickly than reliability issues, challenges integrating renewable resources, or significant cost impacts."[1]

This Application presents the Commission with a unique opportunity to proactively and concretely address the looming reliability crisis in California. In other proceedings before the

[1] Exhibit ("Ex.") 2, Attachment B at p. 3.

Commission and other regulatory agencies, parties have endlessly debated policy objectives and potential solutions to address the reliability problems arising from a 33% RPS, increasing amounts of distributed generation, and the retirement of OTC units. This Application is a concrete proposal to address those challenges. The Oakley Generating Station ("Oakley Project") is a fully-permitted, state-of-the-art new generation resource that is specifically designed to facilitate the integration of renewable resources and contribute to the reliable operation of the CAISO grid. The Oakley Project was originally proposed in PG&E's 2008 Long-Term Request for Offers ("LTRFO") and had one of the best market valuations of any of the numerous offers submitted in that solicitation. The Oakley Project is as cost-effective today as it was when it was first proposed. As demonstrated in detail in PG&E's Application, prepared testimony, and in this opening brief, the Oakley Project is the "least cost/best fit" resource to address the identified reliability needs.

It is also notable that the Commission is not the only regulatory agency that has considered the Oakley Project. Both the California Energy Commission ("CEC") and Bay Area Air Quality Management District ("BAAQMD") conducted independent and extensive reviews of the Oakley Project. After preparing detailed reports and analyses, both agencies issued permits and final determinations in favor of the Oakley Project. Moreover, as explained throughout this opening brief, both agencies made numerous findings regarding the environmental and operational benefits associated with the Oakley Project. While not controlling, these determinations are certainly informative and only further support the significant amount of evidence in this proceeding regarding the Oakley Project's benefits.

In this Application, PG&E is requesting that the Commission approve the Amended and Restated Purchase and Sale Agreement ("Amended PSA") between Contra Costa Generating Station, LLC ("CCGS"), the Oakley Project developer, and PG&E. PG&E is also requesting that

the Commission approve a ratemaking and cost recovery proposal that is identical to a proposal that was included in a partial settlement in the 2009 Commission proceeding that initially addressed the Oakley Project. As the Scoping Memo in this proceeding makes clear, there are several avenues for the Commission to approve the Amended PSA. First, in Decision ("D.") 10-07-045, the Commission established clear criteria under which PG&E could resubmit the Oakley Project through an application. As described in detail below, these criteria have been readily met and, given the voluminous evidence in this proceeding regarding the benefits of the Oakley Project and the reasonableness of the Amended PSA, the Amended PSA should be approved.

Second, the Commission can approve the Amended PSA under D.07-12-052, which allowed utilities to propose utility-owned generation ("UOG") facilities outside of a competitive Request for Offer ("RFO") under certain unique circumstances and if an RFO is infeasible. The evidence in this proceeding clearly demonstrates that an RFO is infeasible to meet renewable integration reliability needs that will arise as early as 2018, given the largely undisputed fact that developing new generation resources in California takes a minimum of six years, and often takes substantially longer. The Oakley Project is uniquely situated to address California's reliability needs given its operating characteristics, the fact that it is fully permitted, and its development status.

Third, the Commission has inherent authority under Public Utilities Code section 701 to take all actions necessary in the exercise of its authority over the utilities in California. Given issues such as regulatory lag, the risk of project failures and delays, and the need for a reliable regulatory framework, all of which support approval of the Oakley Project, the Commission can exercise its authority to approve the Amended PSA. In addition to the reliability and environmental benefits of the Oakley Project, approving the Amended PSA will likely have a

positive impact on the market and facilitate other state policies, such as the retirement of aging, inefficient OTC units.

With regard to the specific terms and conditions of the Amended PSA, there is little dispute in this proceeding as to the reasonableness of these terms. In fact, only one party in this proceeding, the Division of Ratepayer Advocates ("DRA"), has substantively questioned specific terms and conditions of the Amended PSA, and DRA's concerns are limited to a single provision. If the Commission determines the Oakley Project is needed, it should approve the relatively undisputed terms and conditions of the Amended PSA.

PG&E has also proposed a ratemaking and cost recovery mechanism that is reasonable and consistent with Commission precedent. As described below, the various elements of PG&E's proposal are generally consistent with other Commission decisions approving UOG facilities. Where PG&E's proposal varies from Commission precedent, PG&E has demonstrated that its ratemaking and cost recovery proposal is reasonable and should be adopted.

Finally, several parties have asserted that PG&E's Application is barred by certain requirements in D.12-04-046, which was issued in the 2010 Long-Term Procurement Plan ("LTPP") proceeding after the Application was filed. As explained in more detail below, these arguments and legally and factually flawed, and do not merit rejecting the Amended PSA.

I. FACTUAL BACKGROUND

A. Description of the Oakley Project And The Amended PSA

1. The Oakley Project

The Oakley Project is a 586 MW combined-cycle facility that will be located in Oakley, California, on a portion of an industrial site that is currently zoned heavy industrial, and is

immediately adjacent to necessary gas and electric interconnections.[2] This air cooled facility will consist of two General Electric ("GE") 7FA.05 combustion turbines, two Heat Recovery Steam Generators ("HRSG"), and one steam turbine producing 586 MW under July peak conditions, and 624 MW under ISO[3] conditions. The Oakley Project will be the most efficient air cooled gas fired generation resource in California with an expected heat rate of 6,752 British thermal units per kilowatt-hour ("Btu/kWh") on a higher heating value basis at ISO conditions. The Oakley Project's advanced technology will set new standards for power plants, including reduced carbon dioxide ("CO_2") emissions due to the low heat rate and quicker start up times.[4] The facility will also provide Bay Area Resource Adequacy ("RA") capacity.

The Oakley Project will be one of the first of a new series of combined-cycle facilities based on an evolutionary upgrade to the GE 7FA series of combustion turbines designed to provide higher efficiency, greater output, higher availability, greater operational flexibility, and reduced maintenance, all while maintaining extremely low emissions.[5] With the Rapid Response technology and various controls improvements associated with the new turbine design, the Oakley Project will have significantly reduced startup and shutdown emissions, as compared to existing combined-cycle facilities. In addition, the Oakley Project is more than just an upgrade of older combined-cycle technology, which was designed primarily to run efficiently at base load (full output). The Rapid Response technology incorporated in the Oakley Project has been

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[2] *See generally*, Ex. 1, Chapter 2 (PG&E, Maring) (describing the Oakley Project).

[3] ISO refers to the International Organization for Standards. In this reference it is referring to a standard set of conditions that is used for rating both generation equipment and the entire power plant. The standard for the rating is 59^0F, 60% relative humidity, and atmospheric pressure at sea level.

[4] Ex. 1 at p. 2-1, lines 27-28 (PG&E, Maring). In its citations to testimony, PG&E will include the Exhibit number, pages and line numbers, and the name of the party and witness sponsoring the testimony in parentheses.

[5] *Id.* at p. 2-2, lines 3-27 (PG&E, Maring).

specifically designed to address the increasing challenges faced by grid operators created by ever increasing amounts of intermittent renewable generation.[6] Electricity will be generated by the combustion turbines and a reheat steam turbine operating on heat energy recovered from the combustion turbines' exhaust. By recovering this heat, which would otherwise be lost up the exhaust stacks, the efficiency of this combined-cycle power plant is increased as compared to either combustion turbines or a steam turbine operating alone. This configuration is well suited to not only the large, steady loads met by a base load plant that generates energy efficiently over long periods of time, but also to rapid start and rapid load change. Furthermore, the project will use evaporative inlet air coolers, two triple-pressure HRSGs and an air cooled steam condensing system, all to further enhance the Oakley Project's efficiency, minimize the project's water consumption, minimize the project's potential effects on the environment, and reduce the life cycle costs.[7]

Actual air emissions will be controlled through a combination of dry low nitrogen oxide ("NO_x") combustors on the combustion turbines and a HRSG equipped with a selective catalytic reduction system to further reduce NO_x, and a Carbon Monoxide ("CO") catalyst to control CO emissions.[8] In addition, CO_2 emissions per kWh will be reduced as a result of the Oakley Project's low heat rate and fast starting capabilities. The Oakley Project will also use air cooling instead of water cooling for the majority of the process cooling loads which will reduce the plant's water use by roughly 90 percent when compared to similar combined-cycle plants that utilize solely water for process cooling.[9] Finally, a significant environmental advantage to the

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[6] *Id.* at p. 2-2, lines 12-15 (PG&E, Maring).

[7] *Id.* at p. 2-2, lines 20-27 (PG&E, Maring).

[8] *Id.* at p. 2-2, lines 28-32 (PG&E, Maring).

[9] *Id.* at p. 2-2, line 33 to p. 2-3, line 4 (PG&E, Maring).

Oakley Project is its location in a former industrial area that is immediately adjacent to the electric transmission and gas supply infrastructures.[10] As a result of its location, the Oakley Project will not be required to interconnect with gas, electric, water, or other utilities through environmentally sensitive areas.

The Oakley Project has enjoyed and continues to enjoy an unprecedented level of community support.[11] Evidence of this support can be found in the transcript of the CEC pre-hearing conference and evidentiary hearing that was held on March 15, 2011 at the Oakley City Hall. At this public hearing more than 50 stakeholders spoke in favor of the project while only six spoke in opposition. In addition to support from the local community, numerous elected officials have expressed strong support for the project.[12]

2. The Amended PSA

The Amended PSA is a contract between PG&E and CCGS that requires CCGS to design, permit, develop and construct the Oakley Project.[13] Once the Oakley Project is constructed and CCGS has demonstrated compliance with all of the performance requirements, operational criteria and conditions precedent, PG&E will purchase the Oakley Project and take ownership of the facility.[14] The Amended PSA contains numerous terms and conditions, as well as detailed specifications regarding the required operating attributes and performance of the Oakley Project. Some of the key Amended PSA provisions bear mentioning here. First, the

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[10] *Id.* at p. 2-16, lines 4-8 (PG&E, Maring).

[11] *Id.* at p. 3-10, lines 2-16 (PG&E, Maring and Royall).

[12] *Id.*

[13] The Amended PSA was identified as Exhibit 19-C. Attachment E-1 to the Amended PSA was identified as Exhibit 36-C. The Amended PSA is described in detail in Ex. 1, Chapter 4 (PG&E, Monardi).

[14] Ex. 1 at p. 4-1, lines 16-20 (PG&E, Monardi).

Amended PSA has a Guaranteed Commercial Availability Date ("GCAD") of June 1, 2016.[15] This means that CCGS has committed to the Oakley Project being operational by Summer 2016.[16]

Second, the Amended PSA includes performance guarantees regarding the operation of the Oakley Project to ensure that PG&E's customers receive the full benefit of the facility.[17] Third, the Amended PSA has specific closing conditions that provide that PG&E can review the Oakley Project permits and documentation, and that these materials must be to PG&E's satisfaction. Similar to the performance guarantees, these closing provisions ensure that PG&E's customers receive what they are paying for. PG&E is not required to assume ownership of the Oakley Project until the closing conditions are fully satisfied.[18] The Amended PSA also includes project milestones, which allow PG&E to monitor the development of the facility, and detailed credit terms to secure CCGS' performance.[19]

PG&E and CCGS spent a considerable amount of time negotiating the Amended PSA. During these negotiations, one of PG&E's primary goals was to reduce the cost and risk for its customers. PG&E negotiated to get the best price possible and included in the Amended PSA numerous contract provisions intended to mitigate risks to PG&E's customers, such as the risk of non-performance.[20] PG&E's customers will not bear any permitting, development or construction risks under the Amended PSA. Moreover, CCGS has worked with PG&E to

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[15] *Id.* at p. 4-3 (PG&E, Monardi).

[16] The Amended PSA includes some provisions for limited delays in the Guaranteed Commercial Availability Date as well as delay damage provisions. *See* Ex. 1 at pp. 4-3 and 4-7 to 4-8 (PG&E, Monardi).

[17] *Id.* at p. 4-4 (PG&E, Monardi).

[18] *Id.* at p. 4-4 (PG&E, Monardi).

[19] *Id.* at pp. 4-10 to 4-12 (PG&E, Monardi).

[20] *Id.*

improve the value and minimize the overall cost of the Oakley Project. For example, even though the original PSA for the Oakley Project was executed in 2009, almost three years ago, CCGS has not increased the price. Instead, CCGS absorbed the risk of inflationary increases and other cost increases at no cost to PG&E's customers.

B. Procedural Background

CCGS initially submitted an offer for the Oakley Project in PG&E's 2008 Long-Term Request for Offers ("LTRFO").[21] After review and evaluation by PG&E, an Independent Evaluator ("IE") and PG&E's Procurement Review Group ("PRG")[22], CCGS' offer was short-listed, and PG&E and CCGS proceeded to negotiate a final contract. After lengthy negotiations, PG&E and CCGS entered into the original PSA for the Oakley Project that was submitted for Commission review and approval in Application ("A.") 09-09-021, along with several other winning offers from the 2008 LTRFO. The proposed Oakley Project had one of the best market valuations of all of the offers received in the 2008 LTRFO and Commission approval of the PSA was supported by the IE who monitored the 2008 LTRFO and evaluated all of the offers. Under the original PSA, the GCAD for the Oakley Project was June 2014.

In July 2010, the Commission issued a decision approving some of the winning offers from the 2008 LTRFO, but not approving the Oakley Project "at that time."[23] The Commission noted the "numerous beneficial attributes" of the Oakley Project, but determined that it was not needed at that time. As Commissioner Bohn explained in his concurrence:

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[21] *See generally* Decision ("D.") 07-12-052 at pp. 4-5 (describing the regulatory background for the 2008 LTRFO).

[22] The PRG is an advisory group composed of individuals from the Commission's Energy Division, consumer advocates such as The Utility Reform Network ("TURN") and DRA, environmental groups, and other non-market participants.

[23] *See* D.10-07-045 at p. 40.

> What I would have liked is to have the opportunity to consider approving the Oakley project, but with a later date for construction and operation, so as to better match the needs of PG&E and its ratepayers. However, the contract presented to us does not contain flexibility in that regard and we do not at this time have the option of considering better dates for the development of the project.[24]

However, given the benefits of the Oakley Project and the recognized challenges with developing new generation resources in California, the Commission did not unequivocally reject the Oakley Project. Instead, the Commission adopted a path for PG&E to resubmit the Oakley Project if, in the future, certain conditions were met.[25]

In August 2010, PG&E filed a petition for modification of D.10-07-045, explaining that CCGS and PG&E had agreed to amend the PSA to modify the GCAD from June 2014 to June 2016 in response to Commissioner Bohn's statements regarding timing. The Commission approved the amended PSA in D.10-12-050. The Commission's decision was subsequently challenged in both the California Court of Appeals and the California Supreme Court. On March 16, 2012, the California Court of Appeals issued a decision annulling D.10-12-050 on procedural and due process grounds.[26] The Court of Appeal did not address the merits of the Oakley Project.

Two weeks after the Court of Appeal decision was issued, on March 30, 2012, PG&E filed this Application seeking Commission approval of the Amended PSA. A number of parties filed protests to the Application, to which PG&E responded on May 17, 2012. PG&E served its Initial Testimony (identified as Exhibit 1) on May 21, 2012. A pre-hearing conference was conducted on May 22, 2012 and the *Assigned Commissioner's Scoping Memo and Ruling* was

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[24] *Id.*, Concurrence of Commissioner Bohn at p. 2.

[25] *Id.* at pp. 40-41.

[26] *TURN v. California Public Utilities Commission*, Case No. A.132439 (Cal. Ct. App. 1st Dist.), unpublished decision issued March 16, 2012.

issued on May 25, 2012 ("Scoping Memo"). The Scoping Memo identified the scope of issues for this proceeding and included a schedule for testimony and hearings.

Discovery and motion practice in this proceeding have been intensive. Parties have filed and/or opposed motions to strike, motions to seal the evidentiary record, and motions to dismiss. With regard to discovery, the active parties in this proceeding have propounded 19 sets of data requests on PG&E that included a total of 419 questions (including subparts).[27]

Intervenors submitted hundreds of pages of testimony and exhibits on July 23, 2012, both supporting and opposing the Amended PSA and the Oakley Project. PG&E and intervenors submitted Rebuttal Testimony on August 3, 2012. Administrative Law Judge ("ALJ") Yacknin conducted three and a half days of hearings between August 15-20, 2012. Opening briefs are being filed concurrently on September 17, 2012 and reply briefs on October 1, 2012.

PG&E's opening brief addresses each of the issues raised in the Scoping Memo and demonstrates, based on the significant evidentiary record, that the Amended PSA is just and reasonable and that it should be approved by the Commission. In addition, the Commission should adopt the ratemaking and cost recovery proposal advocated by PG&E.

II. ISSUE 1(A) – A CPCN IS NOT REQUIRED FOR THE OAKLEY PROJECT.

A. Statutory Requirements And Commission Precedent Regarding CPCNs.

Under California Public Utilities Code section 1001[28], a certificate of public convenience and necessity ("CPCN") is required before a Commission-regulated utility begins construction of, or extends, a "line, plant or system." Section 1001 provides in relevant part:

> No railroad corporation whose railroad is operated primarily by electric energy, street railroad corporation, gas corporation, electrical corporation,

[27] Ex. 2 at p. 80, lines 8-13 (PG&E, Monardi).

[28] All statutory references in this opening brief are to the Public Utilities Code unless otherwise specified.

> telegraph corporation, telephone corporation, water corporation, or sewer system corporation shall *begin the construction of* a street railroad, or of a line, plant, or system, or of any extension thereof, without having first obtained from the commission a certificate that the present or future public convenience and necessity require or will require such construction. (emphasis added)

For electric facilities, the Commission implements this requirement through General Order 131-D. Section III.A of that General Order likewise provides that "[n]o electric public utility shall *begin construction* in this state any new electric generating plant" of greater than 50 MW without first obtaining a CPCN.[29] Under both Section 1001 and General Order 131-D, the key requirement is that the utility is constructing the facility at issue.

Consistent with the plain meaning of the statute and the General Order, the Commission has determined that a CPCN is not required under Section 1001 where, as here, a utility is purchasing a power plant, rather than constructing it. For example, PG&E purchased the Colusa Generating Station ("Colusa Project") under the terms of a Purchase and Sale Agreement ("Colusa PSA") that was very similar to the Amended PSA at issue in this proceeding.[30] With regard to the Colusa PSA, the Commission expressly determined that a CPCN was not required because the Colusa Project "will not be built by PG&E."[31] In that same proceeding, the Commission determined that a CPCN was required for the Humboldt Generation Station ("Humboldt Project") because that facility, unlike the Colusa Project, was being built by PG&E.[32] Notably, several of the intervenors in this proceeding were involved in the Colusa

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[29] G.O. 131-D, Section III.A.; *see also id.* at Section I (electric utilities may not "begin construction" of electric facilities without complying with provisions of the General Order).

[30] *See* D.06-11-048 (describing the Colusa Project and the Colusa PSA); Ex. 2 at p. 2, line 28 to p. 4, line 2 (PG&E, Monardi) (explaining the background of the Colusa PSA and the similarities between the Colusa PSA and the Amended PSA at issue in this proceeding).

[31] D.06-11-048 at p. 32, n. 18.

[32] *Id.* at p. 32; *see also* Ex. 2 at p. 4, lines 3-13 (PG&E, Monardi) (explaining that PG&E was responsible for permitting and construction of the Humboldt Project).

Project proceeding.[33] None of these parties asserted that PG&E was required to obtain a CPCN for the Colusa Project.

After the Commission approved the Colusa PSA, the developer notified PG&E that the developer did not intend to proceed with the project.[34] PG&E stepped in to acquire the developer's assets and the Colusa Project permits, and then constructed the Colusa Project on its own. At that point, because PG&E was going to construct the Colusa Project, a CPCN was required. PG&E requested a CPCN in A.07-11-009 and the Commission granted it in D.08-02-019.

B. PG&E Is Not Constructing The Oakley Project And Thus A CPCN Is Not Required.

Under the terms of the Amended PSA, CCGS is constructing the Oakley Project, not PG&E. PG&E will have no ownership interest in the Oakley Project until it is fully constructed, all permitting and governmental approvals are obtained to PG&E's satisfaction, and CCGS has complied with all of the closing requirements in the Amended PSA.[35] The conditions for the transfer of the Oakley Project from CCGS to PG&E are generally described in PG&E's Initial Testimony and described in more detail in the Amended PSA sections referenced in PG&E's Initial Testimony.[36] Until the transfer occurs, PG&E will not own the Oakley Project, nor is PG&E making any payments to CCGS during the Oakley Project development. Moreover, PG&E has no direct involvement in or responsibility for construction activities related to the Oakley Project. All of this work is being undertaken by CCGS. CCGS is responsible for all construction activities, including retaining all contractors necessary to develop the Oakley

[33] Ex. 2 at p. 3, lines 16-23 (PG&E, Monardi).

[34] Ex. 2 at p. 3, lines 6-15 (PG&E, Monardi).

[35] *Id.* at p. 1, line 26 to p. 2, line 7 (PG&E, Monardi).

[36] Ex. 1 at p. 4-4 ("Transfer of Project to Utility") (PG&E, Monardi).

Project, and all development activity related to the Oakley Project. Indeed, if the terms of the Amended PSA are not satisfied, the Oakley Project will not be transferred to PG&E and PG&E will never have an ownership interest in the project.[37]

The Amended PSA for the Oakley Project is strikingly similar to the PSA for the Colusa Project. In that case, as here, a third-party was responsible for permitting and construction and the utility only became responsible for the project once it had passed the contractual performance tests and ownership passed from the developer to the utility.

At the hearings in this proceeding, several parties asked questions regarding PG&E's involvement in construction activities related to the Oakley Project. For example, these parties noted that PG&E has the right to review the Engineering, Procurement and Construction ("EPC") contract between CCGS and its general contractor and that, at various points in time, PG&E would have personnel located on the project site.[38] However, as PG&E witness Monardi explained, these activities simply reflect prudent monitoring of CCGS' construction and development of the Oakley Project.[39] The Oakley Project represents a significant, beneficial investment for PG&E's customers. As Mr. Monardi testified, it would not be prudent for PG&E to enter into the Amended PSA for the Oakley Project and then simply walk away for several years while the Oakley Project was being constructed, returning only at the end to take ownership of the project.[40] Although the Amended PSA provides PG&E with the right to

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[37] Ex. 2 at p. 2, lines 8-11 (PG&E, Monardi).

[38] *See e.g.* Transcript ("Tr.") at p. 213, line 19 to p. 215, line 8 (PG&E, Monardi) (questions by WPTF regarding PG&E involvement in construction). In its citations to the hearing transcript, PG&E will include the page and line numbers and the name of the party and witness sponsoring the testimony in parentheses.

[39] Tr. at p. 214, line 11 to p. 215, line 8; p. 222, line 23 to p. 224, line 3 (PG&E, Monardi).

[40] *Id.*

monitor the project development, PG&E is not responsible for permitting or constructing the Oakley Project.

Notably, several intervenors candidly acknowledged that PG&E is not building the Oakley Project. TURN witness Kevin Woodruff testified that "a third party would build Oakley and sell the plant to PG&E, which would then own and operate it."[41] William Monsen, the witness for the Independent Energy Producers Association ("IEP") testified that "[CCGS] will develop, construct, and then transfer the Oakley Project to PG&E pursuant to the [Amended PSA]."[42] Moreover, when PG&E initially proposed the Oakley Project in A.09-09-021, no party in that proceeding asserted that a CPCN was required.[43] Finally, even DRA, one of the parties that most strongly opposes the Oakley Project, has candidly admitted that a CPCN is not required.[44]

C. D.12-04-046 Does Not Require A CPCN For The Oakley Project.

In testimony, only two parties – Western Power Trading Forum ("WPTF") and CAlifornians for Renewable Energy ("CARE") -- asserted that a CPCN is required for the Oakley Project.[45] Both of these parties relied exclusively on language from D.12-04-046 to support their position. However, D.12-04-046 does not require PG&E to obtain a CPCN for the Oakley Project for several reasons.

As a preliminary matter, D.12-04-046 was not in effect when PG&E filed the Application that initiated this proceeding. PG&E filed its Application on March 30, 2012. D.12-04-046 is

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[41] Ex. 6 at p. 1, lines 18-19 (TURN, Woodruff).

[42] Ex. 8 at p. 5, lines 4-5 (IEP, Monsen).

[43] Ex. 2 at p. 2, lines 23 to 27 (PG&E, Monardi).

[44] *Id.* at p. 4, line 29 to p. 5, 3 (PG&E, Monardi).

[45] Ex. 10 at pp. 3-5 (WPTF, Ackerman); Ex. 13 at p. 2 (CARE, Sarvey).

dated April 19, 2012 and did not become effective until that date.[46] Even if D.12-04-046 requires a CPCN for situations such as this, in which the utility is not permitting or constructing the facility, it does not apply in this situation because D.12-04-046 only became effective after the Application in this proceeding was filed. The Commission cannot and should not retroactively impose requirements that did not exist when this Application was filed.

Moreover, there is no requirement in D.10-07-045 that PG&E seek a CPCN for the Oakley Project. Instead, in that decision, the Commission indicated that PG&E could resubmit the Oakley Project "via application" if the facility had all necessary permits and one of three conditions was met.[47] The Commission did not require PG&E to request a CPCN for the Oakley Project. Having met the D.10-07-045 conditions, as described in Section V below, the Commission should not now impose a new, additional CPCN requirement that is simply not authorized under Section 1001 or General Order 131-D. D.10-07-045 is specific to the Oakley Project and thus is controlling as compared to the more general requirements of D.12-04-046.

Even if D.12-04-046 applied to the Oakley Project, which it does not, the decision does not expressly state that a CPCN is required for approval of PSAs under which the utility neither permits nor constructs a project. In D.12-04-046, the Commission was discussing generally rules related to UOG projects.[48] When it referenced the CPCN requirements, the Commission did not consider how the CPCN requirement might apply to different types of UOG development, nor did the Commission explain that it was vacating existing Commission precedent holding that a CPCN is not required for PSAs.[49]

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[46] D.12-04-046 at p. 78.

[47] D.10-07-045 at p. 40-41.

[48] D.12-04-046 at pp. 28-39.

[49] *Id.* at pp. 31, 33, 37-38 (mentioning the CPCN requirement).

Indeed, D.12-04-046 does not discuss the various methods for developing UOG projects, such as projects which the utility constructs as compared to projects purchased by the utility through a PSA, and how the CPCN requirements apply to the different types of UOG development. Rather, the Commission expressed concern about the fairness of utility-proposed projects competing with third-party projects proposed during the RFO process, and concluded that UOG proposed by a utility may seem unfairly chosen if selected in a RFO process. Given the issues addressed in D.12-04-046, it is apparent that the Commission was not considering at that time whether a PSA would trigger the need for a CPCN. Rather, the Commission has expressly determined that a CPCN is not required for a PSA.[50]

Finally, and most importantly, CARE's and WPTF's interpretation of D.12-04-046 contradicts the plain language of Section 1001 and General Order 131-D, which require a CPCN only where the utility is responsible for constructing a generating facility. When it enacted Section 1001, the Legislature was clear that a CPCN is required only before a utility can "begin the construction" of a generating facility. Requiring a CPCN in a situation in which the utility never begins or performs construction of a facility would impose CPCN requirements that are more onerous than what was intended by the Legislature and would contravene the plain language of Section 1001, which requires the utility to "begin" construction. It would also significantly change General Order 131-D without instituting a rulemaking proceeding to properly consider stakeholder concerns about the effects of such a change, which presumably would affect not only UOG but also electric transmission and distribution projects.

Requiring utilities to obtain a CPCN for projects developed, permitted, and constructed by non-utility developers would serve no practical purpose given the CEC's exclusive

[50] D.06-11-048 at p. 32, n. 18.

jurisdiction over the siting and licensing of such facilities. CARE's and WTPF's argument that D.12-04-046 somehow fundamentally rewrote both Section 1001 and General Order 131-D is nonsensical and must be rejected.

III. ISSUE 1(B) – THE OAKLEY PROJECT IS NOT BARRED BY D.12-04-046.

In D.12-04-046, the Commission adopted new rules concerning the participation of UOG offers in utility RFOs and when a UOG proposal could be made by a utility. In particular, the Commission determined that it was no longer appropriate for UOG proposals to participate in utility RFOs.[51] This changed long-standing Commission precedent that allowed both UOG and PPA proposals to participate in utility RFOs.[52] The Commission also decided in D.12-04-046 that UOG proposals could only be made by application after a "failed" RFO and the submission of an advice letter demonstrating the RFO failed.[53] This also represented a modification to well-established Commission policy.[54]

In protests to PG&E's Application in this proceeding, several parties asserted that the Oakley Project was barred by D.12-04-046 because PG&E had not demonstrated a failed RFO.[55] However, in testimony, only two parties addressed this issue – CARE and WPTF.[56] Both of these parties argue generally that the Oakley Project is barred because PG&E has not demonstrated a failed RFO. These arguments are fundamentally flawed.

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[51] D.12-04-046 at p. 31.

[52] D.04-12-048 at pp. 125-127 (allowing both PPA and UOG proposals in a utility RFO); D.07-12-052 at pp. 205-206 (same).

[53] D.12-04-046 at pp. 38-39.

[54] *See* D.07-12-052 at pp. 211-212 (allowing application proposing a UOG project without the requirement of a failed RFO).

[55] *See e.g.* DRA Protest at pp. 8-9; Robert Sarvey Protest at p. 2; WPTF/AReM Protest at pp. 6-7; Fairfield/Madera Protest at p. 3.

[56] Ex. 10 at pp. 5-6 (WPTF, Ackerman); Ex. 13 at pp. 2-3 (CARE, Sarvey).

First, as PG&E explained above in Section II, this Application was filed before D.12-04-046 became effective. The Commission did not indicate in D.12-04-046 that the requirements in that decision would be applied retroactively. Given the fact that D.12-04-046 only became effective after this Application was filed, the new requirements adopted in that decision should not be retroactively applied to the Oakley Project.

Second, D.10-07-045 provides the specific requirements for PG&E to resubmit an application for approval of the Oakley Project. In that decision, the Commission did not require a failed RFO, or for that matter the filing of a CPCN. Moreover, there is nothing in D.12-04-046 that would indicate that the Commission was changing or modifying the requirements of D.10-07-045.

Third, the Oakley Project was the product of a competitive solicitation. The Oakley Project was offered in PG&E's 2008 LTRFO and was one of the winning offers.[57] When the Commission reviewed the 2008 LTRFO results, it determined that the 2008 LTRFO was generally open, transparent and reasonable.[58] The Commission also determined that the Oakley Project had numerous beneficial attributes.[59] However, the Commission determined that the Oakley Project was not needed to meet the need identified in the 2006 LTPP proceeding decision (*i.e.*, D.07-12-052) and thus denied the Oakley Project at that time. Although Decision 12-04-046 has now changed the rules regarding UOG offers in RFOs for new resources, this does not change the fact that the Oakley Project resulted from a competitive process and was one of the best offers resulting from that process. When the 2008 LTRFO was

[57] Ex. 2 at p. 5, lines 12-26 (PG&E, Monardi).

[58] D.10-07-045 at pp. 19-21 (the Commission identified some areas for improvement in future RFOs and concluded that "[t]hese criticisms should be taken in context of the RFO as a whole and while significant particularly in regard to future RFO's, do not change our determination that overall PG&E conducted a reasonable RFO and evaluation.").

[59] *Id.* at p. 40.

conducted, PG&E did it in a manner that was fully consistent with the Commission's RFO rules that were in effect at that time. Because of the unique factual circumstances giving rise to the Oakley Project, the Commission should determine that it is not barred by D.12-04-046, especially given that the Oakley Project was the result of a competitive solicitation process.

Fourth, as a matter of regulatory certainty and equity, consideration of the Oakley Project should not be barred by D.12-04-046. CCGS spent millions of dollars participating in the 2008 LTRFO, fully permitting the Oakley Project, and proceeding with construction and development. CCGS followed the Commission's RFO rules in effect in 2008 when it submitted a UOG proposal in the 2008 LTRFO, spent months negotiating an agreement with PG&E, and finalized an agreement based on the Commission's then current rules.[60] At each step of the way, CCGS followed the Commission's then-existing rules and requirements and expended significant amounts of money on developing the Oakley Project. At the hearings in this proceeding, several parties suggested in their cross-examination questions that CCGS was aware of the risk that the Oakley Project would not be approved when it decided to expend this money, and thus there would be no inequity in applying the D.12-04-046 rules.[61] While CCGS was certainly aware that there was regulatory risk of approval for the Oakley Project, it certainly could not be expected to assume that the Commission would bar an application for approval of the project based on the retroactive application of a decision issued four years after the Oakley Project was first proposed and two years after all permits were issued and construction was started.

Moreover, given the clear language in D.10-07-045 as to when an application for the Oakley Project could be filed, CCGS could not have reasonably expected that a Commission decision issued two years later would bar this Application. While developers do assume

[60] Ex. 2 at p. 6, lines 1-23 (PG&E, Monardi).

[61] *See e.g.* Tr. at p. 123, lines 3-30 (PG&E, Monardi) (questioning by TURN).

regulatory risk when they propose new projects, they should not be required to assume that the Commission will change the "rules of the game" retroactively when the developer has already expended considerable sums based on the rules existing at the time that it proposed its project. Indeed, this kind of retroactive regulatory change would not only detrimentally impact CCGS, but may raise concerns for other developers.[62] Barring the Oakley Project based on Decision 12-04-046 given this history would be inequitable.

Finally, other than reciting the language in D.12-04-046 in their testimony, CARE and WPTF provide no reasoned basis for their proposals to bar the Oakley Project under D.12-04-046. Given the legal authority and facts discussed above, the Commission should not bar consideration of the Oakley Project based on a retroactive application of D.12-04-046.

IV. ISSUE 1(C) – THE OAKLEY PROJECT IS AUTHORIZED BY D.07-12-052.

In D.07-12-052, the Commission required that proposals for UOG facilities generally be submitted through all-source RFOs, except in certain "unique circumstances."[63] With regard to UOG proposals outside of an RFO, the Commission indicated a utility must demonstrate that an RFO is infeasible and that one of four unique circumstances has occurred.[64] In this proceeding, PG&E has stipulated that three of the four unique circumstances do not apply. The unique circumstance that does apply concerns reliability.

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[62] Ex. 2 at p. 6, lines 19-23 (PG&E, Monardi).

[63] D.07-12-052 at pp. 205-206, 210 ("However, as noted by several parties, unique circumstances could arise that dictate a need for UOG outside of a competitive RFO."). The Commission also used the phrase "extraordinary circumstances" in D.07-12-052 as another description for "unique circumstances."

[64] *Id.* at pp. 210-212. In Decision 07-12-052, the Commission initially approved five unique circumstances. However, in response to petitions for modification, the Commission subsequently eliminated one of the unique circumstances, which was an expansion of an existing facility. See D.08-11-008 at pp. 22-23.

In this proceeding, the Oakley Project was not originally proposed outside of an RFO but was, instead, one of the winning offers in a competitive RFO. Although the Commission did not approve the Oakley Project, it did clearly provide in D.10-07-045 a process by which PG&E could re-submit the project. Thus, it is not entirely clear in this case that the requirements of D.07-12-052 apply to the Oakley Project given that it initially arose in an RFO and the Commission provided a process for its re-submission. However, if the Commission determines that the D.07-12-052 requirements for a UOG project outside of an RFO do apply to the Oakley Project, these requirements are readily satisfied here.

The infeasibility of an RFO and how the Oakley Project satisfies the D.07-12-052 reliability requirement are discussed in more detail below. However, before discussing the specifics of the Oakley Project, consideration of relevant Commission precedent is warranted. Since D.07-12-052 was issued, the Commission has had several occasions to apply the requirements of that decision when considering UOG outside of an RFO. One of those situations is instructive here. In D.09-01-008, the Commission approved the Miramar II Project, a UOG facility proposed by San Diego Gas & Electric Company ("SDG&E") outside of an RFO process. In that case, the Commission determined that the Miramar II Project satisfied the requirements of D.07-12-052, specifically the unique circumstance of reliability, explaining that:

> We concur with [SDG&E's] assessment that there is an acute need for local capacity in its service territory by summer 2009 given the delays associated with a number of generation projects currently under development including resources selected in SDG&E's 2008 peaker RFO, and MEF II will provide peaking energy and capacity that will contribute to SDG&E meeting its local and system RA requirements.
>
> We also support the goals of realizing ratepayer savings and retiring aging, inefficient plants, and recognize that the expedited development of resources may obviate the need for the CAISO to sign up some of the aging plants in SDG&E's service territory on reliability-must-run (RMR) contracts is consistent with these goals.

> While this goal is not explicitly stated as a component of the Reliability exception, it represents the type of consideration of ratepayer interests that the Commission must weigh in ruling on applications such as the MEF II application. So while we appreciate parties' requests for more prescriptive definitions of these exceptions, and we endeavored in the preceding paragraphs to provide additional guidance regarding the Commission's thinking in adjudicating them, we must balance this desire for specificity with the need to not restrict our decision-making abilities with overly-narrow definitions that would not best serve ratepayers.
>
> The Commission finds that SDG&E needs MEF II due to the local reliability need it is facing as a result of a number of delayed local area generation projects. SDG&E did attempt to get MEF II built through the 2008 Peaker RFO, and while parties can now, with hindsight, critique what the utility did or did not do concerning the site and the RFO process, the end result was no bidder bid on the MEF II project. In addition, the IE has testified that the project is fairly priced and merits approval. Therefore, while we reiterate our commitment to an open, competitive process for the selection of procurement resources, we approve SDG&E's application to build and operate the MEF II project.[65]

Although the facts in D.09-01-008 differ from the situation in this proceeding, the principles discussed by the Commission are certainly relevant. For example, the Commission noted that the Miramar II Project not only addressed a reliability need, but it also had other benefits such as retiring aging facilities and brownfield development on an industrial site.[66] The Commission made clear that when considering a UOG project under the reliability circumstance, it could consider additional customer benefits and it rejected the use of "overly-narrow definitions that would not best serve ratepayers."[67] The Commission also noted the IE's support for the project, delays for other projects, and the looming reliability need.

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[65] D.09-01-008 at pp. 14-15 (emphasis added) (footnotes omitted).

[66] *Id.* at p. 14, n. 14 (addressing benefits of development on an industrial site).

[67] *Id.* at p. 15.

A. An RFO Is Infeasible To Meet The 2018 Need.

1. The Timeline for New Resource Development Does Not Allow For An RFO.

Developing and constructing new generation resources in California does not happen overnight. There are several key steps in the development and construction process that require a substantial amount of time. Although some of these steps can be accomplished at the same time, even when the development activities occur in parallel project development takes a minimum of six (6) years, and will often take longer.[68] This estimate is entirely consistent with the July 23, 2012 testimony of IEP witness Monsen in the 2012 LTPP proceeding, in which Mr. Monsen testified that "the lead-time for constructing new resources can be 6-8 years or more."[69] Several of the key steps for developing a new project are described below.

New projects are typically procured by a utility through an RFO process. In recent years, the Commission has required additional steps as a part of the RFO process that have added to its length, such as review of RFO materials by the PRG, IE and Energy Division prior to distribution, and active PRG and IE involvement in and consultation regarding the RFO process.[70] Development of RFO materials typically takes 3-6 months and conducting the actual RFO, including initial bid evaluation, shortlisting, and negotiations takes another 12-18 months.[71] A conservative estimate for developing and conducting an RFO, based on past experience, is sixteen (16) months.[72]

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[68] Ex. 1 at p. 5-6, lines 3-6 (PG&E, Monardi).

[69] Ex. 2, Attachment O at p. 19, lines 3-4.

[70] Ex. 2 at p. 8, line 7 to p. 9, line 6 (PG&E, Monardi).

[71] Ex. 1 at p. 5-5, lines 17-24 (PG&E, Monardi); Ex. 2 at pp. 8-9 (PG&E, Monardi).

[72] Ex. 2 at p. 9, lines 24-28 (PG&E, Monardi).

Once the RFO has concluded, Commission approval of the winning offers is required. Based on past experience, the approval process can typically take seven (7) to eleven (11) months, depending on the contentiousness of the proceeding.[73] While developers can pursue some activities before Commission approval, many key milestones in the development process must wait until Commission approval.

Separate from the RFO process and Commission approval, a developer also needs to undertake numerous permitting and development activities for a new generation resource. The developer must secure a site, obtain a permit from the CEC and local air quality agency, and negotiate an interconnection agreement with the CAISO.[74] If there is local opposition to a project, or there are delays in the interconnection queue process or legal challenges to permits, the time to develop a new resource can lengthen substantially. One example of this type of potential development delay is Calpine's Russell City Project, which commenced development in 2001 and is scheduled to come on-line in 2013, twelve (12) years later.[75]

New combined-cycle and combustion turbine projects are also likely to face a regulatory requirement that does not apply to the Oakley Project, obtaining a Prevention of Significant Deterioration ("PSD") permit.[76] The PSD program now applies to major sources of greenhouse gas ("GHG") emissions that begin actual construction after July 1, 2011. The permitting associated with the PSD process can take twelve (12) months or longer.[77]

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[73] Ex. 1 at p. 5-5, lines 24-29 (PG&E, Monardi).

[74] *Id.* at p. 5-7, lines 1-24 and pp. 5-8 to 5-10 (PG&E, Monardi).

[75] *Id.* at p. 5-11, lines 16-23 (PG&E, Monardi).

[76] Ex. 2 at p. 11, lines 3-11 (PG&E, Monardi) (explaining why the PSD rules do not apply to the Oakley Project).

[77] *Id.* at p. 10, line 1 to p. 11, line 2 (PG&E, Monardi);*see also* Ex. 24 (Environmental Protection Agency information concerning the lengthy PSD process); Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule, 75 Fed. Reg. 31,514 (June 3, 2010) (codified at 40 C.F.R. pts. 51, 52, 70 & 71 (2010)).

Once the RFO and preliminary development steps are completed, the developer still needs to build the project, which can take between 30-36 months for a combined-cycle project and 18-24 months for a combustion turbine project.[78]

Taken together, even if some of these activities are conducted in parallel, project development takes a minimum of six (6) years, and will often take longer. Even assuming the minimum of six (6) years, at this point in time projects simply cannot be developed to meet a need by 2018. Thus, an RFO is infeasible to meet the 2018 need described below in Section V.B. Moreover, given the new PSD requirements, interconnection challenges, and other permit and development challenges, it is likely that new projects will require substantially more than six (6) years, which only further demonstrates the infeasibility of an RFO.

2. PG&E's Estimates For The Length of Project Development Are Supported By Other Parties.

PG&E is not alone in its estimate of the substantial amount of time needed for project development. As noted above, IEP witness Monsen recently submitted testimony in the 2012 LTPP proceeding stating that development of new resources can take six (6) to eight (8) years, or longer. Similarly, Fairfield Energy Center and Madera Energy Center ("Fairfield/Madera") stated in their testimony in this proceeding that there was not sufficient time to conduct an RFO and have new resources come on-line by 2018.[79] Another developer, GenOn, recently indicated at a Commission workshop that project development could take as long as eight (8) or nine (9)

[78] *Id.* at p. 5-7, lines 25-26 (PG&E, Monardi) (concerning a combined cycle); Tr. at p. 102, line 4 to p. 103, line 3 (PG&E, Monardi) (concerning a combustion turbine).

[79] Ex. 11 at p. 15, lines 17-18 (Fairfield/Madera, Fredericks).

years.[80] Finally, the CEC has indicated that project development can take five (5) years, and this does not include the RFO process or approval of an agreement by the Commission.[81]

3. The Projects Identified By Fairfield/Madera And DRA Cannot Meet The 2018 Need.

Although Fairfield/Madera acknowledges that conducting an RFO for new generation resources to meet a 2018 need is infeasible, they propose that the Commission simply allow losing bidders from the 2008 LTRFO to refresh their offers as a way to shorten development time.[82] Fairfield/Madera identify four projects that they claim are in an "advanced" state of development that are available to meet a 2018 resource need. However, during cross-examination at the hearings, it became evident that the projects identified by Fairfield/Madera would not be available by 2018. None of these projects have permits or even final configurations, and only one has an interconnection agreement.[83] Moreover, the PSD requirements described above would apply to these projects, which would substantially lengthen their permitting. Even refreshing the 2008 LTRFO offers would take time as developers would need to draft and submit refreshed offers, and PG&E and the PRG/IE would need time to evaluate these offers and negotiate final contracts. In short, given the very preliminary development status of the four projects identified by Fairfield/Madera, the proposal to refresh the 2008 LTRFO offers is infeasible.[84]

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[80] Ex. 1 at p. 5-6, lines 19-22 (PG&E, Monardi).

[81] *Id.* at p. 5-6, lines 11-14 (PG&E, Monardi).

[82] Ex. 11 at pp. 14-15 (Fairfield/Madera, Fredericks).

[83] Ex. 33; Tr. at 322, line 5 to p. 323, line 17 (Fairfield/Madera, Fredericks).

[84] Ex. 2 at p. 15, lines 4-24 (PG&E, Monardi); *see also* Ex. 4 at p. 13, line 13 to p. 14, line 14 (CUE, Marcus) (Addressing status of Fairfield/Madera projects).

In its testimony, DRA identifies three facilities that could be alternatives to the Oakley Project and that DRA claims could be developed by 2018.[85] However, as PG&E explained in its Rebuttal Testimony, there is insufficient time to conduct an RFO, obtain Commission approval, comply with PSD requirements, resolve remaining development obstacles, and construct any of these facilities by 2018.[86] Moreover, as PG&E demonstrated, some of these projects may never be developed. Coalition of California Utility Employees and California Unions for Reliable Energy (jointly "CUE") witness Marcus provided further, detailed testimony in his rebuttal explaining why none of these facilities would be available to meet a 2018 need.[87]

4. Upgrading Existing Facilities Will Not Substantially Shorten The Development Process.

In its testimony, IEP suggests that existing facilities can be retrofitted or upgraded in a shorter amount of time.[88] As PG&E explained in its Rebuttal Testimony, modifying or upgrading an existing facility to provide the same flexibility attributes that are provided by the Oakley Project will likely take the same amount of time as developing new resources.[89] Owners of existing facilities will still be required to participate in an RFO, get all of the necessary permits and regulatory approval, procure equipment, and substantially re-design and upgrade their facility. Moreover, many of the existing facilities are located in populated areas and may be subject to substantial protest and challenge. Other than suggesting the existing facilities might be able to be developed faster than new generation resources, IEP offers no specific evidence or

[85] Ex. 5 at pp. 2-9 to 2-10 (DRA, Shmidt).

[86] Ex. 2 at p. 15, line 28 to p. 16, line 28 (PG&E, Monardi).

[87] Ex. 4 at pp. 4-7 (CUE, Marcus).

[88] Ex. 8 at pp. 33-34 (IEP, Monsen).

[89] Ex. 2 at p. 12, line 5 to p. 13, line 18 (PG&E, Monardi).

even detailed discussion demonstrating that upgrading or retrofitting an existing resource by 2018 is feasible.

5. An RFO For Combustion Turbines Is Not Feasible Or Prudent.

During the hearings, IEP raised questions as to whether a combustion turbine could be constructed more quickly than a combined-cycle facility, such as the Oakley Project, and thus whether an RFO for combustion turbines was feasible.[90] There are several problems with this argument. First, a combined cycle facility offers unique operational benefits over a combustion turbine so that a combustion turbine is not the "best fit" alternative. PG&E addresses this issue in more detail below in Section VII.C.3. Second, there are aspects of the project development process that do not change based on the type of technology, such as the time needed to develop and conduct an RFO or the permitting of a new facility and comply with PSD requirements. Third, at most the construction time for a combustion turbine is only twelve (12) months shorter than a combined cycle.[91] Fourth, combustion turbines are a less efficient technology than combined cycle facilities. As a result, a combustion turbine would have higher emissions per MWh than the Oakley Project. Given the conservative estimate of six (6) years or more to conduct an RFO and develop and build a new generation resource, even if the construction time required for a combustion turbine is twelve (12) months shorter, an RFO is still infeasible.

B. The Oakley Project Satisfies A Specific, Unique Reliability Need.

In addition to demonstrating that an RFO is infeasible, a utility proposing a UOG project outside of an RFO must also demonstrate that one of four unique circumstances is satisfied. In this case, the Oakley Project satisfies the reliability circumstance:

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[90] *See e.g.*, Tr. at p. 102, lines 4 to 21 (PG&E, Monardi).

[91] Tr. at p. 102, line 4 to p. 103, line 3 (PG&E, Monardi).

> [R]esources needed to meet specific, unique reliability issues (particularly in circumstances in which it becomes evident that reliability may be compromised if new resources are not developed[)], and the only means of developing new resources in sufficient time is via UOG.[92]

There are two elements to this circumstance. First, there must be a specific, unique reliability need for a UOG resource. Second, the only means of developing the new resource in sufficient time must be via a UOG proposal. In this case, both aspects of the reliability circumstance are satisfied.

1. The Oakley Project Addresses A Specific And Unique Reliability Need.

There is a specific and unique reliability need in California that the CAISO has identified by 2017-2018 related to the integration of renewable resources.[93] As the CAISO has made clear, and is undisputed by any party in this proceeding, the integration of a 33% RPS will create enormous challenges for the operation of the California grid and could threaten reliability throughout California.[94] In particular, the CAISO has identified a need for flexible resources that will be able to integrate the 33% RPS requirement. This need is exacerbated by the retirement of aging OTC facilities mandated by the State Water Resources Control Board.[95] As CAISO Chief Executive Officer Steve Berberich stated in March 2012, "under the most likely scenarios" California will be several thousand megawatts short of flexible capacity within the next five (5) years if nothing is done to address this situation.[96] The results of CAISO studies demonstrating

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[92] D.07-12-052 at p. 212.

[93] Ex. 2 at p. 17, lines 20-23 (PG&E, Alvarez) (PG&E is not in this citation referring to the portion of this Q&A that was stricken on the first day of hearings).

[94] *See e.g.* Ex. 15, Slide 16 (CAISO presentation showing wind and solar generation profiles and depicting the "significant flexibility and ramping needs" to integrate these resources).

[95] Ex. 2, Attachment B at p. 2.

[96] *Id.* at p. 18, lines 1-4 (PG&E, Alvarez).

the significant reliability risks from integrating the 33% RPS requirement are described in substantially more detail in Section V.B below.

To meet this need, the CAISO has identified the type of flexible resources that it needs to maintain reliability. In particular, the CAISO has indicated that it needs resources that can be dispatched between their minimum and maximum operating levels, have low minimum operating levels, can respond and ramp quickly, and can provide ancillary services.[97] The Oakley Project satisfies all of these criteria as PG&E demonstrated in its testimony.[98] Indeed, the CAISO has noted that the Oakley Project exceeds the flexibility of generic resources that the CAISO has been modeling to integrate renewables.[99] The CEC came to a similar conclusion regarding the flexibility of the Oakley Project:

> [The Oakley Project or "OGS"] would provide flexible, highly dispatchable power. The "Rapid Response" capability of OGS allows each of the combustion turbine generators to start up and reach full load in less than 90 minutes for all cases, and hot/warm startups would occur in less than 30 minutes. OGS would provide short-starting and fast-ramping power under the CAISO use of these terms, which set a fast start as under 10 minutes. OGS would also provide a wide range of turndown operation, and is deemed fast starting in our evaluation because of its ability to come to full load in less than two hours. OGS would not obstruct penetration of renewable energy due to its ability to turn down to low loads and to achieve startups in less than two hours. OGS is likely to serve as an important firming source for intermittent renewable resources in support of California's RPS and GHG goals.[100]

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[97] Ex. 21 at p. 8, lines 13-30 (CAISO statements regarding what is meant by flexible resources).

[98] Ex. 1 at pp. 2-3 to 2-10 (PG&E, Maring) (describing operating characteristics of the Oakley Project that match the CAISO flexibility need).

[99] *Id.*, Attachment 5-2 at p. 2.

[100] Ex. 2 at pp. 50 to 51 (PG&E, Alvarez) (quoting the CEC Final Decision) (emphasis added).

2. The Oakley Project Is The Only Means To Address This Need In Sufficient Time.

As PG&E explained above in Section IV.A, it is infeasible to conduct an RFO that would result in having new resources on-line by 2018, nor are any of the other alternatives proposed by parties feasible. The Oakley Project is uniquely situated to address the reliability need associated with the integration of renewable resources and retirement of OTC units, is fully permitted, has commenced construction, and has strong community support. The Oakley Project has a GCAD of June 1, 2016. Even if the project encounters some delays, as many projects often do, there is no doubt that it will be ready and available to meet the CAISO system needs in 2018. No project, other than the Oakley Project, is sufficiently far along in development to meet a 2018 need associated with renewable integration.[101] Indeed, some of the projects that the Commission assumed in the 2010 LTPP would come on-line by 2018, and that were relied on in the 2010 LTPP analysis, are now in jeopardy and are unlikely to be available.[102]

3. The Reliability Need Cannot Be Met By Resources From the 2012 LTPP Proceeding As DRA Suggests.

In its testimony and at hearings, DRA asserted that resources approved in an application filed by SDG&E (*i.e.*, A.11-05-023) and in the 2012 LTPP proceeding may be sufficient to satisfy reliability needs associated with new generation.[103] There are several flaws in this argument.

First, it is not clear that any new capacity will be approved in A.11-05-023 or in Track 1 of the 2012 LTPP. A number of parties, including DRA, have protested various issues in both

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[101] Ex. 1 at p. 5-11, line 25 to 5-12, line 5 (PG&E, Monardi).

[102] Ex. 2, Attachment B at p. 31 (explaining that the Victorville and Avenal plants that were included in the 2010 LTPP analysis are not expected to be available by 2018).

[103] Ex. 5 at pp. 2-8 to 2-9 (DRA, Shmidt).

proceedings and the outcome of both proceedings is uncertain.[104] During cross-examination, DRA witness Shmidt was shown filings made by DRA opposing both SDG&E's application and requests for new capacity in the 2012 LTPP proceeding.[105] If DRA and other parties are successful, there may be no new capacity from these proceedings.

Second, even if the requested new capacity is approved in both proceedings, it may not have the operating characteristics needed by the CAISO.[106] At the hearings, PG&E witness Alvarez explained that it was not entirely clear what attributes the resources approved in those proceedings would have and testified that ultimately these resources may not be sufficiently flexible to integrate renewable resources.[107] DRA witness Shmidt conceded on cross-examination that she did not know the extent to which the Commission was "considering inflexible, so to speak, resources at this juncture."[108]

Third, as CUE witness Marcus explained in his rebuttal testimony, there are significant development challenges related to potential projects in Southern California and, for those projects that have been proposed, they are less efficient and have higher heat rates than the Oakley Project.[109]

Finally, even if the resources in those proceedings are approved and they have sufficient flexibility, the CAISO has indicated at Commission workshops that its studies still indicate a shortfall in resources sufficient to allow for the integration of the 33% RPS.[110]

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[104] Ex. 2 at p. 32, lines 13-16 (PG&E, Alvarez).

[105] Exs. 37-38.

[106] Ex. 2 at p. 32, lines 16-18 (PG&E Alvarez).

[107] Tr. at p. 347, lines 12-12 (PG&E, Alvarez).

[108] Tr. at p. 467, line 25 to p. 468, line 7 (DRA, Shmidt).

[109] Ex. 4 at pp. 1-4 (CUE, Marcus).

[110] Ex. 15, Slide 61; *see also* Tr. 48, line 23 to p. 49, line 4 (TURN, Woodruff) (discussing Slide 61); Ex. 21 at p. 4, lines 21-29. PG&E is cognizant of ALJ Yacknin's admonition to the parties not to quote

C. The Commission Should Consider The Other Beneficial Aspects Of The Oakley Project Consistent With D.09-01-008.

In D.09-01-008, the Commission noted that when considering the reliability circumstance established in D.07-12-052, it could also consider other beneficial attributes of a UOG project.[111] Two of the factors considered in that decision that bear note here are the benefits of brownfield development and retirement of aging, inefficient plants. With regard to brownfield development, similar to the Miramar II Project, the Oakley Project will be developed on a former industrial site that is zoned for heavy industry.[112] In addition, the Oakley Project is near existing gas, electric and water utilities so that there will be little need for additional construction. Moreover, the transmission upgrade costs associated with the Oakley Project, which would ultimately be borne by all users of the CAISO transmission system, are very low because it is near an existing substation.[113] Furthermore, these transmission upgrade cots are known since the Oakley Project has completed the CAISO study process and executed an LGIA.

Second, development of the Oakley Project will facilitate the retirement of aging, inefficient OTC units, especially units in Northern California.[114] There are currently a number of OTC plants in Northern California that have heat rates that are almost double the Oakley Project's heat rate.[115] Continuing to operate these resources is environmentally damaging (both for water use and GHG emissions), as well as expensive for customers who would continue to

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CAISO studies for the truth of the matter asserted. PG&E cites these materialssimply to refute DRA's argument that resources from the SDG&E application and the 2012 LTPP are sufficient to integrate renewable resources. PG&E also notes that Exhibit 21, which is cited in this footnote, was introduced by DRA. *See* Tr. at p. 153, lines 19-27 (DRA, Morey).

[111] D.09-01-008 at p. 15.

[112] Ex. 1 at p. 2-16, lines 4-8 (PG&E, Maring).

[113] *Id.* at p. 3-9, lines 4-24 (PG&E, Maring and Royall).

[114] Ex. 2 at pp. 47-50 (PG&E, Alvarez).

[115] *Id.* at p. 47, Table E-3 (PG&E, Alvarez).

pay for the operation of these inefficient resources. The Oakley Project will facilitate retirement of these OTC units.[116] As the CEC explained when it approved the Oakley Project:

> If no new natural gas plants were constructed, reliance on older power plants may increase. These plants could consume more fuel and emit more air pollutants per kilowatt-hour generated than the [Oakley Project]. In the near term, the more likely result is that existing plants, many of which produce higher levels of pollutants, could operate more than they do now.[117]

Third, although GHG emissions were not a significant issue at the time D.09-01-008 was adopted, GHG emissions have become a significant statewide issue today, and this issue provides another reason for the Commission to approve the Amended PSA. The Oakley Project is exactly the kind of facility needed to integrate renewable resources and thus it actually facilitates GHG-free resources such as wind and solar. Moreover, the Oakley Project itself will have significant GHG benefits, as the CEC confirmed in its review of the project. In reviewing the Oakley Project, the CEC made a number of key determinations regarding the environmental benefits of the Oakley Project, including a reduction in GHG emissions. The CEC then went on to conclude:

> The [Oakley Project] will be consistent with the state's GHG policies and will help achieve the state's GHG goals, by (1) causing a decrease in overall electricity system GHG emissions; and (2) fostering the addition of renewable generation into the system, which will further reduce system GHG emissions.[118]

In addition to these benefits, there are numerous environmental and operational benefits to the Oakley Project that are described in Sections I.A.1 and VIII of this opening brief. In

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[116] *Id.* at p. 48, lines 7-18 and p. 49, lines 1-24 (PG&E, Alvarez) (discussing specific plants that could retire).

[117] *Id.* at p. 48, lines 29-34 (PG&E, Alvarez) (quoting the final CEC decision).

[118] *Id.* at p. 77, lines 30-34 (PG&E, Maring) (quoting Section V.A, GHG Emissions, at p. 2).

considering the Oakley Project under D.07-12-052, the Commission should consider these attributes, as it did when it approved the Miramar II Project.

V. ISSUE 1(D) – THE OAKLEY PROJECT IS AUTHORIZED BY D.10-07-045.

In D.10-07-045, the Commission denied the Oakley Project "at this time" but provided an opportunity for PG&E to resubmit the project in the future. The Commission explained:

> Though we deny the Oakley Project at this time, we understand that developing and building a power plant in California is a long process, fraught with pitfalls. Given this risk and the fact that we believe this plant has numerous beneficial attributes, PG&E may resubmit the Oakley Project, via application, for Commission consideration under the specific conditions below.[119]

The first condition identified by the Commission was that the Oakley Project has received the necessary permits. The second condition involved satisfying one of three future conditions. PG&E has acknowledged that only one of these three future conditions has occurred – final results from the "CAISO Renewable Integration Study" demonstrating that there are significant negative reliability risks from integrating a 33% RPS. Both of these conditions have been satisfied and thus, PG&E's application for approval of the Amended PSA is authorized and should be approved.

A. The Oakley Project Has All Necessary Permits

There are two permits that are necessary for CCGS to proceed with the construction of the Oakley Project – a license from the CEC and an authority to construct ("ATC") permit from the BAAQMD. It is undisputed that both of these agencies have issued the necessary permits for the Oakley Project.[120] These undisputed facts should have ended any controversy on this issue. However, some parties appear to want to litigate in this proceeding the validity of these permits.

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[119] D.10-07-045 at p. 40.

[120] Ex. 2 at p. 20, lines 12-29 (PG&E, Maring); *see also* Ex. 1, Chapter 3 (PG&E, Maring and Royall).

For example, a significant amount of time was spent in the hearings with questions regarding the construction status of the Oakley Project. These questions appear to be directed toward an argument that the Oakley Project did not begin actual construction by July 1, 2011, and thus CCGS is required to obtain a PSD permit for the facility. This argument is fundamentally flawed.

As a preliminary matter, the BAAQMD has already determined that a PSD permit was not required -- both at the time of the Oakley Project's air permit application and again with BAAQMD's issuance of the ATC for the Oakley Project.[121] If parties disagree with that determination, the appropriate venue is at the BAAQMD, not this proceeding.

Moreover, even if this proceeding was the appropriate venue to consider the applicability of the PSD requirements to the Oakley Project, which it is not, the evidence in this proceeding demonstrates that the Oakley Project began actual construction in June 2011.[122] On the CEC website, the Oakley Project is listed as being "approved and under construction."[123] At the hearings, PG&E witness Maring provided a detailed description of the construction activities that have occurred to date.[124]

IEP acknowledges that CCGS began actual construction before July 1, 2011, but argues that development of the project has effectively halted.[125] IEP's assertions, which are not based on first-hand knowledge but instead simply based on a review of CEC filings, were contradicted by PG&E witness Maring who has periodically been to the site and seen the construction

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[121] Ex. 2 at p. 22, lines 16-19 (PG&E, Maring and Royall).

[122] Ex. 1 at p. 3-10, line 17 to p. 3-11, line 8 (PG&E, Maring and Royall).

[123] *See* http://www.energy.ca.gov/sitingcases/all_projects.html (CEC website listing status of projects in California).

[124] Tr. at p. 521, line 6 to p. 522, line 18; p. 580, line 13 to p. 581, line 22 (PG&E, Maring).

[125] Ex. 8 at pp. 40-43 (IEP, Monsen).

activity. Moreover, to support its argument, IEP only attached a single page from the monthly Oakley Project compliance reports submitted by CCGS to the CEC. The other pages of these reports provide more detailed information concerning construction and development activities that are continuing on the Oakley Project.[126] The fact that construction activity has not significantly ramped up is to be expected given the status of this proceeding (and is irrelevant to the need for a PSD permit in any event). While construction is continuing, given the uncertainty of the Commission's approval of the Amended PSA, CCGS cannot be expected to significantly ramp up construction activity, or make significant equipment purchases, until the Commission has decided whether to approve the Amended PSA.

In addition to arguments about the status of construction, CARE argues that the CEC permit is not final because it is the subject of a pending appeal filed by Communities for a Better Environment ("CBE") at the California Supreme Court.[127] CBE and Robert Sarvey filed a Petition for Writ of Review at the California Supreme Court regarding the CEC decision approving the Oakley Project license, as well as the Commission's earlier decision regarding the Oakley Project (*i.e.*, D.10-12-050).[128] However, this argument is now moot as the Supreme Court issued a decision on September 12, 2012 denying CBE's and Mr. Sarvey's petition.

B. The CAISO Has Issued Study Results Demonstrating Significant Negative Reliability Risks From 33% RPS.

1. The CAISO Has Issued Final Study Results.

In addition to demonstrating that the Oakley Project has the necessary permits, D.10-07-045 also provides that PG&E can resubmit the Oakley Project:

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[126] Ex. 2 at p. 21, lines 8-25 (PG&E, Maring and Royall).

[127] Ex. 13 at p. 6, lines 9-10 (CARE, Sarvey).

[128] *Communities for a Better Environment, et al. v. CEC, et al.*, California Supreme Court, Case No. S194079.

> If the final results from the CAISO Renewable Integration Study demonstrates that, even with the projects approved by the Commission, there are significant negative reliability risks from integrating a 33% Renewable Portfolio Standard.[129]

As described in detail below, this condition has been readily satisfied.

a) Summary Of CAISO Studies.

A year after D.10-07-045 was issued, the CAISO submitted the results of its 33 percent RPS integration study in the 2010 LTPP proceeding (R.10-05-006).[130] The CAISO's study was based on scenarios developed by the Commission's Energy Division. After describing its analysis in detail, the CAISO concluded that some of the scenarios identified capacity shortfalls, while others did not identify any shortfalls.[131] The CAISO explained that it could not determine whether sufficient flexible capability existed in those scenarios if the available generation capacity was limited to the existing 15-17 percent Planning Reserve Margin because these scenarios had excess reserve margin.[132] The CAISO indicated that it intended to run additional scenarios and sensitivities.[133]

On August 3, 2011, twenty-three (23) parties submitted a settlement in Track 1 of the 2010 LTPP proceeding that addressed, in part, issues related to RPS integration ("2010 LTPP Settlement").[134] The 2010 LTPP Settlement provided that "[t]he resource planning analyses presented in this proceeding do not conclusively demonstrate whether or not to add capacity for renewable integration purposes through the year 2020, the period to be addressed in the current

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[129] D.10-07-045 at p. 41.

[130] *See Track I Direct Testimony of Mark Rothleder on Behalf of the California Independent System Operator*, submitted on July 1, 2011 in R.10-05-006. Portions of Mr. Rothleder's testimony in the 2010 LTPP proceeding are included as Attachment D to DRA's Testimony (Ex. 5).

[131] *Id.* at pp. 43-44.

[132] *Id.* at p. 44.

[133] *Id.* at p. 49.

[134] Ex. 2 at p. 25, lines 11-21 (PG&E, Alvarez)

LTPP cycle."[135] Thus, the settling parties agreed that "further analysis is needed before any renewable integration resource need is made."[136] The settling parties recommended that the Commission and the CAISO collaborate and continue the work undertaken to date to refine and understand the future need for new renewable integration resources.

In September 2011, parties submitted opening briefs in the 2010 LTPP proceeding addressing the settlement. In its brief, the CAISO explained that "as part of the ISO's continuing study efforts, the ISO conducted a preliminary analysis of possible local and system flexibility capacity needs for the 2011-2020 timeframe and provided these results in a Board of Governors briefing on August 25, 2011."[137] Using the High Load Trajectory Scenario developed by the Commission's Energy Division and assuming the retirement of OTC units, the CAISO determined that there was a need for 4,600 MW of capacity by 2020 to provide upward balancing flexibility and 800 MW of downward balancing flexibility.[138] The CAISO went on to explain that "[t]he ISO shares the concerns identified by AES that, given the lengthy lead times required to permit and construct generation needed for operational flexibility, long-term procurement decisions must be made quickly, preferably well before year end 2012."[139] The CAISO concluded that "[t]hese studies document that additional flexibility services are needed to maintain reliability with the higher levels of variable renewable generation to meet California's 33% renewable portfolio standard."[140]

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[135] *Id.*

[136] *Id.*

[137] Ex. 2, Attachment D at p. 4.

[138] *Id.*, Attachment D at pp. 4-5 and Exhibit 1 at p. 2.

[139] *Id.*, Attachment D at p. 5.

[140] *Id.*, Attachment D, Exhibit 1 at p. 8.

The CAISO's statements in September 2011 reflect the fact that, since it submitted its testimony in the 2010 LTPP proceeding in July 2011, the CAISO had continued to adjust the studies it had performed in that proceeding and to run additional sensitivities and analysis.[141] These studies culminated in the *Petition for Waiver of Tariff Provisions and Request for Confidential Treatment* related to Calpine's Sutter facility ("Sutter Waiver Petition") that the CAISO filed at FERC in January 2012.[142] As PG&E witness Alvarez explained at the hearings, the study performed by the CAISO for the Sutter Waiver Petition started with the 2010 LTPP study, but was not the same analysis and, in fact, considered different conditions and years and used separate computer simulations.[143] In his declaration in support of the Sutter Waiver Petition, CAISO Director of Market Analysis and Development, Mark Rothleder, explained how the Sutter Waiver Petition study varied from the study performed by the CAISO for the 2010 LTPP.[144] When asked if the CAISO's Sutter Waiver Petition study was based on the CAISO's 2010 LTPP, Mr. Rothleder answered "No" and explained the differences in the studies.[145]

The CAISO supported the Sutter Waiver Petition with detailed testimony describing studies that it had conducted demonstrating the need for the Sutter plant. Specifically, the CAISO identified a need for new flexible generation capacity resources in 2017-2018 in order to integrate intermittent renewable resources. "[T]he [CAISO's] 2017/2018 analysis identified a 2,535 MW deficiency in flexible capacity requirements, resulting in an estimated 3,750 MW of

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[141] Ex. 15, Slide 23 (identifying additional sensitivities and analysis); Ex. 2 at p. 27, lines 13-20 (PG&E, Alvarez); Tr. at p. 276, lines 1-9; p. 295, line 10 to p. 296, line 24 (PG&E, Alvarez); Ex. 21 at p. 2, line 21 to p. 3, line 5 (CAISO witness Rothleder).

[142] Ex. 2, Attachment B (Sutter Waiver Petition); *see also* Ex. 1, Attachment 5-1 (the Declaration of Mark Rothleder supporting the Sutter Waiver Petition).

[143] Tr. at p. 276, lines 1-9; p. 295, line 10 to p. 296, line 24 (PG&E, Alvarez).

[144] Ex. 1, Attachment 5-1 at pp. 25-27.

[145] Ex. 1, Attachment 5-1 at p. 25.

additional capacity needs."[146] In his declaration in support of the petition, Mr. Rothleder testified:

> As I will explain, the ISO's analysis concludes that, under an analysis using the assumptions described above consistent with good utility practice, there will be a shortage or gap of 3,570 MW for meeting system-wide needs in California by the end of 2017.[147]

The CAISO ultimately withdrew the Sutter Waiver Petition at FERC because the Commission issued a Resolution directing the three investor-owned utilities to negotiate a contract for the Sutter facility.[148] When these negotiations concluded successfully, the Sutter Waiver Petition became moot and thus was withdrawn by the CAISO.[149] However, despite withdrawing the Sutter Waiver Petition, the CAISO has not stopped continually and consistently expressing the need for new flexible operating capacity to integrate renewable resources.[150]

b) The CAISO Studies Satisfy The Requirements Of D.10-07-045.

D.10-07-045 requires final results from a CAISO study demonstrating that, even with approved projects, "there are significant reliability risks from integrating a 33% Renewable Portfolio Standard."[151] Contrary to the assertions in parties' testimony, this is exactly what has happened. As described above, the CAISO submitted testimony in the 2010 LTPP proceeding that included the CAISO's study results, indicating in the High Load Trajectory Scenario a need for resources to integrate the 33 percent RPS. The CAISO continued to perform studies in the

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[146] Ex. 2, Attachment B at p. 28.

[147] Ex. 1, Attachment 5-1 at p. 30 (emphasis added).

[148] *See* Commission Resolution E-4471.

[149] *See NOTICE OF WITHDRAWAL OF PETITION FOR WAIVER OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION*, filed June 21, 2012 in FERC Docket No. ER12-897-000.

[150] *See e.g.* Ex. 1 at p. 5-4, lines 1 to 26 (PG&E, Alvarez); Ex. 15, Slides 61 and 73 (CAISO presentation on June 4, 2012); Ex. 21 at pp. 4-5 (CAISO testimony from the 2012 LTPP).

[151] D.10-07-045 at p. 41.

Fall and Winter 2011, ultimately resulting in the study submitted in the Sutter Waiver Petition that demonstrated a capacity gap for integrating 33% RPS by the end of 2017. Since submitting the Sutter Waiver Petition in January 2012, the CAISO has continued publicly and at the Commission to re-affirm the final results included in the Sutter Waiver Petition.[152] While intervenors may disagree with the conclusions the CAISO has reached, there is no question that the CAISO has prepared final study results that demonstrate significant negative reliability risks associated with the 33 percent RPS.

More specifically, in the Sutter Waiver Petition, the CAISO explained that "the operations planning scenario, which is a more prudent and appropriate scenario for planning future reliability needs, definitively shows that a capacity gap will exist by the end of 2017 that cannot be filled by planned generation and that would only be exacerbated by removal of the Sutter plant."[153] In his testimony supporting the Sutter Waiver Petition, Mr. Rothleder was asked the following questions and provided the following answer:

> Q: What does the ISO's analysis conclude regarding the need for the Sutter Plant?
>
> A: As I will explain, the ISO's analysis concludes that, under an analysis using the assumptions described above consistent with good utility practice, there will be a shortage or gap of 3,570 MW for meeting system-wide needs in California by the end of 2017. This shortage would pose significant challenges to the reliable operation of the ISO grid.[154]

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[152] *See e.g.*, Ex. 15, Slide 73 (CAISO presentation in June 2012 showing the results of the Sutter Waiver Petition study).

[153] Ex. 2, Attachment B at p. 26 (footnotes omitted) (emphasis added).

[154] Ex. 1, Attachment 5-1 at p. 3.

Given these statements, there is simply no basis for parties' assertions that the CAISO has not issued a final study which demonstrates significant reliability risks as a result of 33% RPS integration.

During the hearings, counsel for DRA challenged the Sutter Waiver Petition by implying that the CAISO's filing addressed an existing facility, not the need for new resources. This argument is flawed. Although the Sutter Waiver Petition did concern an existing generation facility, the studies and analysis submitted by the CAISO demonstrate a need for new generation resources in addition to existing facilities. The CAISO explained that losing the Sutter facility "would exacerbate reliability and operational issues on the ISO grid and would result in a further capacity need in addition to the identified capacity gap of 3,750 MW at the end of 2017."[155] In other words, closing the Sutter facility only added to the resource shortfall. The fact that the Sutter facility was an existing facility does not change the results of the CAISO studies underlying the Sutter Waiver Petition.

2. Commission Approval Of Final CAISO Study Results Is Not Required.

TURN asserts that D.10-07-045 requires the CAISO to develop a "final report" to submit to the Commission, presumably for the Commission's approval.[156] TURN then extrapolates that the "final report" was to have been submitted in the 2010 LTPP proceeding and approved by the Commission in that proceeding. However, the language in D.10-07-045 is quite clear. The Commission did not require a "report" nor did the Commission require that the "final results" from a CAISO study be submitted to or approved by the Commission. TURN is simply reading into D.10-07-045 steps that were not required by the Commission. Moreover, TURN also

[155] Ex. 2, Attachment B at p. 26.

[156] Ex. 6 at p. 6, lines 13-14 (TURN, Woodruff).

implies that the Commission would need to determine a specific "need" before the requirements of D.10-07-045 could be satisfied.[157] However, D.10-07-045 simply requires that the final results from a CAISO study indicate that "there are significant negative reliability risks from integrating a 33% Renewable Portfolio Standard." There is no requirement for a Commission decision, must less a specific determination of need by the Commission.

3. The 2012 LTPP Does Not Preclude The Commission From Determining That The D.10-07-045 Requirements Have Been Satisfied.

A number of parties have referred to work that the CAISO is performing in the 2012 LTPP and in other venues and asserted, based on this ongoing work, that the CAISO studies are not final.[158] However, as ALJ Yacknin aptly noted at the hearings, the CAISO's work in this area is "never going to be done" and will always be ongoing.[159] If D.10-07-045 is interpreted to require a "final" study so that no more studies are needed or conducted, this condition will never be met. TURN witness Woodruff made a similar statement, noting during cross-examination that the CAISO would be "routinely" and continually updating its studies.[160] Instead, D.10-07-045 is more appropriately interpreted to mean that the CAISO has completed a specific study and that the final results from that study demonstrate a significant reliability risk. As explained above, this has already occurred.

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[157] Ex. 5 at p. 7, lines 4-6 (TURN, Woodruff).

[158] *See e.g.* Ex. 8 at p. 22 (IEP, Monsen); Ex. 13 at p. 6 (CARE, Sarvey); Ex. 6 at p. 9 (TURN, Woodruff).

[159] Tr. at p. 435, line 9 to p. 436, line 11; p. 438, lines 8-14 (ALJ Yacknin).

[160] Tr. at p. 75, lines 4-15 (TURN, Woodruff).

4. Criticisms of The CAISO Studies Are Unwarranted.

TURN criticizes the CAISO study results, asserting that the CAISO has improperly relied on a High Load Trajectory Scenario (which TURN refers to as the "4600 Study") in making its determination that there are significant negative reliability risks associated with 33% RPS. TURN is mistaking differences of opinion or concerns with flaws. In fact, TURN's August 4, 2011 testimony in the 2010 LTPP refers to concerns, and on-going efforts to resolve these concerns.[161] Since the July 1, 2011 filing, the CAISO and its consultant E3 have addressed questions TURN had previously raised,[162] and have not found flaws.[163] In fact, the continued use by the CAISO of the High Load Trajectory Scenario is a good indication that CAISO still stands behind the final results. In its September 2011 comments in the 2010 LTPP proceeding, the CAISO explained why the High Load Trajectory Scenario was prudent to use:

> [T]he material reflects concerns that certain assumptions specified by the CPUC are based on the expectation that state agencies and others will successfully implement new demand response and energy efficiency measures that are not yet in development. We believe it is more prudent to plan on these measures not materializing which results in higher expected demand and generation needs. Accounting for the possibility that state energy efficiency and demand response goals will not materialize is not an indictment of the goals. The goals are among the most important and least cost steps California can take to successfully integrate the expected levels of new renewable generation. However, the consequences of having insufficient resources to reliably operate the grid are much more significant than the consequences of over-procurement. In addition to severe economic consequences, electricity outages caused by

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[161] TURN, 2010 LTPP Track 1 Testimony of August 4, 2011, p. 7 filed in Rulemaking 10-05-006.

[162] For example, one of TURN's main concerns was the capacity need identified in the Alt-Gas Case scenario in 2020, which CAISO and E3 have explained in subsequent working group meeting and presentations to all LTPP parties. A recent presentation on this topic can be found at: http://www.cpuc.ca.gov/NR/rdonlyres/32D2572E-7B0B-4DAD-8D99-AB13CBA1470F/0/201206OpFlexMeetingpresentationPDF.pdf (The relevant slides are Slides 30 to 37 out of 169 slides).

[163] Ex. 2 at p. 31, lines 1-2 (PG&E, Alvarez).

shortage of the flexible resources needed to reliably operate the system would put renewable goals themselves at risk.[164]

5. This Application Does Not Violate The 2010 LTPP Settlement.

The 2010 LTPP Settlement approved by the Commission in D.12-04-046 provided that "[t]he resource planning analyses presented in this proceeding do not conclusively demonstrate whether or not to add capacity for renewable integration purposes through the year 2020, the period to be addressed in the current LTPP cycle."[165] Thus, the settling parties agreed that "further analysis is needed before any renewable integration resource need is made."[166] In fact, further analyses by the CAISO have been conducted, as described in detail in the Sutter Waiver Petition. Nothing in the 2010 LTPP precludes PG&E from filing this Application or requesting that the Commission approve the Oakley Project. Indeed, at the time the 2010 LTPP Settlement was presented to the Commission, PG&E and likely other settling parties assumed the Oakley Project was going to be developed because a final Commission decision approving the Oakley Project had been issued (although that decision was later annulled by the Court of Appeal). Thus, there is no basis for asserting that this Application violates or is contrary to the 2010 LTPP settlement.

Moreover, this Application is not contrary to D.12-04-046, which approved the 2010 LTPP settlement. When it issued D.12-04-046, the Commission expressly stated that it was not considering information submitted with the CAISO comments in September.[167] Nor did the Commission have before it the studies and information included in the Sutter Waiver Petition.[168]

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[164] Ex. 2, Attachment D, Exhibit 1 at p. 2 (emphasis added).

[165] 2010 LTPP Settlement at p. 5.

[166] *Id.*

[167] D.12-04-046 at p. 10 (indicating that CAISO studies conducted after July 2011 were not in the evidentiary record and were not considered by the Commission).

[168] Ex. 2 at p. 30, lines 16-21 (PG&E, Alvarez).

C. Delaying A Decision On The Oakley Project Will Effectively Terminate The Project And Increase The Need Identified In CAISO Studies.

TURN has suggested as an alternative to rejecting the Oakley Project that the Commission simply defer making a decision, either by delaying action in this proceeding or by denying PG&E's Application without prejudice, until after a decision is reached in Track 2 of the 2012 LTPP proceeding.[169] This suggestion is impractical. TURN itself acknowledges that Track 2 of the 2012 LTPP will likely not be completed until December 31, 2013.[170] More likely, given the timing in past LTPP proceedings, the Commission will not issue a decision until April 2014 at the earliest.[171] The Commission cannot reasonably expect CCGS, which first proposed the Oakley Project in 2008, to continue construction and development activities for almost two more years until Track 2 of the 2012 LTPP concludes.[172] CCGS has communicated to PG&E that it cannot wait until 2014 or 2015 for a decision on the Oakley Project and that CCGS needs a Commission decision this year if the project is to proceed.[173] Moreover, even if CCGS was able to hold open the Oakley Project until 2014-2015, it is unlikely that CCGS would agree to keep the same price that was agreed to in 2009. More than likely, the costs of the Oakley Project would increase, and potentially increase substantially. PG&E's customers could end up paying more for exactly the same facility that they can get today for a lower price.

Currently, the Oakley Project is at the point where it is fully permitted and ready to move forward with major construction. When a project reaches this point, expenditures increase exponentially. Permits have expiry dates, exposure to the CAISO Large Generator

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[169] Ex. 6 at p. 4, line 19 to p. 5, line 2 (TURN, Woodruff).

[170] Ex. 20.

[171] Ex. 2 at p. 36, line 24 to p. 37, line 24 (PG&E, Monardi).

[172] *Id.* at p. 38, lines 3-13 (PG&E, Monardi).

[173] Tr. 139, line 16 to p. 140, line 18 (PG&E, Monardi).

Interconnection Agreement ("LGIA") increase rapidly, major equipment must be ordered, engineering must be completed and a whole host of issues must be dealt with in real time - this is especially critical with a fixed price contract. With an approved contract, the project company cannot close financing and thus will not have the resources it needs to assure a project completion on time and within budget. In fact some of the financial exposures may be too risky for equity investors to swallow. The Oakley Project is ready now and must have the financial surety in place in order to close debt financing and move forward. Additional unnecessary delays significantly jeopardize the Oakley Project's viability.

Furthermore, by terminating the Oakley Project the need estimated by CAISO will further increase. As Mr. Rothleder explained in his declaration supporting the Sutter Waiver Petition, even though the Oakley Project was not included in the Sutter Waiver Petition analysis, the Oakley Project replaced part of the additional generation assumed in the 2010 LTPP Scoping Memo that is now expected to be unavailable by 2018.[174] Delaying the Oakley Project will only result in further reliability challenges given other resource delays.

VI. ISSUE 1(E) – THE COMMISSION SHOULD APPROVE THE OAKLEY PROJECT TO ADDRESS A NEED FOR FLEXIBLE NEW GENERATION RESOURCES IN CALIFORNIA

The Commission has broad authority under Public Utilities Code section 701 to do "all things" which "are necessary and convenient" in the exercise of its authority over public utilities. Where "the authority sought is 'cognate and germane' to utility regulation, the [Commission's] authority under section 701 has been liberally construed. [Citations omitted.]"[175] Although, as explained in detail above, Commission approval of the Amended PSA is authorized by previous

[174] Ex. 1, Attachment 5-1 at p. 36.

[175] *PG&E Corp. v. Public Utilities Com.* (2004) 118 Cal.App.4th 1174, 1198.

Commission decisions, the Commission could still approve the Amended PSA even if it determines that the decisions discussed above do not apply. In the Scoping Memo, Assigned Commissioner Peevey identified several circumstances which may be the basis for approval of the Oakley Project. PG&E addresses each of these circumstances below. In addition, the Scoping Memo did not expressly limit the issues that could be considered by the Commission to those identified. Thus, this section also addresses arguments raised by intervenors opposing the Oakley Project and arguments in favor of the Oakley Project.

A. There Are Considerable System Reliability Risks Posed By Regulatory Lag.

As the Commission is well-aware, one of the challenges with developing new generation resources in California is regulatory lag. A brief review of the history of recent LTPP proceedings demonstrates this point. The 2008 LTPP proceeding (R.08-02-007) was initiated in February 2008 and was dedicated almost entirely to simply establishing assumptions and scenarios that could be used in subsequent LTPPs to actually determine whether new resources were needed. Even with this limited scope, the 2008 LTPP proceeding took almost two years to complete. The 2010 LTPP proceeding was initiated in May 2010 and on December 3, 2010 the *Assigned Commissioner and Administrative Law Judge's Joint Scoping Memo and Ruling* ("2010 LTPP Scoping Memo") was issued establishing the standardized planning assumptions and scenarios to be used by the CAISO and other parties in the 2010 LTPP for the purposes of determining system need.[176] The CAISO submitted testimony and studies based on the 2010 LTPP Scoping Memo on July 1, 2011. After intervener testimony, a settlement, and briefing, the Commission ultimately issued a decision in the 2010 LTPP proceeding regarding the settlement in April 2012 – sixteen (16) months after the 2010 LTPP Scoping Memo was

[176] Ex. 2 at p. 36, line 29 to p. 37, line 4 (PG&E, Alvarez).

issued. Moreover, the 2010 LTPP proceeding, which ultimately took two years to complete, resulted in the approval of a settlement in which the parties simply agreed that further analysis was needed. Indeed, the last need determination by the Commission was in December 2007, almost five years ago.

Based on the 2012 LTPP Scoping Memo issued May 17, 2012, the earliest the Commission will issue a decision regarding the assumptions and the scenarios to be used is December 2012.[177] Assuming the 2012 LTPP proceeds at the same pace as the 2010 LTPP, a Commission decision would not be issued on Track 2 until April 2014 (*i.e.*, sixteen (16) months after the assumptions and scenarios are finalized).[178] Even this schedule may be optimistic. In the 2010 LTPP proceeding, virtually every active party signed on to a settlement, so ultimately there was very little that was in dispute. Even with a settlement, it was sixteen (16) months between when the scenarios and assumptions were finalized and when a Commission decision was issued. In Track 2 of the 2012 LTPP proceeding, it is very unlikely that a settlement will be reached. If hearings and extensive briefing are required, it is likely that a Track 2 decision could be issued well after April 2014.[179]

Given this history and the regulatory lag, the Commission should view skeptically arguments by parties in this proceeding that California can simply wait until some undetermined point in the future to determine what resources are needed for 33% RPS integration. As PG&E explained above in Section IV.A, given the lengthy amount of time required to develop and build projects in California, the time to act is now. As described below in Section VII, the Oakley

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[177] See *Scoping Memo and Ruling of Assigned Commissioner and Administrative Law Judge*, issued May 17, 2012 in Rulemaking 12-03-014 at p. 10 (showing a proposed decision in Track 2 on scenarios in November 2012).

[178] Ex. 2 at p. 37, lines 11-16 (PG&E, Alvarez).

[179] *Id.* at p. 37, lines 18-24 (PG&E, Alvarez).

Project is the least cost/best fit option to address a reliability need that is rapidly approaching. Moreover, the Oakley Project has numerous operational and environmental benefits. The project is fully permitted and construction has begun. Given the regulatory lag in California and reliability need for renewable integration, the Commission certainly has a strong basis for approving the Oakley Project.

B. The Risk of Project Failures and Delays Support Approval Of The Amended PSA.

Project failures and delays are more the rule in California, rather than the exception. As the Commission is aware, numerous projects that have initially been proposed with great fanfare, have subsequently been significantly delayed or terminated. For example, two of the proposed projects relied on in the 2010 LTPP analysis – the Avenal and Victorville projects – have been delayed and may never be built.[180] In other situations, such as Russell City, project development has been delayed for years. In this proceeding, the Commission has before it a fully permitted project that enjoys broad local support and has already started construction. Given the history of delays and project terminations in California, the Commission should approve the Amended PSA to ensure that a new generation resource that is needed in California can actually proceed and be built.

C. The Oakley Project Supports A Reliable Regulatory Framework.

California already has a reputation for being one of the most difficult states in which to permit and site new resources.[181] The Commission should approve this Application to reduce resource planning uncertainty and risk. Resource planning has become more complex because of the absence of clear planning criteria to address the need for flexible capacity to integrate higher

[180] *Id.*, Attachment B at p. 31.

[181] *Id.* at p. 39, lines 16-29 (PG&E, Alvarez).

levels of intermittent renewable generation.[182] This does not mean that the solution is to postpone making decisions or wait for some undetermined amount of time in the future, as some parties propose. In fact, if anything, given the increased uncertainty and the lack of experience forecasting and operating with higher levels of renewables with fewer flexible resources, the Commission should err on the side of having an excess margin of flexible capacity, and be more amenable to deviate from the past to protect reliability of service for customers.

D. The Oakley Project Has Numerous Benefits That Merit Approval of the Amended PSA And Furthers California GHG Goals.

In addition to the issues addressed above, as described throughout this opening brief, the Oakley Project has numerous benefits and is a least cost/best fit resource for PG&E's customers. PG&E will not repeat its description of the attributes of the Oakley Project in this section. However, as PG&E has demonstrated in its Application, testimony, during the hearings and in this opening brief, the Amended PSA is reasonable, just and beneficial to PG&E's customers. The Commission should exercise its authority under Section 701 and approve the Amended PSA based on the voluminous record developed in this proceeding.

In addition to its least cost/best fit attributes, the Oakley Project also has numerous environmental attributes. In the testimony of CUE witness Marcus, Mr. Marcus provides a detailed analysis demonstrating the water use and air pollutant emissions benefits of the Oakley Project.[183] The Oakley Project also has GHG benefits. As the CEC concluded after its exhaustive review:

> The [Oakley Project] will be consistent with the state's GHG policies and will help achieve the state's GHG goals, by (1) causing a decrease in overall electricity system GHG emissions; and (2) fostering the addition of

[182] *Id.*

[183] Ex. 3 at pp. 2-6 (CUE, Marcus).

renewable generation into the system, which will further reduce system GHG emissions.[184]

E. The Oakley Project Can Address Recent Developments In California And Will Benefit The California Energy Market.

There are two additional benefits associated with the Oakley Project that merit Commission consideration. First, with the recent outage at Southern California Edison Company's ("SCE") San Onofre Nuclear Generation Station ("SONGS") nuclear power plant, there have been an increasing number of individuals and groups who have urged the early retirement of SCE's SONGS facility and opposed license renewal for PG&E's Diablo Canyon nuclear power plant. In addition, the Commission is currently evaluating a scenario in the 2012 LTPP proceeding that assumes the early retirement of SONGS and Diablo Canyon by 2015. The current licenses for Diablo Canyon Units 1 and 2 expire in 2024 and 2025, respectively. If Diablo Canyon is not relicensed, there will be an even greater need for new generation resources in Northern California.[185] Given the Oakley Project's efficiency and low emissions relative to other conventional generation resources, the Oakley Project would be even more critical if the operating licenses for Diablo Canyon are not renewed.[186]

Second, the Oakley Project will likely have a beneficial impact on market prices in California, effectively lowering customer generation costs. As CUE witness Marcus explained in his testimony, because of the Oakley Project's low heat, it is likely that when it is bid into the CAISO markets the Oakley Project will have the net effect of lowering the single-price auction market price.[187] While Mr. Marcus was unable to calculate the exact amount of the market

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[184] *Id.* at p. 77, lines 30-34 (PG&E, Maring) (quoting Section V.A, GHG Emissions, at p. 2).

[185] *Id.* at p. 51, lines 22-34 (PG&E, Alvarez).

[186] *Id.*

[187] Ex. 3 at pp. 10-11 (CUE, Marcus).

impact given that market prices vary from hour to hour, based on a preliminary analysis, he concluded that the market impact could be substantial.[188]

F. Statements Opposing UOG Generally Are Not Persuasive

In its testimony, IEP raised general policy issues regarding UOG as a basis for rejecting the Amended PSA. In particular, IEP asserts that PPAs are preferable over UOG because under a PPA an independent generator bears the cost risks rather than utility customers.[189] This assertion is simply wrong. First, the generator does not bear certain cost risks in many PPAs. For example, in a tolling agreement the utility is typically responsible for procuring fuel for a facility and thus the generator does not bear any risk in terms of fluctuations in fuel costs. Another example would be GHG compliance costs, which in many PPAs can be the responsibility of the utility, not the generator. In these cases, the generator is insulated from risks that prices and costs will fluctuate and that risk is instead transferred to PG&E's customers.

Second, even when a PPA provides for fixed capacity and energy payments, the generator may subsequently ask for a price amendment if costs increase. For example, the Russell City Project was one of the winning offers in PG&E's 2004 LTRFO. As a result of permitting delays and cost increases in equipment, materials and labor, the developer of the Russell City Project asked for a delay in the project on-line date, a contract price increase, and other amendments.[190] The Commission ultimately approved a revised version of the PPA amendments that included, among other items, "a 30% cost increase over the terms of the

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[188] *Id.* at p. 11, line 9 (CUE, Marcus).

[189] Ex. 8 at p. 36, lines 1-6 and Attachment U at p. 29 (IEP, Monsen).

[190] D.09-04-010 at p. 2 (approving amendments to the Russell City Project PPA).

original PPA" and provisions that shifted "certain risks from the developer to PG&E's customers related to control of future GHG emissions."[191]

At the hearings, IEP asked questions regarding whether PG&E believed the Russell City amendments were reasonable.[192] However, the point is not whether the amendments were reasonable. Instead, PG&E has simply used Russell City as an example of a PPA being negotiated and the developer subsequently coming back for an increase in the PPA prices. In effect, whether or not the price increase is reasonable, the fact is that the developer is shifting increased costs to customers. These facts are contrary to IEP's oft-repeated assertion that PPAs create little risk for customers once a PPA is initially executed.[193]

VII. ISSUE 2 -- THE AMENDED PSA IS JUST AND REASONABLE AND THE OAKLEY PROJECT IS THE LEAST COST/BEST FIT ALTERNATIVE.

A. The Amended PSA Is Just And Reasonable

In its Initial Testimony, PG&E provided a detailed description of the Amended PSA and explained why the terms and conditions are just and reasonable.[194] For example, PG&E explained in detail the obligations of the parties, milestones and guaranteed commercial availability for the Oakley Project, the risks that PG&E was assuming under the Amended PSA and its efforts to mitigate those risks, and specific terms and conditions such as credit, termination and other provisions.

The terms of the Amended PSA itself are largely undisputed by the parties. Indeed, only two parties raised concerns about specific terms and conditions in the Amended PSA. First,

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[191] *Id.* at pp. 7-8.

[192] Tr. at p. 624, line 10 to p. 626, line 9 (PG&E, O'Flanagan).

[193] Ex. 8 at p. 36, lines 1-6 (IEP, Monsen).

[194] *See* Ex. 1, Chapter 4 (PG&E, Monardi). The Amended PSA was included in the record as Ex. 19-C and Attachment E-1 to the Amended PSA was marked as Exhibit 36-C.

WPTF asserted that under the Amended PSA, CCGS is only taking on minimal risk associated with the Oakley Project.[195] This is incorrect. As PG&E detailed in its Rebuttal Testimony, CCGS is taking on substantial risk associated with the Oakley Project.[196] In any contract, both parties will always assume some measure of risk. Although CCGS is assuming most of the risks in the Amended PSA, there are some risks that PG&E agreed to assume.[197] However, PG&E negotiated a number of key provisions in the Amended PSA to mitigate these risks for PG&E and its customers.[198] Other than generalized statements, WPTF provides no specific examples of CCGS taking on minimal risk or of the risks that PG&E is assuming are unreasonable.

Second, DRA raised concerns about one specific provision in the Amended PSA. Because this term is confidential, PG&E addresses it in Attachment A to this opening brief.[199]

Finally, several parties at the hearings made reference to the fact that, as market participants, they were unable to review the terms and conditions of the Amended PSA.[200] These parties raised similar issues in their testimony.[201] This issue is a red herring. First, in response to the Motion to Seal filed by PG&E, IEP asserted that the Amended PSA was not confidential and should be partially or wholly unredacted. ALJ Yacknin denied this motion and determined that the Amended PSA and corresponding testimony was properly marked confidential.[202] PG&E's

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[195] Ex. 10 at p. 12, lines 1-2 (WPTF, Ackerman).

[196] Ex. 2 at p. 53, line 8 to p. 54, line 2 (PG&E, Monardi).

[197] Ex. 1 at p. 4-10 to p. 4-13 (PG&E, Monardi).

[198] *Id.*

[199] Rather than redacting a discussion in the middle of its brief, PG&E hoped that it would be easier for ALJ Yacknin and the parties to simply include this discussion in a confidential Attachment.

[200] *See e.g.*, Tr. at p. 96, lines 2-5 (statement by IEP's counsel).

[201] Ex. 8 at p. 5 (IEP, Monsen); Ex. 10 at p. 10, lines 8-10 (WPTF, Ackerman).

[202] *Administrative Law Judge's Ruling on Motion to Seal the Evidentiary Record*, issued June 28, 2012 at pp. 3-4. IEP subsequently filed a motion for reconsideration of this ruling which has not yet been acted on by the Commission.

designation of the Amended PSA as confidential is consistent with Commission decisions and rules, and thus market participants such as IEP cannot complain about PG&E's redactions. Second, in D.11-07-028, the Commission established a procedure for market participants, such as IEP and WPTF, to use a reviewing representative in proceedings to review market information. IEP and/or WPTF could have followed this procedure and a reviewing representative could have had access to the Amended PSA, but they chose not to do so.[203] Thus, it is inaccurate for parties such as IEP and WPTF to argue that they could not review the Amended PSA. To the extent that these parties in opening briefs assert that they were precluded from addressing the specific terms and conditions of the Amended PSA, these arguments should be rejected.

B. The Oakley Project Is A Least Cost Resource For Customers.

1. The Oakley Project Is A Least Cost Resource Compared To Recently Built Or Proposed Projects.

In its Initial and Rebuttal Testimony, PG&E compared the Oakley Project to other recently proposed facilities that are either completed or in development.[204] PG&E's Initial Testimony demonstrated that the Oakley Project is the "most cost-effective resource addition, compared to other projects that the Commission has approved in the last two years."[205] In its Rebuttal Testimony, PG&E updated this analysis with more recent market information, updated transmission upgrade information, and a corrected heat rate for the Oakley Project.[206] This updated analysis demonstrated that the Oakley Project had an even better market valuation than was included in PG&E's Initial Testimony. Fairfield/Madera asserted in their testimony that the

[203] Ex. 2 at p. 80, lines 4-7 (PG&E, Monardi).

[204] Ex. 1 at pp. 5-15 to 5-16 (PG&E, Alvarez); Ex. 2 at pp. 40-44 (PG&E, Alvarez).

[205] Ex. 1 at p. 5-15, lines 7-9 (PG&E, Alvarez).

[206] Ex. 2 at p. 41, lines 1-9 (PG&E, Alvarez).

projects that they proposed in the 2008 LTRFO could be lower cost alternatives to the Oakley Project.[207] However, when PG&E updated its evaluation of the Fairfield/Madera offers using current market information, the Oakley Project market value was significantly better than the market value of these projects.[208]

Although no party opposing the Oakley Project offered an alternative valuation analysis in its testimony, several parties criticized certain aspects of PG&E's analysis. First, TURN asserted that all of the market valuations in PG&E's testimony, including the valuation for the Oakley Project, were negative.[209] However, as PG&E witness Alvarez explained in response to questions from ALJ Yacknin, a negative market valuation does not mean that a proposed resource is not the least cost option.[210] As explained above in Section V.B, the Oakley Project is needed to meet a significant negative reliability risk in 2018 identified by the CAISO. As the Commission has previously explained, under-procurement and lack of electric system reliability can have a significant and detrimental financial impact on California.[211] Moreover, as IEP has acknowledged, under-procurement can have disproportionate impacts across geographic areas and demographic groups.[212] Although the Oakley Project's market valuation is negative, this does not mean that it is not the least cost alternative to address reliability needs in California. Indeed, PG&E's undisputed analysis of recently constructed and proposed projects demonstrates that the Oakley Project is the least cost option.

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[207] Ex. 11 at pp. 2-4 (Fairfield/Madera, Fredericks).

[208] In addition, as explained in Section IV.A.3, the Fairfield and Madera Projects are not viable alternatives to the Oakley Project given the viability challenges associated with these projects.

[209] Ex. 6 at p. 19, lines 1-10 (TURN, Woodruff).

[210] Tr. at p. 359, line 8 to p. 359, line 18 (PG&E, Alvarez); *see also* Ex. 2 at p. 40, lines 2-16 (PG&E, Alvarez).

[211] D.07-01-041 at p. 23 and Findings of Fact ("FOF") 17-18.

[212] Ex. 39 at p. 3.

Second, TURN and DRA argue that comparing a 30-year UOG facility to 10-year PPAs is difficult, and that the Commission has previously expressed concern about this kind of analysis.[213] To perform its market valuation analysis, PG&E developed the net present value of the levelized costs associated with the Oakley Project and compared it to the net present value of the levelized costs associated with Commission-approved PPAs.[214] PG&E recognizes that there is a difference in the duration for these resources (30 years v. 10 years), but the levelized cost and net present value approach addresses this difference. Moreover, it is not prudent to try to guess what the next 20 years of PPA costs would be after the first ten-year period, as some parties appear to suggest. As PG&E witness Alvarez explained in testimony and at the hearings, unlike the certainty of costs associated with UOG, PPA costs after the first ten-years could be higher for the remaining 20-years of the resource, or lower.[215] If PG&E had assumed certain PPA costs for the remaining 20-years after the PPA expired, parties in this proceeding would have inevitably disputed PG&E's estimate. Some would have asserted the market price for PPAs in the future would be higher and others would assert they would be lower. PG&E's levelized market valuation approach avoids these disputes about predictions of future events.[216]

PG&E's written testimony and the testimony of witness Alvarez at the hearings also addresses the concerns raised by TURN in the initial Oakley Project Application (*i.e.*, A.09-09-021). In that proceeding, TURN expressed concern about the "uncertainty" associated with PG&E's levelization analysis.[217] In D.10-07-045, the Commission did not substantively address

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[213] Ex. 5 at p. 3-6 (DRA, Shmidt); Ex. 6 at pp. 27-29 (TURN, Woodruff).

[214] Ex. 2 at p. 43, line 4 to p. 44, line 2 (PG&E, Alvarez).

[215] *Id.*; *see also* Tr. at p. 289, lines 10-28 (PG&E, Alvarez).

[216] Tr. at pp. 360, line 13 to p. 361, line 27 (PG&E, Alvarez).

[217] D.10-07-045 at p. 37.

TURN's concerns or agree with TURN's conclusions.[218] Instead, the Commission simply noted that TURN had raised this issue and that it was unresolved. In order to address TURN's earlier concerns, in this proceeding PG&E has explained the reasonableness of its levelization approach and how, in fact, including assumptions regarding PPA prices for years 11-30 of a PPA facility would create greater uncertainty. Notably, nowhere in its testimony did TURN dispute the underlying market assumptions or calculations in PG&E's market valuation analysis, or offer any alternative analysis or assumptions. Nor does TURN explain why PG&E's levelization approach is unreasonable.

2. The Oakley Project Is More Cost Effective Than Other Alternatives For Flexible Generation.

a) Contracting With Existing Facilities Is Not A Least Cost Alternative.

Some parties assert that an alternative to the Oakley Project to address the need for flexible resources by 2018 is to simply contract with existing conventional generators that would otherwise retire.[219] However, PG&E performed an economic analysis of this alternative demonstrating that it would be more expensive for customers. Specifically, PG&E compared the net cost of accelerating the commercial on-line date ("COD") for the Oakley Project from 2020 to 2016 with the costs associated with paying existing generation to stay on-line until 2018 to meet the reliability need.[220] PG&E assumed that existing generators would receive the Capacity Procurement Mechanism ("CPM") price, which is included in the CAISO Tariff and was approved by the Federal Energy Regulatory Commission ("FERC"). PG&E's initial analysis determined that the marginal cost for the Oakley Project coming on-line in 2016 is $129 million

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[218] *Id.* at p. 39.

[219] *See e.g.* Tr. at p. 352, line 24 to p. 353, line 26 (PG&E, Alvarez) (cross-examination by DRA regarding the CAISO's risk of retirement initiative).

[220] Ex. 1 at pp. 5-16 to 5-19 (PG&E, Alvarez).

as compared to $193 million that would be spent to keep existing generation from retiring. PG&E explained that:

> If an existing CC is to be paid CPM payments until it is needed, and this cost to keep the existing CC on-line is greater than the cost to accelerate the COD for a new, flexible, gas-fired generating unit, then the new gas-fired resource is inframarginal and the cost of accelerating the COD of the unit is justified. As shown above, because the cost of accelerating the Oakley Project is less than the cost of paying CPM payments to keep existing capacity on-line until it is needed, if the CAISO and the Commission are willing to pay existing capacity a CPM price until it is needed, the Oakley Project with a June 2016 GCAD is inframarginal for meeting the future system needs for flexible capacity.[221]

In its Rebuttal Testimony, PG&E updated this analysis to correct a mistake in the present valuation of the Oakley Project's costs.[222] This correction lowered the net cost of the Oakley Project further and demonstrated that "the net cost [of] developing the Oakley Project for a 2016 [Commercial On-Line Date ("COD")], compared to a 2020 COD, is less than half of the cost of paying a CPM price to existing resources to remain in operation until 2018, when the CAISO says they will first be needed."[223]

Only a few parties attempted to refute PG&E's analysis. In its testimony, TURN argues that the CPM price used in PG&E's analysis is too high because existing generators will most likely be paid substantially less than CPM, and thus PG&E's analysis of the cost to retain existing generation is too high.[224] TURN cites the Sutter facility as an example of paying an existing generator less than the CPM. However, the actual price paid to Sutter is unknown and TURN relies solely on a representation from Calpine that the Sutter price was significantly below CPM. Moreover, as TURN witness Woodruff acknowledged at the hearings, other

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[221] *Id.* at p. 5-18, lines 8-17 (PG&E, Alvarez).

[222] Ex. 2 at pp. 41-43 (PG&E, Alvarez).

[223] *Id.* at p. 42, line 20 to p. 43, line 3 (PG&E, Alvarez) (emphasis added).

[224] Ex. 6 at p. 26, line 14 to p. 27, line 7 (TURN, Woodruff).

generators in Southern California are currently being paid CPM to continue operating to ensure reliability.[225] It is certainly reasonable to assume that, in the future, generators will seek to maximize their profits by demanding CPM in order to continue to operate for grid reliability purposes. As TURN witness Woodruff conceded, with generators "[t]here is certainly a tendency to want more."[226] Thus, although TURN cites Sutter as one instance in which the CPM price was not paid to prevent a generator from retiring, more recently generators have been paid CPM to ensure reliability in Southern California and it is likely that in the future generators will seek the highest compensation possible. Thus, using the CPM price is entirely reasonable. Notably, TURN did not propose an alternative price that should be used.

TURN also argues that there are currently CAISO proposals that pay a lower price than CPM to keep existing generation on-line, and thus concludes that PG&E's use of the CPM is not warranted. The key word in TURN's argument is "proposals." While the CAISO is currently considering a number of proposals addressing the risk of retirement of existing generation, none of these proposals have even been filed at FERC for approval. As TURN witness Woodruff conceded at the hearings, any CAISO proposal to compensate existing generators to prevent retirement will require FERC approval.[227] Mr. Woodruff also acknowledged that, at FERC, generators will likely push for more compensation than what is proposed by the CAISO.[228] For example, the initial CPM price proposed by the CAISO was $55/kw-year.[229] After litigation at FERC and a settlement, the CPM price ultimately approved by FERC was $67.50/kw-year, a

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[225] Tr. at p. 51, lines 8-17 and p. 53, lines 8-11 (TURN, Woodruff); *see also* Ex. 16.

[226] Tr. at p. 56, lines 2-3 (TURN, Woodruff).

[227] Tr. at p. 55, lines 3-12 (TURN, Woodruff).

[228] Tr. at p. 56, lines 16-22 (TURN, Woodruff).

[229] Tr. at p. 58, lines 7-20 (TURN, Woodruff); Ex. 17 at p. 2, paragraph 4.

20% increase over what the CAISO originally proposed.[230] As Mr. Woodruff conceded, the ultimate price approved by FERC associated with any CAISO proposal may be "very different" than what the CAISO originally proposed.[231] Thus, there is no basis for TURN's reliance on current CAISO proposals as demonstrating that the CPM price used in PG&E's analysis is too high.

TURN's other criticism of PG&E's analysis is that PG&E should have only considered the cost to keep existing generators on-line until 2016, when the Oakley Project goes on-line, not 2018.[232] However, the analysis related to keeping existing generation on-line assumed that the Oakley Project was not approved and developed.[233] If the Oakley Project is not developed, or alternative capacity is not built by 2018 or later, customers will pay more to keep existing generators on-line to address the reliability needs in 2018 or later. Thus, it is appropriate to analyze the amount of payments to existing generators that would be required from 2012 through 2018, not 2016. If the Oakley Project is built, payments to existing generators will be unnecessary as the Oakley Project will be available to meet the 2018 need. Moreover, even if TURN is correct that the date to use is 2016 and not 2018 for analyzing existing generator payments, TURN's own analysis that these payments would amount to $114 million[234] demonstrates that the Oakley Project is the least cost option as its marginal cost will be less than that amount.[235]

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[230] Tr. at p. 58, line 21 to p. 59, line 17 (TURN, Woodruff); Ex. 17 at p. 4, paragraph 10.

[231] Tr. at p. 59, lines 18-24 (TURN, Woodruff).

[232] Ex. 6 at p. 25, line 7 to p. 26, line 3 (TURN, Woodruff).

[233] Ex. 2 at p. 44, lines 17-25 (PG&E, Alvarez).

[234] Ex. 6 at p. 25, line 28 (TURN, Woodruff).

[235] Ex. 2 at p. 42, Table E-2 (PG&E, Alvarez).

The only other party that addressed PG&E's analysis was IEP. IEP asserted that PG&E used an incorrect escalation rate in its analysis to determine the difference between accelerating the Oakley Project on-line date and paying existing generation to remain on-line.[236] IEP asserts that PG&E should have used a 2.75% escalation rate, instead of 3.7%. PG&E's Initial Testimony mistakenly referred to a 3.7% escalation rate.[237] PG&E addressed this mistake in its Rebuttal Testimony and corrected its Initial Testimony at the hearings.[238] Thus, IEP's concerns about the escalation rates used by PG&E are moot.

b) The Fairfield and Madera Projects Are Not Least Cost Alternatives.

Fairfield/Madera assert that their proposed projects are a lower cost alternative to the Oakley Project and that PG&E should simply refresh the losing offers from the 2004 LTRFO.[239] There are several problems with this argument. First, as PG&E demonstrated above in Section IV.A.3, it is unlikely that any of the limited set of projects identified by Fairfield/Madera will be available by 2018 given the lack of development associated with these projects. Second, it is unclear whether these proposed projects, even if these limited offers are refreshed, will be more cost effective than the Oakley Project. Based on the offers from the 2008 LTRFO, the Fairfield/Madera projects had a substantially worse market valuation than the Oakley Project.[240] Third, Fairfield/Madera's assertions are not based on an actual commercial commitment, unlike CCGS' contractual commitment. Fairfield/Madera have failed to present any information that would demonstrate their offers will improve significantly.

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[236] Ex. 8 at pp. 17-19 (IEP, Monsen).

[237] Ex. 1 at p. 5-17, n. 33 (PG&E, Alvarez).

[238] Ex. 2 at p. 45, lines 3-15 (PG&E, Alvarez); Tr. at p. 261, lines 1-7 (PG&E, Alvarez).

[239] Ex. 11 at pp. 15-16 (Fairfield/Madera, Frederickson).

[240] Ex. 2 at p. 44, n. 119 (PG&E, Alvarez).

c) IEP's Proposal To Retrofit Or Upgrade Existing Facilities Fails To Demonstrate Lower Cost Alternatives.

IEP asserts that existing resources can be retrofitted or upgraded to address the need for flexible resources by 2018 at a lower cost than the Oakley Project.[241] As with Fairfield/Madera's assertions, IEP has not demonstrated that there is sufficient time to upgrade or retrofit existing facilities by 2018, as PG&E explained above in Section IV.A.4. Moreover, IEP failed to provide any evidence as to the actual costs of a retrofit or upgrade to demonstrate that this might be a lower cost alternative to the Oakley Project. Indeed, in PG&E's discovery responses that were attached to IEP's testimony, PG&E explained why retrofitting or upgrading existing facilities with the type of technology included in the Oakley Project would be costly, complex and time-consuming.[242] Upgrading existing facilities to incorporate recent technology would involve the modification or wholesale replacement of key equipment, modification to building structures and designs, upgrading facilities to comply with current building codes, and obtaining new permits and licenses.[243] IEP fails to provide any information or data that this substantial work can be done in a timely or inexpensive manner.

d) IEP's Statements Regarding The Lodi Energy Center Are Unavailing.

During the hearing, IEP submitted a press release concerning the Lodi Energy Center ("LEC") and indicated in cross-examination that LEC would appear to have a lower $/MW capital cost than the Oakley Project.[244] There are several problems with this argument. First, IEP only offered a press release regarding LEC and it is unclear what was and was not included in the $388 million cost figure cited. For example, this may not have included the land

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[241] Ex. 8 at pp. 33-36 (IEP, Monsen).

[242] Ex. 8, Attachment B, Response to IEP Data Request No. 13 at pp. 2-3 (IEP, Monsen).

[243] *Id.*

[244] Ex. 44; Tr. at p. 697, lines 16-21 (CUE, Marcus).

acquisition cost, transmission costs, or other costs that could significantly impact the price. IEP's reliance on a single sentence in a press release is unpersuasive and certainly is not a compelling analysis of least-cost options.

Second, IEP ignores the fact that PG&E's cost-effectiveness analysis is based on actual offer prices in a competitive solicitation for projects in PG&E's service territory. It may be that there were unique features which impacted the LEC price, or that the municipal developers of that project had equipment or material available to them that could lower the cost. Rather than relying on a number in a press release, the Commission should instead rely on actual offers for projects in a competitive solicitation. Using this information, the Oakley Project is clearly the lowest cost alternative.

In addition, LEC provides much less flexible operating capability and reliability when compared to the Oakley Project. Lodi has one gas turbine and one steam turbine creating a single point failure potential for the entire output of the facility with the loss of one gas turbine. The lower output associated with the equipment configuration also provides for approximately half of the ancillary service capability provided by the Oakley Project.

C. The Oakley Project Is The Best Fit For The Need Identified.

1. The Oakley Project Is Exactly The Kind Of Resource Needed To Integrate Renewable Resources.

In its Initial and Rebuttal Testimony, PG&E has described in detail the operational benefits of the Oakley Project, and why this facility is the best fit alternative to meet the needs associated with renewable resource integration.[245] In this opening brief, PG&E provides a brief summary of the attributes that demonstrate that the Oakley Project is the "best fit" resource.

[245] *See generally*, Ex. 1, Chapter 2 (PG&E, Maring) (describing the operational benefits of the Oakley Project); Ex. 2 at pp. 61-76 (PG&E, Maring and Royall) (addressing intervenors testimony regarding operational characteristics of the Oakley Project).

First, the Oakley Project will incorporate "an evolutionary upgrade to the GE 7FA series of combustion turbines designed to provide higher efficiency, greater output, higher availability, greater operational flexibility, and reduced maintenance, all while maintaining extremely low emissions."[246] PG&E described this technology in detail and provided operating test results from GE demonstrating the benefits of the new turbine.[247] Indeed, one of the cross-examination exhibits used by Fairfield/Madera graphically depicts the high efficiency of the GE turbine that will be used in the Oakley Project.[248]

Second, the Oakley Project is designed to provide significant operational flexibility. In its Initial Testimony, PG&E described in detail modifications to the HRSG and special design features included by GE that will allow maximum flexibility for the Oakley Project.[249] GE has also designed its technology to allow the start-up of both turbines at the same time and to provide a wide range of operating scenarios.[250] The Oakley Project also includes rapid ramp rates over its entire operational range.[251]

Third, the Oakley Project has been designed to provide ancillary services, which are critical for the CAISO to meet the needs of intermittent and renewable generation.[252]

Fourth, the Oakley Project will have the lowest heat rate in PG&E's portfolio of resources.[253] This has both environmental and cost benefits. With regard to environmental

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[246] Ex. 1 at p. 2-2, lines 4-7 (PG&E, Maring).

[247] Ex. 1 at pp. 2-2 to 2-3 (PG&E, Maring); Ex. 2, Attachments I and J (testing information from GE).

[248] Ex. 23.

[249] Ex. 1 at pp. 2-3 to 2-6 (PG&E, Maring).

[250] *Id.* at p. 2-7, lines 3-32 (PG&E, Maring).

[251] *Id.* at p. 2-8, lines 1-9 (PG&E, Maring).

[252] *Id.* at p. 2-8, line 10 to p. 2-9, line 27 (PG&E, Maring).

[253] *Id.* at p. 1-1, lines 8-10 (PG&E, Monardi); Ex. 42.

benefits, because it has an extremely low heat rate, the Oakley Project will emit less GHG and other pollutants than less efficient facilities.[254] The Oakley Project has other environmental benefits as well, such as reduced water usage.[255] With regard to cost, a lower heat rate means that less fuel will be needed to provide the same amount of energy, which benefits PG&E's customers, and less GHG allowances and other compliance instruments will need to be purchased by PG&E for its customers. As PG&E witness Royall explained at the hearing, PG&E customers will save millions of dollars annually because of the Oakley Project's low heat rate.[256]

All of the above attributes and operating characteristics are exactly the kind needed by the CAISO to integrate renewable resources.[257] In addition, PG&E provided detailed evidence demonstrating that the Oakley Project has substantially better operating capabilities compared to projects were recently constructed and in operation or which are currently being developed. For example, in its Initial Testimony, PG&E provided operating information demonstrating that the Oakley Project has significantly better operational flexibility attributes compared to recently developed projects, including faster start and ramp times and the ability to ramp more quickly.[258] Because of its advanced technology, PG&E also demonstrated that the Oakley Project will have lower annual emissions than other recently developed facilities.[259] In its Rebuttal Testimony,

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[254] *Id.* at pp. 2-11 to 2-13 (PG&E, Maring).

[255] *Id.* at pp. 2-15 to 2-16 (PG&E, Maring).

[256] Tr. at p. 549, lines 1525 (PG&E, Royall).

[257] Ex. 2 at p. 67, line 23 to p. 68, line 5 (PG&E, Maring and Royall).

[258] Ex. 1 at p. 2-10, Table 2-1 (PG&E, Maring).

[259] *Id.* at p. 2-14, Table 2-4 (PG&E, Maring).

PG&E provided additional operating information regarding both existing facilities and facilities that are currently under construction.[260]

In his testimony, CUE witness Marcus performed his own analysis of the flexibility attributes of the Oakley Project and concluded:

> The underlying data show that Oakley is not only better than the average of the other plants, it is better than each of them. Specifically, the underlying data show that the maximum level of spinning reserves and regulation capability and the ramp rate that Oakley can provide is greater than the corresponding maximum for ***each*** of the other plants, that Oakley can provide spinning reserves but none of the other combined cycles can, and that Oakley's start up times are faster than those of ***each*** of the other plants, whether starting cold, warm, or hot.[261]

Mr. Marcus also noted that the Oakley Project's "minimum generation as a percentage of its maximum output would be lower than that of ***all*** the other combined cycles for which PG&E has provided minimum generation data."[262] The minimum generation as a percentage of maximum output is a key parameter of flexibility.

All of this information shows that the Oakley Project has demonstrably better operating characteristics than existing facilities, as well as facilities currently under construction. In short, the Oakley Project is the best fit alternative to address the renewable integration needs and reliability risks identified by the CAISO.

2. The Oakley Project Is A State-Of-The-Art Facility.

In their testimony, DRA and IEP both assert that the Oakley Project may no longer be "state-of-the-art" technology given the passage of time since it was first proposed.[263] IEP references, for example, recent turbine designs developed by Siemens. However, these parties

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[260] Ex. 2 at pp. 71-73 (PG&E, Maring and Royall).

[261] Ex. 3 at p. 7, line 24 to p. 8, line 8 (CUE, Marcus) (footnotes omitted).

[262] *Id.* at p. 9, lines 6-8 (CUE, Marcus).

[263] Ex. 5 at pp. 3-2 to 3-3 (DRA, Shmidt); Ex. 8 at pp. 30-32 (IEP, Monsen).

offer no studies or analysis demonstrating that this technology is better than the GE turbine. Moreover, GE has continued to refine and test its Rapid Response technology and these tests have confirmed the benefits of GE's technology, and that the GE technology is state-of-the-art.[264] Indeed, the only evidence in this proceeding comparing technologies was submitted by PG&E. In response to a discovery request, PG&E did a comparison of the Oakley Project to other air-cooled facilities, one of which used the Siemens Flex technology referred to by IEP. With regard to the Siemens Flex facility, PG&E determined that facility had a heat rate that was 6% higher than the Oakley Project.[265] In addition, IEP failed to provide any evidence that other technologies had better operating characteristics than the GE Rapid Response technology that will be used in the Oakley Project. Finally, these parties ignore the CEC's conclusion last year, after reviewing various technologies, that the Oakley Project embodies "the most fuel-efficient electric generation technology available."[266]

3. Other Agencies Have Recognized The Operational Benefits Of The Oakley Project.

The CEC conducted an exhaustive and detailed proceeding regarding the Oakley Project in which its operating benefits were reviewed and examined.[267] At the end of that process, the CEC approved the Oakley Project's AFC and made a number of findings regarding the Oakley Project, including determinations that:

- The Oakley Project is "flexible, highly dispatchable power" that will foster renewable resource integration[268];

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[264] Ex. 2 at p. 75, lines 16-17 (PG&E, Maring and Royall); Ex. 2, Attachments I, J and L.

[265] Ex. 2 at p. 63, line 16 to p. 64 line 6 (PG&E, Maring and Royall).

[266] Ex. 2 at p. 75, lines 11-15 (PG&E, Maring and Royall).

[267] Ex. 1 at pp. 3-2 to 3-6 (PG&E, Maring) (describing the CEC review process and finding).

[268] Ex. 2 at p. 68, lines 3-5 (PG&E, Alvarez).

- "The evidence indicates that the proposed turbines [for the Oakley Project] embody the most fuel-efficient electric generation technology available."[269];

- "If no new natural gas plants were constructed, reliance on older power plants may increase. These plants could consume more fuel and emit more air pollutants per kilowatt-hour generated than the [Oakley Project]. In the near term, the more likely result is that existing plants, many of which produce higher levels of pollutants, could operate more than they do now."[270]

- "OGS [*i.e.*, the Oakley Project] would provide flexible, highly dispatchable power. The "Rapid Response" capability of OGS allows each of the combustion turbine generators to start up and reach full load in less than 90 minutes for all cases, and hot/warm startups would occur in less than 30 minutes. OGS would provide short-starting and fast-ramping power under the CAISO use of these terms, which set a fast start as under 10 minutes. OGS would also provide a wide range of turndown operation, and is deemed fast starting in our evaluation because of its ability to come to full load in less than two hours. OGS would not obstruct penetration of renewable energy due to its ability to turn down to low loads and to achieve startups in less than two hours. OGS is likely to serve as an important firming source for intermittent renewable resources in support of California's RPS and GHG goals."[271]

- "The evidence shows that the [Oakley Project] will benefit the State of California's electrical system by providing peaking power and ancillary services during periods of high demand. The project will do so in the most fuel efficient manner practicable, without creating adverse effects on energy supplies or resources. Furthermore, the project will contribute to regional electricity reserves."[272]

- "The [Oakley Project] will be consistent with the state's GHG policies and will help achieve the state's GHG goals, by (1) causing a decrease in overall electricity system GHG emissions; and (2) fostering the addition of renewable generation into the system, which will further reduce system GHG emissions."[273]

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[269] *Id.* at p. 75, lines 13-15 (PG&E, Maring) (quoting the CEC Final Decision).

[270] *Id.* at p. 48, lines 27-34 (PG&E, Alvarez) (quoting the CEC Final Decision).

[271] *Id.* at p. 50, line 28 to p. 51, line 2 (PG&E, Alvarez) (quoting the CEC Final Decision).

[272] *Id.* at p. 51, lines 6-11 (PG&E, Alvarez) (quoting the CEC Final Decision).

[273] *Id.* at p. 51, lines 14-18 (PG&E, Alvarez) (quoting the CEC Final Decision)

The BAAQMD also recognized the best fit attributes of the Oakley Project after conducting its own exhaustive review.[274] The BAAQMD concluded in part:

- "[T]he [Oakley Project's] "Rapid Response" design will allow fast startups, so that it can provide power to the grid quickly. The proposed facility will thus provide energy-efficient electric generation capacity using new conventional generation technology, with operational flexibility to efficiently address grid fluctuations due to the intermittent nature of renewable generation such as wind and solar."

- "The Rapid Response package allows the plant to start up significantly faster than conventional combined-cycle plants by uncoupling the steam turbine as the gas turbine ramps up and comes on-line. The steam turbine is brought on-line more slowly to allow the equipment to heat up. Using this Rapid Response package, the proposed plant will be able to complete hot startups in less than 30 minutes and cold startups in less than 90 minutes. By contrast, conventional combined-cycle power plants can take up to three hours for hot startups and six hours for cold startups. The shorter startup periods of the proposed plant mean that it can come on-line and provide electricity to the grid more quickly, and also translate to reduced startup emissions; while the combined-cycle configuration retains high thermal efficiency. This fast startup capability coupled with high efficiency will give the plant a high degree of operational flexibility, which will allow it to rapidly respond to grid fluctuations that will result as more intermittent renewable resources are integrated into the grid while providing highly efficient generating capacity."[275]

Finally, the CAISO has recognized the operational benefits of the Oakley Project. In a letter to the Commission in May, 2012, the CAISO explained that "[t]he Oakley project will be capable of providing regulation, spinning reserves and non-spinning reserves as well as load following capability to support the ISO market. The operational flexibility of the project exceeds the flexibility of a generic combined cycle resource the ISO is currently using to study grid requirements to facilitate renewable integration."[276]

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[274] Ex. 1 at pp. 3-6 to 3-7 (PG&E, Maring) (describing BAAQMD review process).

[275] *Id.* at pp. 3-7 to 3-8 (PG&E, Maring) (quoting BAAQMD decision).

[276] *Id.*, Chapter 5, Attachment 2 at pp. 1-2 (PG&E, Alvarez) (emphasis added).

Virtually all of the intervenors simply ignore the CEC, BAAQMD and CAISO statements regarding the benefits of the Oakley Project. The only party to address this issue was TURN, who asserted that the CAISO's statements were consistent with CAISO statements regarding other proposed facilities, and thus these statements should carry "no particular credibility or weight."[277] TURN's argument is misplaced. The fact that the CAISO has provided similar letters for other projects simply means that the CAISO recognizes that there is a significant need for new generation to integrate renewable resources, and that the resources addressed in these letters will help meet those needs. This is not a reason to dismiss the CAISO's statement. Moreover, TURN ignores the fact that the CAISO's letter in this proceeding makes more specific statements regarding the Oakley Project. For example, in the two other documents attached by TURN that included statements from the CAISO, the CAISO did not say that those facilities exceeded the flexibility requirements that the CAISO was using it its modeling.[278] The CAISO did make this statement about the Oakley Project, demonstrating the unique operational benefits of the facility.

4. A Combined Cycle Facility Is A Better Fit Than A Combustion Turbine For The Needs Identified.

During the hearings, counsel for IEP raised questions regarding the use of a combustion turbine instead of a combined-cycle facility.[279] However, as PG&E witness Monardi explained, combustion turbine facilities are typically significantly less efficient than combined cycle facilities.[280] Use of a less efficient facility will likely mean that it is dispatched less by the

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[277] Ex. 6 at p. 15, line 21 (TURN, Woodruff).

[278] Ex. 6, Attachments 10-11 (TURN, Woodruff).

[279] Tr. at p. 102, lines 4-21 (PG&E, Monardi).

[280] *Id.*

CAISO[281], that PG&E's customers would be required to purchase more fuel for the less efficient operation, and that the facility would emit more pollutants. This is certainly not best fit. Moreover, many combustion turbine facilities have significant operating limitations given their lack of efficiency. For example, the Marsh Landing facility, which is currently being constructed and will come on-line in 2013, has limited starts and operating hours.[282] Other combustion turbine facilities have similar, significant limitations.[283] In comparison to combustion turbines, with its low heat rate, high efficiency and wide variety of permitted operating scenarios[284], the Oakley Project is clearly a best fit alternative. Finally, a combined-cycle facility will be less detrimentally impacted by changes in ambient conditions that impacts heat rates because a combined-cycle can use the exhaust heat to provide additional steam turbine output.[285] Thus, in a climate like California where there are substantial changes in ambient conditions, a combined-cycle facility is a better fit alternative.

5. Other Non-Conventional Resources Cannot Provide The Operational Benefits Provided By The Oakley Project.

In testimony and during the hearings, DRA questioned whether other alternatives, such as demand response or energy storage, were preferable to the Oakley Project.[286] However, the demand response programs in California are for limited time periods and, other than addressing peak day needs, do not provide operational flexibility.[287] Moreover, none of the demand

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[281] Tr. at p. 549, lines 15 to p. 551, line 2 (PG&E, Royall).

[282] Ex. 2 at p. 70, lines 21-31 (PG&E, Maring and Royall).

[283] *Id.* at pp. 72-72, Table H-3 (PG&E, Maring and Royall).

[284] *Id.* at p. 68, line 18 to p. 69, line 24 (PG&E, Maring and Royall).

[285] *Id.* at p. 62, lines 9-13 (PG&E, Maring and Royall).

[286] Ex. 5 at pp. 2-10 to 2-11 (DRA, Shmidt); Tr. at p. 152, line 16 to p. 153 line 7 (PG&E, Monardi).

[287] Tr. at p. 152, line 16 to p. 153 line 7 (PG&E, Monardi).

response programs developed to date have demonstrated the operational flexibility necessary to integrate renewable resources, nor have these programs had sufficient capacity to do so. As IEP correctly noted, "planning based on hoped-for levels of voluntary demand reduction (*i.e.*, energy efficiency and demand response) may result in involuntary demand reduction (*i.e.*, blackouts)."[288]

With regard to energy storage, it is unlikely that any meaningful storage capacity will be online by 2018.[289] Batteries are still early-stage technologies, and with limited operating experience. Furthermore, active CAISO queue positions for battery-related technologies account for less than 10 MW of capacity. PG&E is undergoing a feasibility study for the only utility-scale compressed air energy storage ("CAES") project under development in California. The PG&E CAES project has not yet started the interconnection study process, and is not expected to come online before 2020.[290] Aside from one project coming online this summer, it is unlikely any additional pumped storage facilities will be completed by 2017-2018 given FERC licensing requirements and construction timeframes. An alternative that is unavailable is not a best fit alternative.

6. Concerns About The GE Turbine Are Meritless.

In its testimony, CARE expressed concern that the GE Turbines were a new technology and therefore may be prone to equipment problems.[291] CBE raised similar issues in its cross-examination questions.[292] These concerns are unwarranted for several reasons. First, the new

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[288] Ex. 39 at pp. 2-3.

[289] Ex. 2 at p. 14, lines 18-30 (PG&E, Monardi).

[290] *Id.*

[291] Ex. 13 at pp. 9-10 (CARE, Sarvey).

[292] *See e.g.*, Tr. at p. 565, line 14 to p. 567, line 4 (PG&E, Maring).

technology 7FA is made up from proven designs of the major components. As GE explained, "[i]n developing the 7FA.05 gas turbine, GE has mined the wealth of knowledge that comes from the largest and most experienced F-class fleet in the industry and combined it with proven technology from across GE's broad portfolio of heavy duty and aeroderivative gas turbines, as well as GE's aircraft engine models."[293]

Second, GE has constructed a new testing facility in its Greenville, South Carolina, manufacturing facility to facilitate full load testing of the new compressor design and then the complete combustion turbine assembly. The compressor testing was completed earlier this year and the combustion turbine testing is ongoing.[294]

Third, manufacturers typically provide warranties for new equipment, as PG&E witness Maring explained in relation to a single incident at the Humboldt Project.[295]

Fourth, PG&E also intends to execute a long term maintenance agreement with GE for the Oakley Project, similar to agreements for the Colusa and Gateway Projects, to ensure proper operation.[296]

Finally, one additional comment on this subject is necessary. During the hearings, counsel for Fairfield/Madera repeatedly referred to information from GE that was included in PG&E's Rebuttal testimony as "marketing material" presumably to diminish its evidentiary value.[297] Even a cursory review demonstrates that Attachments I and J to PG&E's Rebuttal Testimony are not simply marketing materials. Instead, these documents provide a detailed

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[293] Ex. 2, Attachment L at p. 1.

[294] *Id.*, Attachments I and J; Tr. at p. 525, lines 8-21 (PG&E, Royal).

[295] Tr. at p. 565, lines 27-28 (PG&E, Maring).

[296] Ex. 2 at p. 76, lines 4-6 (PG&E, Maring and Royall).

[297] Tr. at p. 525, line 27 to p. 526, line 16 (PG&E, Maring) (responding to question from Fairfield/Madera's counsel).

explanation of the testing that the GE 7FA.05 turbine has undergone and provide the results of these tests. Attempts to characterize these test and validation results simply as "marketing materials" are unavailing.

7. Concerns About The Oakley Project Heat Rate Are Overstated.

Fairfield/Madera and CARE raised a number of issues regarding the heat rate for the Oakley Project. This issue consumed a remarkable amount of time at the hearings and verbiage in testimony, all of which appeared to be designed to add small increments to the Oakley Project heat rate. While PG&E believes all of these arguments are meritless, it is important not to lose the forest for the trees. The Oakley Project heat rate is demonstrably and significantly better than other similar facilities that have already come on-line or will soon commence operation.[298] Small incremental changes in the Oakley Project heat rate, which in circumstances such as changes in ambient conditions affect every other gas-fired facility as well, do not negate the fact that the Oakley Project has either the lowest or one of the lowest heat rates in California for a combined-cycle facility. Fairfield/Madera's and CARE's arguments ultimately do little to dispute this underlying reality and their efforts to add a few points to the Oakley Project heat rate are unavailing. Below, PG&E responds to each of the heat rate arguments raised by Fairfield/Madera and CARE.

First, Fairfield/Madera noted that the expected heat rate of 6,752 Btu/kwh assumed certain operating conditions which may or may not exist on any given day at the Oakley Project location.[299] This statement is unremarkable. PG&E used certain conditions (referred to as ISO conditions) as the basis for its statement regarding heat rates because these are the standard

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[298] Ex. 2 at p. 63, Table H-1 (PG&E, Maring and Royall); Ex. 42 (comparing the Oakley Project to the Colusa and Gateway Projects).

[299] Ex. 11 at pp. 5-7 (Fairfield/Madera, Roberts).

conditions used in the industry for comparing facilities.[300] PG&E does not dispute that under different condition the Oakley Project's heat rate will vary, just as the heat rate for every other conventional power plant in California will vary under different conditions. PG&E used ISO conditions for comparative purposes, and applied it equally to other facilities that it compared to the Oakley Project.[301]

Second, Fairfield/Madera asserted that summer temperatures in Oakley could significantly increase the Oakley Project heat rate.[302] However, Fairfield/Madera's witness Roberts conceded during cross-examination that he used the highest temperature in Oakley in his testimony, which may occur one or two hours a year, if at all. The evidence presented at the hearings indicated that the average temperatures in Oakley were substantially less during the day than the numbers used by Dr. Roberts, and even lower in the evening.[303] Indeed, during re-direct by Fairfield/Madera's counsel, Dr. Roberts admitted that his analysis was "aimed at" an "extreme increase in heat rate as a function of a high temperature" and that the impact of average temperatures on the heat rate would be substantially less.[304]

Third, Fairfield/Madera asserts that the use of an Air Cooled Condenser ("ACC") (*i.e.*, dry cooling) increases the Oakley Project heat rate by 4-6%. At the hearings, Fairfield/Madera's witness acknowledged that he had not performed any study specific to the Oakley Project to arrive at this conclusion and also agreed that all air-cooled facilities would have similar issues.[305]

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[300] Ex. 2 at p. 61, lines 8-29 (PG&E, Maring and Royall).

[301] Ex. 2 at p. 63, Table H-1 (PG&E, Maring and Royall) (showing the heat rates for other facilities at ISO conditions).

[302] Ex. 11 at p. 6, lines 2-7 (Fairfield/Madera, Roberts).

[303] Tr. at p. 312, line 25 to p. 314, line 4 (Fairfield/Madera, Roberts); Ex. 31 (average temperatures in Oakley).

[304] Tr. at p. 334, line 17 to p. 335, line 1 (Fairfield/Madera, Roberts).

[305] Tr. at p. 315, lines 11-20 (Fairfield/Madera, Roberts).

Moreover, the benefits of the ACC technology outweigh the slight increase in heat rate at high ambient temperatures. In Chapter 2, page 2-3 of PG&E's Initial Testimony, PG&E explained that the ACC will reduce water consumption by roughly 90 percent when compared to similar combined cycles that utilize water for process cooling. In addition, in Chapter 2, page 2-11, PG&E listed other environmental benefits of an air cooled facility that included reduction in waste water discharge, and elimination of the unsightly vapor plumes and air emissions related to wet cooled facilities. Moreover, the Fairfield/Madera testimony was based on older versions of ACC's that do have limited operational capacity under high ambient conditions. More recent ACC technology, such as that used in the Colusa and Gateway Projects, does not have this type of limited operational capacity. Finally, a comparison of the Oakley Project to recent wet-cooled projects demonstrates the use of air cooling does not detrimentally impact the efficiency of the Oakley Project.[306]

Fourth, Fairfield/Madera expresses concern about the operation of the Oakley Project at minimum load, speculating that this may impact the heat rate by 10-16 percentage points.[307] However, as with Fairfield/Madera's other heat rate arguments, there was no study or analysis specific to the Oakley Project to demonstrate this assertion.[308]

Fifth, Fairfield/Madera expresses concerns about the impact of certain pumps and other equipment on the Oakley Project heat rate.[309] These concerns are overstated. Electric-driven vacuum pumps are for the hogging ejectors, which are the ejectors that are used to initially evacuate the sub-atmospheric portion of the steam system.[310] The holding ejectors, those

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[306] Ex. 2 at p. 63, Table H-1 (PG&E, Maring and Royall).

[307] Ex. 11 at pp. 6-7 (Fairfield/Madera, Roberts).

[308] Tr. at p. 316, lines 2-9 (Fairfield/Madera, Roberts).

[309] Ex. 11 at pp. 7-8 (Fairfield/Madera, Roberts).

[310] Ex. 2 at p. 64, lines 13-31 (PG&E, Maring and Royall).

ejectors used to maintain vacuum once it has been established, will be conventional steam jet air ejectors ("SJAE"). When the Oakley Project is offline in hot-standby mode, the SJAEs will be supplied steam from the auxiliary boiler. It will not normally be necessary to operate the electric driven vacuum pumps in this mode. During shorter offline periods, the demand on the auxiliary boiler is expected to be minimal as steam for the SJAE and steam turbine seals will be provided initially from the thermal energy stored within the HRSGs. During extended offline periods, the auxiliary boiler will come online once the energy stored within the HRSGs is no longer sufficient to supply the steam need for the SJAE and steam turbine seals.

Sixth, CARE asserts that to Oakley Project heat rate is higher than other facilities identified in a CEC Report.[311] However, as PG&E explained it its Rebuttal Testimony, CARE's argument is based on a misreading of that report.[312]

Finally, CARE asserts the certain recently constructed facilities have heat rates that are almost as good as the Oakley Project, relying on information that it cherry-picked from a single year.[313] However, when heat rate information from these facilities over several years is considered, the average heat rates are substantially higher than the Oakley Project.[314] Moreover, when compared to the guaranteed heat rates of similar facilities that were recently built or are currently in development, the Oakley Project heat rate is substantially better.[315]

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[311] Ex. 13 at p. 8, lines 15-17 (CARE, Sarvey).

[312] Ex. 2 at p. 66, lines 9-28 (PG&E, Maring and Royall).

[313] Ex. 13 at p. 9, lines 2-5 (CARE, Sarvey).

[314] Ex. 2 at p. 67, lines 3-8 (PG&E, Maring and Royall).

[315] Ex. 2 at o. 63, table H-1 (PG&E, Maring and Royall).

8. Concerns About The Oakley Projects Operating Hours Are Not Well-Founded.

In addition to raising concerns about the Oakley Project heat rate, Fairfield/Madera and CARE also raise concerns about the number of hours the Oakley Project will be able to operate. These parties claim that limits on operating hours will limit the Oakley Project's ability to integrate renewable resources. As with their concerns about heat rates, these parties' concerns about operational limitations are based on misunderstandings and flawed reasoning.

First, Fairfield/Madera asserted that they independently calculated the number of hours the Oakley Project could operate based on the numbers of starts identified in the BAAQMD air permit.[316] However, at the hearings, Fairfield/Madera witness Roberts conceded that he did not review any of the publicly available BAAQMD workpapers which indicate significantly more hours of operation that Dr. Roberts calculated on his own.[317] Indeed, the BAAQMD analyzed three different scenarios to reflect varying operating conditions. In the same scenario as was used by Dr. Roberts for his analysis (*i.e.,* 275 hot starts and 25 cold starts), the BAAQMD determined that the Oakley Project could operate for 5,390 hours per year, more than double the amount calculated by Dr. Roberts.[318] Dr. Roberts' calculations were understandably low because his analysis was based on flawed assumptions. Dr. Roberts incorrectly assumed in his calculations that starts were related to the entire facility, instead of on a per unit basis, which was the basis for the BAAQMD air permit.[319] More fundamentally, as PG&E witness Royall

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[316] Ex. 11 at pp. 9-11 (Fairfield/Madera, Roberts).

[317] Tr. at p. 317, lines 15-22 (Fairfield/Madera, Roberts); Ex. 32 (BAAQMD calculations of operating hours).

[318] Compare Ex. 32 at p. 1 (Scenario 1) and Ex. 11 at p. 10, lines 13-14 (Fairfield/Madera, Roberts) (calculating a limit if 2,285 hours per year).

[319] Tr. at p. 320, lines 5-20 (Fairfield/Madera, Roberts); Ex. 32 at p. 1 (indicating that numbers were on a per unit basis unless otherwise noted).

explained in detail at the hearings, Dr. Robert's analysis was based on incorrect assumptions regarding operation of the facility to its maximum allowable permit limits.[320]

Second, Fairfield/Madera did not consider the various operating scenarios used by the BAAQMD in approving the permit for the Oakley Project.[321] Each of these scenarios allows for significantly more hours of operation (ranging between 5,390 and 8,463 hours/year) than Dr. Roberts calculated based on his mistaken assumptions.

Third, PG&E submitted detailed information regarding the operating limitations and operating hours of other facilities in PG&E's portfolio.[322] This information demonstrates that many of these facilities have significantly greater restrictions either on starts or operating hours. It is the flexibility in the Oakley Project permits that makes it the best fit resource for integrating renewables.

Finally, CARE indicates that it has some concerns regarding the start-up times for the Oakley Project.[323] However, the Oakley Project has the best start up time of any combined-cycle facility in PG&E's portfolio.[324] Moreover, as PG&E described in detail in its Initial Testimony, the Oakley Project ramp rates are very aggressive so that the facility is able to quickly ramp up,[325] the GE Rapid Response technology provides a significantly advance in combined-cycle

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[320] Tr. 551, line 18 to p. 554, line 1 (PG&E, Royall); Tr. at p. 588, line 9 to p. 591, line 19 (PG&E, Royall).

[321] Ex. 2 at p. 68, line 18 to p. 70, line 15 (PG&E, Maring and Royall).

[322] Ex. 2 at p. 72, Table H-3 (PG&E, Maring and Royall).

[323] Ex. 13 at p. 10, lines 4-13 (CARE, Sarvey).

[324] Ex. 2 at p. 73, lines 3-14 (PG&E, Maring and Royall).

[325] Ex. 1 at pp. 2-7 to 2-8 (PG&E, Maring).

design so that the facility can ramp more quickly,[326] and the start times of the Oakley Project are substantially better than average combined-cycle start times.[327]

VIII. ISSUE 3 – PG&E'S RATEMAKING PROPOSAL IS CONSISTENT WITH COMMISSION PRECEDENT AND IS REASONABLE.

A. PG&E's Ratemaking And Cost Recovery Proposal

In Application 09-09-021, PG&E entered into a partial settlement agreement with TURN, DRA and other parties addressing the ratemaking and cost recovery for the Oakley Project. Ultimately, because the Oakley Project was not approved at that time by the Commission, the portion of the partial settlement applicable to the Oakley Project was moot. In this proceeding, PG&E has included a ratemaking mechanism and cost recovery proposal that is identical to the partial settlement proposed in Application 09-09-021.[328] PG&E recognizes that the partial settlement agreement in Application 09-09-021 is no longer binding on the settling parties for purposes of the Oakley Project, and that parties in this proceeding can support or oppose PG&E's ratemaking and cost recovery proposal. However, PG&E believes that the ratemaking and cost recovery proposal included in the partial settlement agreement was reasonable, and thus PG&E is supporting an identical proposal in this proceeding.

PG&E's ratemaking and cost recovery proposal for the Oakley Project includes several key elements. First, PG&E has proposed an initial revenue requirement for the Oakley Project that will be fixed for the first eight years of the operation of the facility.[329] The initial revenue requirement was based on operations and maintenance ("O&M") and capital cost forecasts and can be adjusted prior to commercial operation of the Oakley Project and each subsequent

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[326] *Id.* at pp. 2-3 to 2-5 (PG&E, Maring).

[327] *Id.* at p. 2-10, Table 2-1 (PG&E, Maring).

[328] *Id.* at p. 6-1, lines 10-16 (PG&E, O'Flanagan).

[329] *Id.* at p. 6-1, lines 19-26 (PG&E, O'Flanagan).

calendar year to reflect: (1) authorized changes in the fixed O&M forecast; (2) authorized changes in the capital costs; and (3) the latest Commission-authorized cost of capital and franchise, uncollectibles and property tax factors.[330]

In its Initial Testimony, PG&E provided an initial O&M estimate that was used to develop PG&E's initial revenue requirement. The O&M estimate can be adjusted for escalation under limited circumstances including: (1) changes in negotiated labor rates; and (2) changes in the material index used for the Long-Term Service Agreement ("LTSA") with GE for the Oakley Project turbines.[331] In addition, PG&E can propose through an advice letter process changes to its O&M estimate to reflect: (1) delays in closing for the Amended PSA; (2) increased O&M expenses caused by governmental agency requirements or changes in permitting assumptions; and (3) changes in the Oakley Project operating profile as compared to the profile used to develop the initial O&M estimate.[332] Commission approval of PG&E's advice letter would be required before PG&E could change its O&M estimates for these items. Finally, PG&E would be permitted a one-time update to its LTSA cost forecast after the LTSA with GE is executed.[333] After the initial eight year period, PG&E could propose changes to its O&M expenses either through the General Rate Case ("GRC") or an application for an increase in rates.[334]

PG&E's capital cost estimate reflects a $24.5 million decrease in the capital cost estimate that PG&E submitted in Application 09-09-021 when it initially sought approval of the Oakley Project PSA.[335] In addition, despite the passage of more than three years since PG&E initially

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[330] *Id.* at pp. 6-1, line 22 to 6-2, line 3 (PG&E, O'Flanagan).

[331] *Id.* at p. 6-2, lines 11-20 (PG&E, O'Flanagan).

[332] *Id.* at p. 6-2, lines 21-30 (PG&E, O'Flanagan).

[333] *Id.* at p. 6-2, lines 31-34 (PG&E, O'Flanagan).

[334] *Id.* at p. 6-3, lines 1-6 (PG&E, O'Flanagan).

[335] *Id.* at p. 6-3, lines 12-14 (PG&E, O'Flanagan).

filed the Oakley Project application, and four years since the Oakley Project offer was received, PG&E is not proposing an increase in the capital costs. The capital costs can be adjusted under several circumstances. First, if the actual capital costs exceed the capital cost estimates, PG&E is proposing three bands for recovery – the first $20 million band would be recovered from customers; the second $20 million band would be shared 90% by customers and 10% by shareholders; and the third $20 million band would be shared 80% by customers and 20% by shareholders.[336] If the actual capital costs of the Oakley Project exceed the capital cost estimate by more than $60 million (*i.e.*, the amount of the three bands), PG&E would be required to file an application to recover the additional amount.[337] PG&E would also be permitted to adjust the capital cost to reflect incentive payments and penalties under the Amended PSA.[338] PG&E would also be able to propose changes to the initial capital costs through an advice letter in the following limited circumstances: (1) delays in closing the Amended PSA; (2) operational performance enhancements to the Oakley Project; and (3) changes beyond PG&E's control such as new permit or regulatory requirements.[339] PG&E has also included a proposal for ratemaking treatment for $345,000 in capital additions.[340]

Finally, in Application 09-09-021, TURN and DRA had requested that PG&E provide plant availability and heat rate information for UOG facilities to these parties and the Commission on an annual basis. PG&E has included in its ratemaking proposal an agreement to

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[336] *Id.* at p. 6-3, lines 19-33 (PG&E, O'Flanagan).

[337] *Id.* at p. 6-4, lines 3-8 (PG&E, O'Flanagan).

[338] *Id.* at p. 6-4, lines 17-21 (PG&E, O'Flanagan).

[339] *Id.* at p. 6-4, lines 9-16 (PG&E, O'Flanagan).

[340] *Id.* at pp. 6-4, line 23 to 6-5, line 12 (PG&E, O'Flanagan).

prepare an annual report, broken down on a monthly basis, that includes operational and heat rate information for the Oakley, Colusa, Gateway and Humboldt Projects.[341]

B. The Colusa Decision Is Instructive Commission Precedent.

At the hearings, ALJ Yacknin indicated that Commission precedent regarding ratemaking and cost recovery for other UOG facilities would help "inform" her decision in this proceeding.[342] To date, PG&E has received Commission approval for three new conventional generation UOG resources -- the Gateway, Colusa and Humboldt Projects. Ratemaking for the Gateway Project was the subject of a settlement[343] and the Humboldt Project is distinct from the Oakley Project because Humboldt was built by PG&E through an EPC contract. However, the Colusa Project, which was initially to be acquired by PG&E through a PSA, was the subject of a Commission decision regarding ratemaking and cost recovery.[344] In this section, PG&E briefly describes the elements of the Colusa PSA ratemaking and cost recovery mechanism approved by the Commission. In subsequent sections, PG&E compares the Colusa PSA ratemaking with the ratemaking and cost recovery proposal made by PG&E in this proceeding.

The Colusa PSA ratemaking and cost recovery mechanism included two key elements – capital costs and O&M costs. With regard to the capital costs for the Colusa PSA, these included the fixed contract cost for the Colusa Project plus PG&E's estimated owner's cost and owner's contingency.[345] PG&E was also authorized to file an advice letter to adjust the initial capital

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[341] *Id.* at p. 6-5, lines 13-24 (PG&E, O'Flanagan).

[342] Tr. at p. 664, lines 6-11 (ALJ Yacknin).

[343] At the hearings, ALJ Yacknin indicated that settlements approved by the Commission, which included a ratemaking component, were not "precedential or informative." *Id.* at p. 664, line 5. Thus, PG&E is not including in this brief a discussion of the Gateway Project ratemaking because it was the result of a settlement.

[344] *See generally* D.06-11-048 at pp. 13-32.

[345] *Id.*, Ordering Paragraph ("OP") 3.

costs for any performance incentives or penalties arising under the Colusa PSA, as well as changes to the Commission-authorized cost of capital, franchises and uncollectible factors.[346] The Commission rejected PG&E's proposal to adjust the initial capital costs for delays in closing and new regulatory requirements because these costs were already included in the owner's contingency.[347] PG&E was also authorized to seek through an application any additional capital costs for operational enhancements to the Colusa Project.[348] To the extent that the Colusa Project capital costs came in lower than the estimates, the savings were shared 50-50 between customers and shareholders.[349]

With regard to O&M expenses, the Commission adopted an initial O&M forecast for the Colusa Project in order to establish the initial revenue requirement.[350] Contingency amounts for unplanned outages or curtailment-related repairs, negotiated labor costs, negotiated plant maintenance costs and inflation were included in a one-way balancing account[351] and PG&E was permitted to file an advice letter to change the O&M forecast estimate for increased staffing levels or changes in the operation date of the Colusa Project.[352] PG&E's proposal for authority to change the O&M forecast by advice letter for changes in Colusa Project operation was denied because this was already covered by the approved O&M contingency.[353]

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[346] *Id.* at pp. 23-24 and OP 5-6, 14.

[347] *Id.* at p. 24.

[348] *Id.*, OP 7.

[349] *Id.*, OP 9.

[350] *Id.*, OP 10.

[351] *Id.* at pp. 29-30 and OP 11.

[352] *Id.* at pp. 30-31 and OP 12.

[353] *Id.* at p. 31.

Although the ratemaking and proposal approved by the Commission for the Colusa PSA is not identical to the ratemaking proposal in this proceeding, many of the elements are similar or identical and provide support for PG&E's proposal in this proceeding.

C. PG&E's Ratemaking Proposal Is Reasonable And Consistent with Commission Precedent.

Below, PG&E explains why each of the elements of its ratemaking proposal in this proceeding is reasonable and generally, though not entirely, consistent with Commission precedent.

1. The Initial Revenue Requirement Proposal Is Reasonable.

PG&E's proposal to lock-in the initial revenue requirement for eight years is a significant departure from conventional ratemaking and represents a substantial benefit to customers by fixing, subject to modification in three limited circumstances, the initial revenue requirement for the Oakley Project through 2024.[354] The three circumstances in which the initial revenue requirement would be adjusted are: (1) changes to O&M forecasts; (2) changes to the initial capital costs; and (3) Commission authorized cost of capital and franchise, uncollectible and property tax factors. The O&M and capital cost estimate modifications are described below. Changes to reflect cost of capital and franchise, uncollectibles and property tax factors are consistent with the ratemaking mechanism approved by the Commission for the Colusa Project.[355]

2. PG&E's O&M Proposal Is Reasonable.

PG&E has proposed an initial O&M estimate that can be adjusted for escalation in labor rates changes and in the material index for the LTSA. In addition, PG&E could adjust the initial

[354] Tr. at p. 667, lines 10-19 (PG&E, O'Flanagan).

[355] D.06-11-048 at p. 23.

O&M expenses once to reflect the terms and conditions in an executed LTSA.[356] Since the Oakley Project will not commence operation until 2016, it is reasonable and prudent to allow a modification to the initial O&M estimate to reflect future, unknown escalations in labor and LTSA index costs, as well as the LTSA terms and conditions once they are final. The Commission approved similar O&M estimate adjustments through a one-way balancing account for the Colusa Project.[357]

PG&E has also proposed that it be able to request an adjustment to its O&M estimate through an advice letter for delays in closing, changes in expenses caused by regulatory or permitting requirements, and changes to the Oakley Project operating profile. In D.06-11-048, the Commission approved the use of an advice letter process for changes to the O&M estimate related to staffing changes to address permitting requirements and changes in the commercial operation date.[358] Thus, these two aspects of PG&E's request are consistent with Commission precedent. However, in the same decision, the Commission denied PG&E's request to change the O&M request for changes in the Colusa Project operating profile.[359] The Commission based its decision on the fact that PG&E already included a contingency factor for unplanned outages and curtailment-related repair costs in the one-way balancing account approved for the Colusa Project. In this proceeding, PG&E has not included a contingency for unplanned outages or curtailment-related repair costs. Thus, this proceeding is distinguishable from the Colusa Project proceeding. Moreover, in the Colusa Project proceeding, the Commission determined a contingency was appropriate for operational changes for the Colusa Project, such as unplanned

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[356] PG&E has not yet finalized and executed the LTSA with GE for the Oakley Project.

[357] D.06-11-048 at pp. 29-30 (allowing for adjustments to labor rates and plant maintenance contract costs which were still in negotiation).

[358] D.06-11-048 at pp. 30-31.

[359] *Id.* at p. 31.

outages and curtailment-related costs. In this proceeding, it is reasonable to request O&M cost estimate changes arising from changes in operation of the Oakley Project through the advice letter process.

DRA was the only party in testimony that opposed PG&E's proposal, arguing that PG&E's O&M expenses should be fixed for ten years with no adjustments or, alternatively, that PG&E should be required to file an application to adjust its O&M estimate rather than an advice letter.[360] However, as PG&E explained in rebuttal, requiring the O&M cost estimate to be fixed for 10-years is not reasonable, nor is it consistent with third-party PPAs which often include escalation factors to reflect operational cost increases.[361] Moreover, DRA's proposal to fix O&M estimates for ten years is inconsistent with Commission precedent, which allows for some adjustment for O&M estimates, especially given the difference in time between when the facilities are approved and when they actually go into operation.[362]

DRA's alternative proposal, that PG&E be required to file an application for approval of changes to its estimated O&M expenses, should also be rejected. The application process is often lengthy and would not provide for a prompt resolution of requests to change the O&M estimate.[363] Moreover, use of the advice letter process for modifications to O&M estimates is consistent with Commission precedent.[364]

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[360] Ex. 5 at pp. 4-2 to 4-4 (DRA, Huang).

[361] Ex. 2 at p. 55, line 28 to p. 56, line 15 (PG&E, O'Flanagan).

[362] D.06-11-048 at p. 30.

[363] Ex. 2 at p. 56, line 16 to p. 57, line 6 (PG&E, O'Flanagan).

[364] D.06-11-048 at pp. 30-31.

3. PG&E's Capital Cost Proposal Is Reasonable.

a) The Capital Costs Including The Adjustment Bands Are Reasonable.

The capital costs proposed by PG&E include the cost of the Amended PSA. PG&E reduced by $24.5 million the capital cost amount that it initially proposed in Application 09-09-021, which reflects the elimination of the $24.1 million owner's contingency.[365] By comparison, when the Commission approved the Colusa Project, it approved the fixed Colusa PSA costs, plus certain owner costs and contingencies, as the basis for the capital costs.[366] With regard to the inclusion of PG&E's contingency for the Colusa Project, the Commission noted that:

> It would be unfair and unreasonable to exclude any contingency from the initial capital cost while at the same time denying recovery of excess costs through reasonableness review. Furthermore, it is reasonable to expect minor contract revisions and changes in owner's cost estimates after contract selection.[367]

In this case, PG&E has agreed to reduce its initial capital cost estimates by $24.5 million to reflect the elimination of the owner costs and contingencies. However, as the Commission noted in D.06-11-048, it would be unfair and unreasonable not to include some mechanism to recover costs that result from revisions and changes in the initial cost estimates. Thus, PG&E has proposed three $20 million bands for recovery of up to $60 million in costs if the actual costs of the Oakley Project exceed the initial capital cost estimate.[368] This is reasonable to reflect the risks and uncertainties that may occur during the development, engineering and construction of the Oakley Project.[369] Moreover, amounts in excess of the initial capital cost recovered through

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[365] Ex. 1, Attachment 6-1; Ex. 2 at p. 57, lines 17-20 (PG&E, O'Flanagan).

[366] D.06-11-048 at pp. 18-23.

[367] *Id.* at p. 23.

[368] Tr. at p. 666, line 4 to 667, line 19 (PG&E, O'Flanagan) (explaining the purpose of the sharing bands proposed by PG&E).

[369] Ex. 2 at p. 57, lines 20-20 (PG&E, O'Flanagan).

the three bands would likely represent improvements to the operation of the Oakley Project that arise during construction.[370] Moreover, the amount of the initial $20 million band is less than the contingencies included in the Colusa Project that was approved by the Commission.[371] Finally, the second and third bands include a sharing mechanism between customers and shareholders which provides an incentive to aggressively manage costs.[372] Capital costs in excess of $60 million would have to be approved by the Commission through an application process. This process would allow intervenors an opportunity to protest or challenge any capital costs in excess of $60 million and would allow PG&E the opportunity to demonstrate that these excess capital costs are reasonable.

PG&E's proposal is consistent with the ratemaking approved by the Commission for SDG&E's Miramar II Project (referred to as MEF II). In that case, the Commission determined that:

> Regarding the requested rate treatment for MEF II, as described earlier in the decision, SDG&E proposes a construction risk/reward mechanism in which: (1) shareholders take no construction risk (and have no reward opportunities) for construction costs within 5% of the $56.5 million project cost estimate, (2) shareholders take 10% of the construction risk/reward for the band that is 5% over (or under) to 15% over (or under) the estimated project cost, and (3) cost overruns in excess of 15% of the estimated project cost are subject to recovery through a regulatory review process (and shareholders have no reward opportunities for savings resulting from actual costs being greater than 15% below the estimated project cost). In light of the modification to the 50/50 cost sharing requirement made in D.07-12-052, SDG&E's proposed approach is fairly consistent with the risk/reward mechanism approved by the Commission in the PG&E Gateway settlement, which we find to be a reasonable model for a mechanism of this sort, and no ratepayer advocacy group (or any party, for that matter) provided arguments against or recommended any modifications to the proposed mechanism. Consequently, we adopt the

[370] Tr. at p. 667, line 20 to p. 669, line 11 (PG&E, O'Flanagan).

[371] Ex. 2 at p. 57, lines 22-25 (PG&E, O'Flanagan).

[372] *Id.* at p. 57, line 30 to p. 58, line 2 (PG&E, O'Flanagan).

> proposed mechanism, and determine that once the project is constructed and operating consistent with its design specifications, the construction costs (consistent with the adopted risk/reward mechanism) and operating costs of MEF II should be recoverable from bundled ratepayers through rates.[373]

Although the Miramar II Project ratemaking mechanism differs somewhat from the mechanism proposed by PG&E in this proceeding, the Commission approved the pre-approval of certain amounts in excess of the initial capital costs, with shareholders being allocated some of these costs at certain points. The Commission also noted in the Miramar II Project decision that the Gateway settlement was a "reasonable model" for cost sharing mechanisms for costs in excess of the initial capital cost. The Gateway settlement included two bands above the initial capital costs with a very similar structure to what has been proposed by PG&E in this proceeding.[374]

b) PG&E's Proposal For Incentive Payments And Performance Penalties Is Reasonable.

With regard to incentive payments, these payments reflect incremental improvements to the Oakley Project that will benefit customers and will only occur if certain contractual conditions are met in the Amended PSA.[375] Performance penalties result from the Oakley Project not meeting certain operational requirements included in the Amended PSA.[376] The penalties are limited to a narrow band and, if the Oakley Project fails to satisfy performance requirements outside of that band, PG&E has no obligation to purchase the plant. In addition, the incentive amount is capped by the Amended PSA.[377] For the Colusa Project, the Commission approved adjusting the initial capital cost to reflect incentive payments and

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[373] D.09-01-008 at p. 16.

[374] D.06-06-035, Attachment A at p. 5, Section 4 (describing Gateway bands approved by the Commission).

[375] Ex. 1 at p. 4-4, "Performance Guarantees" (PG&E, Monardi) (describing penalties and incentives).

[376] *Id.*

[377] *Id.*

penalties under the Colusa PSA, and required PG&E to file an advice letter reflecting these adjustments.[378] The Commission noted that "[i]ncentive payments (and penalties) are a part of the fixed contract terms, and therefore constitute part of the recoverable project bid price."[379] Thus, PG&E's proposal is fully consistent with Commission precedent.

c) PG&E's Proposal For Changes To The Initial Capital Cost Estimate Through An Advice Letter Is Reasonable.

PG&E has also proposed that it be permitted to requests changes to the initial capital cost estimate through an advice letter process for delays in closing, operational enhancements, and changes beyond PG&E's control such as new permit and regulatory requirements. The only party that addressed this aspect of PG&E's ratemaking proposal in testimony was DRA. DRA did not oppose using an advice letter process to propose changes in the capital cost estimate for circumstances beyond PG&E's control.[380] However, DRA did oppose using the advice letter process for changes in the capital cost estimates associated with delays in closing or operational enhancements.[381]

DRA does not appear to oppose the substantive issue of increases in the capital costs for these two items. Instead, DRA's opposition is to the process for review. DRA proposes that PG&E use an application, rather than an advice letter process, for proposing these types of changes. PG&E recognizes that DRA's proposal to use an application, rather than an advice letter, is consistent with the Commission's decision regarding the Colusa Project.[382] However, as PG&E explain it its Rebuttal Testimony, the application process can be lengthy and decisions

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[378] D.06-11-048 at p. 17 and OP 5.

[379] *Id.* at p. 18.

[380] Ex. 5 at p. 4-7, lines 5-8 (DRA, Huang).

[381] *Id.* at lines 8-10 (DRA, Huang).

[382] D.06-11-048 at pp. 24-25.

regarding operational enhancements, as well as the Amended PSA closing, need to be made on an expedited basis.[383] Given the delays that have already occurred in the development of the Oakley Project, further delay appears unwarranted and thus, in this limited area, the Commission should adopt a different procedural mechanism than was adopted in the decision on the Colusa Project.

In D.06-11-048, the Commission only approved changes to the Colusa Project initial capital cost estimate for operational enhancements, but denied authority to reflect changes associated with a delay in the closing date or new regulatory requirements beyond PG&E's control.[384] However, in that case, PG&E had included a contingency amount to "reflect the risk that unforeseeable factors may adversely affect PG&E's project costs."[385] In this proceeding, as explained above, PG&E has removed the contingency payments from the initial capital cost estimate that it has proposed. Thus, because of this difference in the initial capital cost estimate components between the Oakley and Colusa Projects, it is appropriate to permit PG&E to request to change the initial capital cost estimate to reflect changes associated with a delay in the closing date or new regulatory requirements for the Oakley Project. As noted above, DRA agrees with permitting PG&E to use an advice letter process to propose changes in the capital cost estimate for circumstances beyond PG&E's control.

d) PG&E's Limited Capital Addition Proposal Is Reasonable.

PG&E has also proposed that the Commission approve certain capital additions that: (1) improve safety, allow for regulatory compliance, or reduce costs through improvements; or (2)

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[383] Ex. 2 at p. 58, line 21 to p. 59, line 5 (PG&E, O'Flanagan).

[384] D.06-11-048 at p. 24.

[385] *Id.*

for up to $345,000 for years five through eight of the initial revenue requirement.[386] These capital additions could be recovered in rates through the GRC for rates effective before January 1, 2023 (rates which would occur during the eight year initial revenue requirement period). This request for relatively small capital additions would benefit customers by improving safety, ensuring compliance with regulatory requirements or enhancing the Oakley Project's performance. Again, DRA was the only party that expressed concern about this proposal, and DRA's concern appeared to be primarily based on its miscalculation that PG&E was requesting authority for capital additions up to $345 million, instead of PG&E's actual request for $345,000.[387] Given the small size of this aspect of PG&E's proposal and the benefits of making these capital additions, this aspect of PG&E's ratemaking proposal is reasonable.

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[386] Ex. 1 at p. 6-5, lines 1-12 (PG&E, O'Flanagan).

[387] Ex. 5 at p. 4-6, lines 10-16 (DRA, Huang).

IX. CONCLUSION

Given the need for the Oakley Project and its numerous benefits for customers and for the reliability of the California electric system, PG&E urges the Commission to approve the Amended PSA and to adopt the recommendations included at the beginning of this opening brief.

Respectfully submitted,

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ATTACHMENT A

CONFIDENTIAL PORTION OF PG&E'S OPENING BRIEF

[Redacted from Public Version]

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