

Decision 10-01-025 January 21, 2010

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of Pacific Gas and Electric Company for Authority to Increase Electric Rates and Charges to Recover Smart Grid Costs Relating to Compressed Air Energy Storage Demonstration Project under American Recovery and Reinvestment Act of 2009 (U39E).

Application 09-09-019
(Filed September 29, 2009)

DECISION APPROVING APPLICATION OF PACIFIC GAS AND ELECTRIC COMPANY TO RECOVER SMART GRID COSTS RELATING TO A COMPRESSED AIR ENERGY STORAGE DEMONSTRATION PROJECT

1. Summary

This decision approves the application of Pacific Gas and Electric Company to recover up to \$24.9 million in costs necessary to provide matching funds to support an award of \$24.9 million in federal funds for Phase 1 of a Smart Grid Compressed Air Energy Storage demonstration project from the United States Department of Energy under the American Recovery and Reinvestment Act. This decision finds that it is reasonable for Pacific Gas and Electric Company to commit up to \$24.9 million to Phase 1 of the three phase compressed air energy storage project which includes all permitting, transmission interconnection and plant design leading up to construction. Information obtained during Phase 1 will demonstrate whether Pacific Gas and Electric Company should proceed to subsequent phases.

This decision finds that the costs associated with Phase 1 are reasonable. The Compressed Air Energy Storage Demonstration project will provide Pacific

Gas and Electric Company and its ratepayers with substantial unquantifiable benefits that justify this project. Phase 1 will provide Pacific Gas and Electric Company with a better understanding of a promising technology, which has the potential to improve grid reliability, flexibility, security and interoperability; lower electric power systems costs and enhance cost effectiveness; and reduce greenhouse gases. These benefits are especially beneficial to Pacific Gas and Electric Company ratepayers because California policy seeks to reduce greenhouse gases.¹

For these reasons, it is reasonable to authorize Pacific Gas and Electric Company to recover up to \$24.9 million in rates to provide the required matching funds for Phase 1 of the Smart Grid Compressed Air Energy Storage demonstration project.

This decision approves the requirement for Pacific Gas and Electric Company to provide a final report to the Commission at the conclusion of Phase 1.

Application 09-09-019 is closed.

2. Factual and Procedural Background

On September 29, 2009, Pacific Gas and Electric Company (PG&E) filed Application of Pacific Gas and Electric Company for Authority to Increase Electric Rates and Charges to Recover Smart Grid Costs relating to Compressed

¹ See Pub. Util. Code § 743.1, § 748(a), § 2842, § 2843, § 8341 and Executive Orders S-7-04 and S-3-05. All statutory references are to the Pub. Util. Code unless otherwise stated.

Air Energy Storage Demonstration Project Under American Recovery and Reinvestment Act of 2009 (Application).²

The Application seeks authorization for PG&E to increase electric rates and charges to collect the reasonable level of revenue requirement PG&E needs to provide the balance of non-federal matching funds (\$24.9 million) to support an award of \$24.9 million in federal funds for Phase 1 of a Smart Grid Compressed Air Energy Storage Demonstration Project (CAES Project).³ In this demonstration project, PG&E intends to take a phased approach to build and validate the design, performance, and reliability of an underground CAES plant.⁴ In addition to the funding sought by this application, PG&E has also requested \$1.3 million in research funding from the California Energy Commission (CEC). Should the CEC fund the CAES Project, the funding sought in this application would be reduced accordingly. On August 26, 2009, PG&E applied to the DOE for a \$24.9 million Smart Grid Demonstration grant under the American Recovery and Reinvestment Act of 2009 (Recovery Act) for funding of Phase 1 of a \$356 million CAES project that would be located near Bakersfield in Kern County.

Phase 1 of the CAES project includes all permitting, transmission interconnection, and plant design leading up to construction of the CAES facility

² Attached to the Application was PG&E's Smart Grid Demonstration Project application that was submitted to the United States Department of Energy (DOE).

³ The total expected project cost for all three phases of the CAES project is \$356 million. Phase 2 will cover plant construction and Phase 3 will cover plant monitoring. PG&E plans to request Commission approval for rate recovery for Phases 2 and 3 in a subsequent application or through its procurement process.

⁴ PG&E Application, Attachment 1 at Project Abstract.

which would use off-peak energy, such as intermittent wind energy, to inject compressed air into an underground saline rock formation, and then use the compressed air to power a generator during peak periods when the renewable energy would not otherwise be available.⁵ The completed CAES project would have a generation capacity of 300 megawatts for up to 10 hours.⁶

PG&E, through this project, seeks to:

. . . 1) verify and demonstrate advanced CAES technology to achieve an optimized energy ratio and heat rate; 2) integrate intermittent renewable resources by using the CAES plant to steady the power fluctuations from load and intermittent renewables; and 3) use the CAES plant to provide ancillary services, including regulation, emergency spinning/ non-spinning reserve and VAR/voltage support.

The \$24.9 million of funding sought by PG&E would constitute 50% of the \$49.8 million budgeted for Phase I of the project. Of the \$24.9 million requested in this Application, \$15.9 million is for expense, and \$9 million is for capital.⁷

PG&E received approval of its grant application from DOE on November 24, 2009.⁸

⁵ Specifically, Phase 1 includes geologic reservoir verification (field studies, core sample drilling, geological and engineering analysis), National Environmental Policy Act/California Environmental Quality Act permitting/siting, the California Independent System Operator (CAISO) System Impact Study, baseline for evaluating project performance, and preliminary plant design. (See PG&E Application, Attachment 1 at 12-14. and Division of Ratepayer Advocates (DRA) Data Response at 2.)

⁶ PG&E Application at 2.

⁷ PG&E Application at 3.

⁸ Stipulation of PG&E and the DRA (Stipulation) at 2.

On October 14, 2009, an *Administrative Law Judge's Ruling Consolidating Dockets, Shortening Protest Period, Preliminarily Determining Category, Assignment, and Setting a Prehearing Conference* (ALJ Ruling) was issued. The ruling consolidated two applications made by PG&E, Application (A.) 09-09-18 and the instant application, A.09-09-019, into a single docket.⁹ In addition to setting the Prehearing Conference (PHC), the ALJ ruling held that this Application would be considered under the expedited process established by D.09-09-029, set deadlines for protests or comments accordingly, and requested PHC statements.¹⁰

On October 15, 2009, Resolution ALJ-176-3242 ratified the preliminary determination that this proceeding was ratesetting and that hearings would prove necessary.

On October 15, 2009, the Independent Energy Producers Association (IEP) filed a response in support of the Application. On October 16, 2009, the DRA and The Utility Reform Network (TURN)¹¹ also filed responses to the Application.

⁹ The assigned ALJ subsequently issued a ruling on October 30, 2009 deconsolidating the dockets. PG&E filed a Motion to Withdraw Application without Prejudice in A.09-09-18. A.09-09-018 was dismissed on November 9, 2009 by Decision (D.) 09-11-003.

¹⁰ Under D.09-09-029, where concurrent applications are made to the DOE and the Commission, the normal protest period is shortened to 15 days and replies are due within 7 days following the protest.

¹¹ TURN filed a single *Response and Protest of The Utility Reform Network* to PG&E's applications. In its filing, TURN protested A.09-09-018, which has since been withdrawn by PG&E. TURN did not protest application A.09-09-019.

The Consumer Federation of California (CFC) filed a protest to the application on October 15, 2009. CFC protested the Application arguing that it would result in a “taking” in violation of the United States and California Constitutions.¹² CFC contends the Commission lacks the authority to “take” customers’ money; taking money from customers and giving it to a utility requires a finding of public interest and necessity justifies the proposed contribution.¹³ CFC asserts that the Commission lacks the authority to require ratepayers to contribute capital to a utility enterprise.¹⁴ CFC also argues that, contrary to what is stated in D.09-09-029, the Commission has in fact shifted the burden to show that the proposed rates are just and reasonable away from the utility.¹⁵ Such a shift, CFC argues, is legal error and a violation of Pub. Util. Code § 454(a).¹⁶

¹² CFC Protest at 3-4.

¹³ CFC Protest at 4.

¹⁴ CFC Protest at 2, CFC cites *City and County of San Francisco v. Public Utilities Commission, et al* (1971) 6 Cal. 3d 119, 128-129 in support of this contention. We note, however, that this case addressed whether a utility’s use of the straight line method of depreciation rather than accelerated depreciation for federal income tax purposes was a reasonable cost that the utility could flow through to ratepayers. The court found these cost were unreasonable costs (resulting from imprudent management of the utility) that could not be passed on to ratepayers. The opinion does not state that ratepayers may not be required to contribute capital to a utility project such as that which is before us in this application. CFC’s citation is taken out of context from the facts before the court and was merely dicta from the concurring opinion.

¹⁵ CFC Protest at 5-6.

¹⁶ CFC Protest at 5-6.

CFC also argues that evidentiary hearings were necessary, but CFC has failed to identify a factual dispute that would warrant hearings. For example, CFC raises the following questions:

In what manner will granting PG&E's application further the stated policy goals identified in Pub. Util. Code §§ 8360 (a) through (j)?

What standard should be applied to determine whether to grant PG&E's application, the cost/benefits standard of D.09-09-029 or the reasonableness standard of Pub. Util. Code §§ 451 and 454?

These are not issues of fact, but rather policy considerations or legal questions.

We also note that no party joins CFC in this request for hearings.

On October 16, 2009, PG&E filed *Pacific Gas and Electric Company's (U-39-E) Proof of Rule 3.2(c) Compliance* along with two exhibits documenting PG&E's provision of notice of the Application in newspapers of general circulation.

On October 22, 2009, CFC, DRA, and PG&E filed PHC Statements for consideration at the PHC. On October 23, 2009, PG&E filed *Pacific Gas and Electric Company's Reply to Protests*. The PHC took place in San Francisco on October 27, 2009.

On November 5, the assigned Commissioner issued a *Scoping Memo and Ruling of Assigned Commissioner* (Scoping Ruling), setting the scope of issues in the proceeding and a timetable for case management. In addition, the Scoping Ruling determined that evidentiary hearings would not be necessary.¹⁷ PG&E and DRA subsequently filed comments.¹⁸ CFC did not file any comments.

¹⁷ See *Scoping Memo and Ruling of Assigned Commissioner* in A.09-09-019 at 4.

¹⁸ DRA's Comments were filed on November 19, 2009. PG&E's comments were filed on November 20, 2009.

On November 19, 2009, PG&E filed *Pacific Gas and Electric Company's (U-39-E) Proof of Rule 3.2(d) Compliance* along with an attachment documenting the notice enclosed with customer bills during the period beginning October 12, 2009 and ending on November 9, 2009.

On December 1, 2009, PG&E and DRA filed a *Stipulation of Pacific Gas and Electric Company and The Division of Ratepayer Advocates Regarding the Record and Issues*.¹⁹

On December 3, 2009, the Commission issued *Resolution ALJ-243 Ratification of changes to preliminary determinations pursuant to Rule 7.5*, which approved the assigned Commissioner's ruling changing the determination of need for hearing from hearing needed to no hearing needed, consistent with the definitions of Rule 1.3 and Article 7 of the Commission's Rules of Practice and Procedure.

On December 7, 2009, CFC filed a *Motion of the Consumer Federation of California for Reconsideration of the Scoping Memo and Ruling of the Assigned Commissioner*, arguing that CFC's protest concerning the Application was within the scope of the proceeding.²⁰

On December 14, 2009, the assigned ALJ issued a *Ruling Taking Judicial Notice of Department of Energy Document*, in which the assigned ALJ took judicial

¹⁹ On December 4, 2009, PG&E filed a *Motion* requesting that the data responses sent to DRA be included in the record. As discussed later, that motion is granted.

²⁰ On December 7, 2009, CFC tendered for filing an *Application for Rehearing of the Scoping Memo and Ruling of the Assigned Commissioner* (Application for Rehearing). The Application for Rehearing was rejected by the Commission's Docket Office. CFC refiled the document as a motion for reconsideration.

notice of the DOE's, *Financial Assistance Funding Opportunity Announcement: Smart Grid Demonstration Program* (DE-FOA-0000036).

3. Legal Background

D.09-09-029 established the process for review of projects and investments by investor-owned utilities such as PG&E when seeking Recovery Act funding. PG&E filed its Application prior to being selected as a grant recipient.²¹

D.09-09-029 provided that a utility could seek contingent approval for a project from the Commission in advance of the project being selected by the DOE.²²

In such instances, the Commission determined that projects would be best reviewed through the application process.²³ The Application was considered under an accelerated schedule set forth by D.09-09-029, which shortened the protest period to 15 days, with replies due 7 days after the protest in order to produce a timely review consistent with the goals of the Recovery Act.

Under § 454(a) of the Public Utilities Code,

Except as provided in Section 455, no public utility shall change any rate or so alter any classification, contract, practice, or rule as to result in any new rate, except upon a showing before the commission that the new rate is justified.

Thus, the Commission must review utility projects that lead to changes in rates to ensure that they are just and reasonable. In addition, the burden of

²¹ PG&E was not entitled use the Tier-3 advice letter process set forth in D.09-09-029 because it sought contingent approval prior to being awarded the DOE grant. PG&E decided not to withdraw this application and resubmit under the advice letter process.

²² D.09-09-029 at 5.

²³ D.09-09-029 at 32.

making a showing that the proposed rates are just and reasonable rests with the utility requesting the change in rates.

In this case, the responsibility for showing that PG&E's contribution of \$24.9 million to Phase 1 of the CAES project is just and reasonable falls with PG&E.

4. Issues before the Commission

The issues before the Commission in this proceeding are largely determined by statute, Commission precedent, and the Scoping Ruling.

4.1. Is the Proposed Revenue Requirement to Support the Requested Ratepayer Funding of Phase I of the CAES Project Just and Reasonable?

A critical issue before the Commission in a utility's request for authorization to recover costs in rates is whether the costs are just and reasonable. The reasonableness of any project is most clearly determined when the benefits and costs are compared with as much quantification as possible.

4.1.1. Positions of the Parties

PG&E argues that it is both just and reasonable for it to recover the Phase 1 costs. PG&E asserts that the CAES Project will expand the deployment of advanced technologies enhancing the availability of renewable energy resources, especially wind. In support of its contentions, PG&E has provided a copy of the grant application submitted to DOE and the data responses sent to DRA during discovery.

PG&E states in its application that this CAES Project is a unique, innovative project and, therefore, not duplicative of first generation compressed air energy storage projects. First, PG&E contends the CAES Project is unique because it utilizes saline rock formations as the underground storage reservoir

unlike two existing compressed air energy storage projects. Second, unlike first generation compressed air energy storage projects, this project will include the addition of an adiabatic (no fuel) compressed air energy storage testing capability which, PG&E contends, will further advance the next generation of fossil fuel-free compressed air energy storage capability. Third, the CAES Project will utilize off the shelf components unlike previous compressed air storage projects, which used specially designed and therefore more expensive components.

PG&E asserts the CAES Project will be beneficial to ratepayers and California because it will reduce greenhouse gas emissions by enabling large-scale deployment of intermittent renewable resources and peak load management capabilities using only 35% of the natural gas that a simple-cycle combustion turbine currently uses. Next, PG&E states it will improve grid reliability, flexibility, security and interoperability with available and reliable bulk storage capabilities to integrate renewable resources and to respond to smart grid signals from the CAISO for spinning/non-spinning reserve, VAR/voltage support, and self-healing grid commands. Finally, PG&E contends it will lower electric power system costs and enhance cost effectiveness by charging the CAES plant during lower-priced off-peak periods, reducing the use of expensive gas turbine “peaking” plants during on-peak periods, and increasing overall grid asset utilization.²⁴

PG&E estimates that, in addition to bringing Recovery Act funds into California, the CAES Project will directly create approximately 500 jobs. PG&E

²⁴ PG&E Application, Attachment 1 at 10.

states that the project is also expected to indirectly create additional jobs supporting the jobs directly created by the project. PG&E asserts that many of these jobs will be local jobs in Kern County, which has a 14.75% unemployment rate as of June 2009.²⁵

PG&E contends that the costs for Phase 1 of the CAES Project are reasonable. First, PG&E was awarded \$24.9 million in federal grant money to pay for half of the cost for Phase 1 so ratepayer funding is only required for 50% of the cost of Phase 1. PG&E has sought \$1.3 million in research funding from the CEC and, if awarded, PG&E would reduce the amount of funding recoverable from ratepayers accordingly. Additionally, PG&E has assembled a team whose prior experience allows it to utilize experience and knowledge gained from the Alabama compressed air energy storage project, a first generation project, to reduce the cost and timetable of research, development, and construction.²⁶

PG&E has provided a detailed budget as part of its DOE grant application showing how Phase 1 costs are allocated within each phase and by project year.²⁷ PG&E states that the budget was determined with substantial support from Dr. Robert Schainker, who has over 20 years experience with similar designs and projects using bids received by PG&E for similar equipment. PG&E contends that Phase 1 conducts the analysis necessary to more accurately estimate the costs of developing the underground storage field. Such analysis, PG&E asserts, is crucial to determine if the storage field is economic or if the project ultimately

²⁵ PG&E Application, Attachment at 21.

²⁶ PG&E Reply to Protests at 10.

²⁷ PG&E Application, Attachment at 11-15.

lacks feasibility.²⁸ PG&E contends it will ensure that the project is completed in the most cost effective way by utilizing California's competitive Request for Offer (RFO) Process.²⁹ PG&E will issue an RFO to evaluate bids and select the winning prime construction contractor, who will prepare the site for construction and prepare the bubble development in the selected rock formation.³⁰

PG&E requests authority to establish a memorandum account to track the costs incurred on this project and a process to recover the revenue requirements booked to that account. PG&E states that, once it receives approval from DOE and the Commission, the balance in that account would be transferred to the Distribution Revenue Adjustment Mechanism annually through the Annual Electric True-up advice letter filing.³¹ PG&E notes that because of the anticipated schedule of this proceeding and the structure of the proposed memorandum account, customer rates are not expected to be changed until January 1, 2011.

Neither TURN nor DRA object to approval of Phase 1 of PG&E's CAES Project, subject to certain conditions and the resolution of certain issues prior to Phase 2 of the project.³² Specifically, DRA argues that PG&E must show the CAES Project is cost effective and efficient in order to receive ratepayer funding.³³

²⁸ PG&E Reply to Protests at 8. Note also that PG&E states any surplus Phase 1 funding would be returned to DOE and to ratepayers should such a determination be made.

²⁹ PG&E Application, Attachment A at 7, 14 and 50-52.

³⁰ PG&E Application, Attachment A at 52.

³¹ The amount transferred will be limited by the total expenditure cap of \$24.9 million established in this proceeding.

³² We note that most of the concerns raised by DRA and TURN relate to the transition between Phase 1 and subsequent phases of the project. Only Phase 1 is at issue here.

³³ Stipulation at Appendix A at 2.

DRA contends PG&E may show cost-effectiveness and efficiency in one of two ways:

1. The project produces an economic benefit by showing it moves energy from off-peak to peak hours, taking advantage of the difference between peak and off-peak periods; and/or
2. The project produces quantifiable environmental benefits by alleviating the intermittency and increasing the contribution to system reliability of wind generation.

While DRA recognizes that PG&E's current estimates are preliminary and that the cost calculations (for Phases 2 and 3) need to be further refined by information obtained in Phase I, DRA also contends that ratepayer funds should only be expended for Phases 2 and 3 when PG&E can demonstrate that the project as a whole is conceptually viable under reasonably probable physical and economic conditions.

PG&E will be required to provide detailed reports on the costs and benefits of the project to DOE. PG&E will provide copies of these reports to the Commission. However, in response to the questions raised by DRA, PG&E has stipulated that it will furnish additional information at the completion of Phase 1 as set out in Attachment A.³⁴

4.1.2. Discussion and Analysis

The record supports the contention that the CAES Project is a unique project because the CAES Project presents unique technical and design challenges which include the innovative use of a saline rock formation as the storage reservoir, and new compressed air energy storage plant design that is an improvement over first generation designs.

³⁴ Stipulation, Appendix A.

The CAES Project differs from the first generation compressed air energy storage projects in Alabama and Germany because the proposed project 1) uses saline rock as the storage reservoir; 2) uses off-the-shelf equipment instead of custom-made parts and thus, reduces costs; and 3) uses a combustion turbine with heat recovery instead of the single purpose burner to provide an efficiency advantage over existing compressed air energy storage projects.

Only Phase 1 of the CAES Project is at issue in this Application. With respect to the benefits of Phase 1, which includes not only the permitting and transmission interconnection, but also the research and design verification necessary to move from preliminary to final plant design, the benefits are not quantified, but nevertheless substantial. The compressed air energy storage technology holds promise of reducing greenhouse gas emissions; improving grid reliability, flexibility, security and interoperability; and lowering electric power system costs and enhances cost effectiveness.

The CAES Project is anticipated to add jobs not only to the state but specifically to an area that has a high unemployment rate. In addition, the CAES Project has attracted a \$24.9 million award from the DOE to the state which will have a multiplier effect on the California economy.³⁵ Phase 1 is a crucial first step to the ultimate determination of whether the compressed air energy storage technology as envisioned by PG&E has merit and whether ratepayers would receive a direct benefit from the construction and operation of the compressed air energy storage plant.

³⁵ PG&E Application, Attachment 1 at 21.

In considering grant applications for Recovery Act funds, DOE stated that it adopted extensive requirements and a thorough review process.³⁶ DOE specified that the merit review process would evaluate the project approach, significance and impact, interoperability and cyber security, and project team.³⁷ As part of that review DOE explained it would examine the validity of the proposed approach, likelihood of success, and innovativeness of the technology, and would weigh the benefits in terms of anticipated performance improvements and cost savings of the proposed application over current practices, as well as other criteria.³⁸ The Commission previously found that the benefits that the DOE seeks to achieve through its Smart Grid grants would also be beneficial to investor-owned utility ratepayers.³⁹ In addition, the Commission found that it is reasonable to conclude that investor-owned utility projects that receive DOE grants will be beneficial to the investor-owned utilities' ratepayers.⁴⁰

California statutes, including Assembly Bill (AB) 32 (Stats. 2006, Ch. 488), AB (Stats. 2006, Ch. 47-1) 1925, Senate Bill (SB) 1368 (Stats. 2006, Ch. 598), and Executive orders S-7-04 and S-3-05 call for greenhouse gas reduction. The legislature has added to its mandate for reduction of greenhouse gas the importance of developing an infrastructure that will meet the state's needs in the future. In SB 17 (Padilla)(Chapter 327, Statutes of 2009) the legislature stated that:

³⁶ DE-FOA-0000036.

³⁷ DE-FOA-0000036 at 41.

³⁸ DE-FOA-0000036 at 41-42.

³⁹ D.09-09-029 at 4.

⁴⁰ D.09-09-029 at 25.

It is the policy of the state to modernize the state's electrical transmission and distribution system to maintain safe, reliable, efficient, and secure electrical service, with infrastructure that can meet future growth in demand and achieve all of the following, which together characterize a smart grid . . ."⁴¹

The legislature specifically included in its mandate the deployment and integration of cost-effective advanced electricity storage and peak-shaving technologies.⁴²

With such a clear indication of legislative and executive direction, it becomes the responsibility of the Commission and California utilities to devise strategies that can achieve these legislative goals, even without easy quantification of benefits. Considering this, the CAES Project, which is an innovative opportunity to advance environmental and energy policies, produces benefits that justify its pursuit. Moreover, when the legislature adopts goals that require new technologies to achieve them, it is not reasonable to demand that the preliminary research and design of the new technology provide the Commission with the same level of detail on costs and benefits that the Commission would expect from the use of a traditional technology. Finally, the prospect of determining whether the technology of the proposed CAES Project is technically and economically feasible through the work of Phase 1, while making progress on legislatively mandated goals of reducing greenhouse gas emissions and improving grid reliability, justifies Phase 1 expenditures.

The determination of whether or not it is reasonable to fund Phase 1 of the CAES Project is inherently challenging because PG&E seeks to develop a new

⁴¹ Pub. Util. Code § 8360.

⁴² Pub. Util. Code § 8360(g).

technology and Phase 1 seeks to develop unproven technology and/or expand current practices. In this instance, however, PG&E was awarded a \$24.9 million grant by DOE which leverages ratepayer dollars and provides ratepayers the opportunity to develop technology with less expense. Phase 1 will allow PG&E to determine whether or not the project as a whole will prove technically and commercially feasible and whether it is reasonable for PG&E to proceed to subsequent phases of the project. If, however, the Phase 1 analysis indicates that the project lacks feasibility, PG&E will return surplus Phase 1 funds to DOE and ratepayers.⁴³

PG&E will utilize California's competitive RFO process to ensure that the project is completed in the most cost effective manner. The costs for Phase 1 were also reduced by PG&E's use of the knowledge and experience gained through development and construction of the first generation Alabama compressed air energy storage project. The team assembled by PG&E draws on the expertise of Dr. Robert Schainker and others involved in the preliminary design and construction of the Alabama compressed air energy storage plant in its preliminary design for Phase 1.⁴⁴

Based on the record, the costs for Phase 1 are reasonable. The potential ability to determine whether or not the compressed air energy storage project in the Kern County area can improve grid reliability, flexibility, security and interoperability and lower electric power system costs while reducing greenhouse gas emissions justifies PG&E's Phase 1 expenditures.

⁴³ PG&E Reply to Protests at 8.

⁴⁴ PG&E Reply to Protests at 10.

5. Accounting for PG&E'S CAES Project

In general, when a utility invests capital it is allowed to include reasonable capital costs in ratebase and allowed the authorized rate of return, which is set in its general rate case and cost of capital proceedings. PG&E will be funding Phase 1 of the CAES Project with a combination of federal Recovery Act grant funds and funding generated through an increase in rates. PG&E states that non-federal funds invested in capital for the CAES Project will be treated like any other capital invested by a utility; it will be included in ratebase (if determined to be reasonable) and subject to an allowance for an authorized return. Phase 1 is in large part a feasibility study and includes costs that are expense rather than capital costs, which will be expensed as they normally would be.⁴⁵ Federal Recovery Act funds will not be included in ratebase.

PG&E's request to establish a memorandum account to track the costs incurred on this project and a process to recover the revenue requirements booked to that account are reasonable.⁴⁶ The portion of costs paid for by Recovery Act Funds must not be tracked through this memorandum account. Finally, if PG&E receives research funds from the CEC, the amount authorized for recovery by this decision shall be reduced accordingly.

6. Stipulation of PG&E and DRA

At the conclusion of discovery, PG&E and DRA filed a stipulation regarding the record and issues. As relevant herein, PG&E and DRA stipulated

⁴⁵ Prehearing Conference Transcript at 8-9.

⁴⁶ R.08-12-009 at 31.

that the record in this proceeding should be comprised of the pleadings of the parties, the PHC transcript, and PG&E's data request responses to DRA.

PG&E also agreed that if PG&E subsequently requested a Certificate of Public Convenience and Necessity or power purchase agreement for Phases 2 or 3 of the CAES Project, it would file a report with the results and data from Phase 1 with the Commission. PG&E agreed to supplement its DOE report with information requested by DRA (as shown in Attachment A to this decision) if the DOE report did not include this information. PG&E agreed to meet informally with DRA at any time to discuss the Phase 1 report and results to obtain input on the scope and structure of subsequent phases of the CAES Project prior to filing an application with the Commission for approval of subsequent phases.⁴⁷ DRA requested that after PG&E submitted the information to the Commission, DRA and other parties be given 60 days for review and comment.

Although we agree that PG&E should be required to submit a report with data and analysis of Phase 1 at the conclusion of Phase 1, we believe any such report should come to a conclusion as to whether or not it is technically and economically feasible to proceed to subsequent phases. As a result, we add to the issues PG&E is to address in its final report to the Commission, the requirement that PG&E propose why it is reasonable to proceed to Phases 2 and

⁴⁷ The Stipulation also set forth DRA's separate position on efficiency of the CAES project. DRA argued that PG&E must show that the CAES project is cost effective and efficient in order to receive ratepayer funding. Although this may be an accurate statement, we note that only Phase 1 is before the Commission. As a result, it would be premature to require PG&E to show that the CAES project as a whole is cost effective and efficient until PG&E determines whether or not it will proceed to Phases 2 and 3.

3. Finally, with respect to the report, we do not see the need to provide 60 days for a review and comment period. It is unclear what DRA wants the Commission to do with such comments. If PG&E decides to proceed to subsequent phases of the CAES project, it will be required to file a new application with the Commission which would then be the subject of a new proceeding. Comments on the final report would be more appropriately filed and considered by the Commission during a subsequent proceeding if PG&E decides to proceed with Phase 2 and 3.

7. Conclusion

In summary, we find PG&E's costs to co-fund Phase 1 of the CAES project to be reasonable and authorize their recovery. Thus, PG&E is authorized to recover up to \$24.9 million for Phase 1 costs for Phase 1 of the CAES project. At the conclusion of Phase 1, PG&E must provide a report on Phase 1 of the project including an analysis of Phase 2 of the project that makes a recommendation as to whether or not it is reasonable to proceed to subsequent phases of the CAES project. This report is due within 90 days from the completion of Phase 1.

There are no outstanding issues in this proceeding and it should be closed.

8. Motion to Include PG&E's Responses to Data Requests to the Record

On December 4, 2009, PG&E filed a *Motion* requesting that the data responses sent to DRA be included in the record. The data responses provide information that is relevant and necessary for the Commission's consideration of this Application. The motion is granted.

9. Motion for Reconsideration of the Scoping Memo and Ruling

CFC seeks Commission reconsideration of the Scoping Ruling on the grounds that CFC was denied the opportunity for a fair hearing on issues presented in its protest, PHC conference statement, and at the PHC. CFC also contends that evidentiary hearings are necessary, but that the Scoping Ruling erroneously concluded there were no issues of material fact in dispute.

Our rules do not provide for interlocutory appeals of rulings on procedural and evidentiary matters. Instead, Rule 13.6(c) of the Commission's Rules of Practice and Procedure permits the Commission to review evidentiary rulings in determining the matter on its merits. Only in extraordinary circumstances, where prompt decision by the Commission is necessary to promote substantial justice, do our rules permit the assigned Commissioner or ALJ to refer evidentiary rulings to the Commission for determination. The ALJ and the assigned Commissioner did not find such extraordinary circumstances in this instance and thus we resolve the motion in this decision.

CFC argues that the issues raised in its Protest, PHC statement, and at the PHC should have been within the scope of the proceeding. CFC contends that the Scoping Ruling prevented CFC from addressing issues properly within the scope of the proceeding such as the reasonableness of the rates proposed. CFC argues that the Scoping Ruling precludes the Commission from considering anything CFC filed because it would be considered "beyond the scope of issues identified in the scoping memo."⁴⁸

⁴⁸ CFC Motion for Reconsideration at 3.

The Scoping Ruling clearly stated the issues that were properly within the scope of the proceeding. All parties could address those issues. CFC was not prevented from filing comments on issues properly determined to be within the scope of the proceeding. CFC chose not to file any comments.

With respect to CFC's contention that evidentiary hearings are necessary, CFC again argues that evidentiary hearings are necessary but again fails to identify issues of material fact in dispute to warrant evidentiary hearings. For example, CFC lists conditions it believes PG&E must show to be eligible for an expedited process, including, for example, the requirement that the project further one or more of the benefits identified in D.09-09-029.⁴⁹ CFC fails to state, however, that the listed criteria are the requirements for a utility that is seeking to use the Tier-3 advice letter process and are not applicable to this Application.⁵⁰ No party joined CFC in its request for hearing. We affirm that there is no need for hearing. CFC's motion for reconsideration is denied.

Any other outstanding motions in this proceeding not already addressed by a specific ruling are deemed denied.

10. Notice of Intent of the Consumer Federation of California to Claim Intervenor Compensation and Assessment of its Substantial Contributions to the Decision

On November 30, 2009, CFC filed a *Notice of Intent of the Consumer Federation of California to Claim Intervenor Compensation in A.09-09-019* (CFC

⁴⁹ CFC Motion for Reconsideration at 8.

⁵⁰ PG&E's Application does not seek to use the Tier-3 advice letter process.

NOI). The notice is timely because it was filed within the timeframe set by the Scoping Ruling issued on November 5, 2009 in this proceeding.

CFC states that it is a customer because it represents individual customers and groups or organizations that are composed of California consumers, all of whom are residential customers of California public utilities.⁵¹ Prior Commission decisions have determined that CFC is a customer under Pub. Util. Code § 1804(a)(1) and there is no reason to disturb that determination.⁵²

CFC argues it is eligible for intervenor compensation because participation or intervention in this proceeding will cause it “significant financial hardship,” as defined by Pub. Util. Code § 1802(g). CFC was determined to meet the requirements to show financial hardship in R.08-12-009 on May 13, 2009. However, this finding of significant financial hardship in no way ensures compensation. (§ 1804(b)(2).)

For the reasons cited above, CFC meets the statutory criteria for eligibility for intervenor compensation.

CFC opines that it has been prevented from fully participating in this proceeding because the Scoping Ruling found that all issues raised by CFC, in its Protest, PHC Statement and at the PHC were outside the limited scope of the proceeding.⁵³ CFC states that it “plans to fully participate in this proceeding,” if the Scoping Ruling is reversed. CFC avers that it “will avoid unnecessary

⁵¹ CFC NOI at 1-2.

⁵² See A.06-09-016 and most recently, Rulemaking (R.) 08-12-009 on May 13, 2009.

⁵³ CFC NOI at 5.

duplication of the presentation of any other party.” CFC includes an estimated budget for its compensation request of \$100,120.⁵⁴

With respect to CFC’s participation in this proceeding, we note that CFC was not prevented in any way from commenting on any issue determined to be within the scope of the proceeding. CFC did not file comments in this proceeding or respond to the comments filed by DRA or PG&E.

Generally, a NOI is filed prior to or at the beginning of evidentiary proceedings making the evaluation of whether or not a party had made a substantial contribution to the proceeding premature. There were no evidentiary hearings in this proceeding, however, and the NOI was filed on the same date that discovery closed. As a result, the participation of all parties to the proceeding was essentially complete when CFC filed its NOI. In order to facilitate the review of a potential claim for compensation following the issuance of this decision, we review CFC’s substantial contributions to the proceeding as it stands.

In evaluating whether a customer made a substantial contribution to a proceeding, we look at several things. First, we look at whether the Commission adopted one or more of the factual or legal contentions, or specific policy or procedural recommendations put forward by the customer. (§ 1802(i).) Second, if the customer’s contentions or recommendations paralleled those of another party, we look at whether the customer’s participation unnecessarily duplicated or materially supplemented, complemented, or contributed to the presentation of the other party. (§§ 1801.3(f) and 1802.5.)

⁵⁴ CFC NOI at 6.

As described in § 1802(i), the assessment of whether the customer made a substantial contribution requires the exercise of judgment.

In assessing whether the customer meets this standard, the Commission typically reviews the record, composed in part of pleadings of the customer and, in litigated matters, the hearing transcripts, and compares it to the findings, conclusions, and orders in the decision to which the customer asserts it contributed. It is then a matter of judgment as to whether the customer's presentation substantially assisted the Commission.⁵⁵

As discussed above this proceeding was categorized as ratesetting with a need for evidentiary hearings anticipated. PG&E, DRA, TURN, and IEP all stated that evidentiary hearings would not be required because there were no issues of material fact in dispute and that questions regarding the Application could be answered through discovery. Only CFC argued that evidentiary hearings were necessary but, as discussed above, failed to show there were material issues of fact in dispute.

As discussed above, the issues raised by CFC in its protest, PHC Statement, and at the PHC were determined to be outside the scope of the proceeding. Rather than utilize its resources to address issues determined to be within the scope of the proceeding, CFC continued to raise the same issues in its subsequent Motion for Reconsideration. CFC was not precluded from addressing the reasonableness of PG&E's application or any other issues within the scope of this proceeding. CFC did not file comments or participate in any discovery. CFC failed to make a substantial contribution to this proceeding.

⁵⁵ D.98-04-059, 79 CPUC2d 628 at 653.

11. Turn Is Not Eligible To Claim Intervenor Compensation

TURN did not file a notice of intent to claim intervenor compensation. TURN is not eligible to claim intervenor compensation for participation in this proceeding because the deadline set forth in the Scoping Ruling has passed.

12. Comments on Proposed Decision

The proposed decision of the ALJ in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and comments were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure. Comments were filed on January 11, 2009, by PG&E, IEP, DRA, and CFC. No reply comments were received. In this section we address the major issues addressed by the parties.

CFC reiterated arguments previously raised in its protest to the application, including the contention that the Commission lacks authority to grant PG&E's application. CFC again argues that evidentiary hearings were necessary and again fails to point to any material issues of fact in dispute. CFC opines that if there were no disputed facts it should have prevailed in its motion for summary judgment.⁵⁶ CFC is mistaken, however, in its assertion that summary judgment is proper if there are no material issues of fact in dispute. As CFC itself notes summary judgment is proper when there are no triable issues of fact and the moving party is entitled to judgment as a matter of law. CFC was the sole protestant to PG&E's application, but failed to raise any disputed issues

⁵⁶ On December 9, 2009, CFC filed a motion for summary judgment arguing that, based on the facts presented, PG&E's application should be dismissed because if failed to meet its burden of proof to show the requested ratepayer funding is justified.

of material fact. Thus, while there were no issues of material fact in dispute, the Commission had to make both factual and legal determinations based on the information provided in the application and on the record established during this proceeding. To the extent that CFC's motion for summary judgment agrees that the record is final and seeks a conclusion different from that reached herein, it is denied.

DRA clarifies its position and asks that the proposed decision be amended to clarify that this decision approves only Phase 1 of the CAES Project, that PG&E cannot recover Phase 2 expenditures before review of Phase 1 and that PG&E must file a formal application for review of later phases of the CAES project. This decision clearly states that only Phase 1 is at issue. As a result, it has no bearing on Phases 2 or 3 and PG&E must make separate applications to the Commission for subsequent phases of the CAES project.

IEP requested clarification that the final report required by the proposed decision be publically available, with the possible exception of the intellectual property of the persons or entities hired to perform the studies. In response to IEP's request we note that all Recovery Act grant recipients are required to file quarterly reports, annual reports and a final report with the DOE. The Commission requires copies of any reports required by DOE to be provided to the Commission and it is our understanding that these reports are publicly available.⁵⁷ DOE also states the information shall be reported to and published on the internet.⁵⁸

⁵⁷ D.09-09-029 at 12 and 16.

⁵⁸ DE-FOA-0000036 at 57.

13. Assignment of Proceeding

Rachelle B. Chong is the assigned Commissioner and Katherine Kwan MacDonald is the assigned Administrative Law Judge in this proceeding.

Findings of Fact

1. PG&E proposes building the CAES Project that will use off-peak energy, such as intermittent wind energy, to inject compressed air into an underground saline rock formation. The CAES project would then use the compressed air to power a generator during peak periods when renewable energy is not otherwise available
2. The CAES Project is to be completed in three phases. The project cost for all three phases is \$356 million.
3. The DOE awarded PG&E a \$24.9 million Smart Grid Demonstration grant to co-fund up to 50% of Phase 1 of the CAES Project.
4. The completed project will be located in Kern County and have a generation capacity of 300 megawatts for up to 10 hours.
5. Phase 1 of the CAES project includes geologic reservoir verification, National Environmental Policy/California Environmental Quality Act permitting/siting, CAISO System Impact Study, baseline for evaluating project performance and preliminary plant design.
6. Phase 1 of the CAES Project will determine the technical and economic feasibility of using saline rock formations as a storage reservoir for compressed air energy storage facilities.
7. The CAES Project is a unique, innovative project that is designed using advanced technologies and a new storage reservoir, which distinguishes the project from first generation compressed air energy storage projects.

8. Since legislation makes greenhouse gas reduction a requirement of California energy policy, the CAES project helps comply with this requirement by enabling large-scale deployment of intermittent renewable resources and peak load management capabilities which will reduce greenhouse gas emissions by reducing reliance on fossil fuel energy use.

9. Compressed air energy storage technologies are at a stage where a project presents unique technical and design challenges depending on the geographic location and type of storage reservoir.

10. PG&E's funding of Phase 1 of the CAES Project will constitute not more than 50% of the costs of Phase 1.

11. PG&E's funding of Phase 1 represents a good and fair value for its ratepayer investment.

12. Because the use of compressed air energy storage holds the promise of reducing greenhouse gas and improving grid reliability, flexibility, security, and interoperability with available and reliable bulk storage capabilities to integrate renewable resources and to respond to smart grid signals, Phase 1 offers benefits to ratepayers and to PG&E.

13. PG&E has complied with the notice requirements of Rule 3.2(c) and (d) of the Commission's Rules of Practice and Procedure.

14. The budget submitted for the CAES Project contains sufficient detail for the Commission to determine that the costs associated with Phase 1 are reasonable.

15. PG&E has utilized the knowledge and experience gained from the first generation CAES projects to reduce the cost of Phase 1.

16. The record demonstrates that the costs that PG&E will incur from participating in the funding of Phase 1 of the CAES Project are reasonable and total no more than 50% of the total costs for Phase 1.

17. PG&E will utilize a competitive RFO process to complete the project in the most cost effective manner.

18. It is reasonable to require PG&E to submit progress reports to the Energy Division on the same schedule as required by the DOE over the course of Phase 1 of the CAES project.

19. It is reasonable to require PG&E to file and serve a final report within 90 days of the conclusion of Phase 1 on the service list for this proceeding. The report must contain the information listed in Attachment A, which summarizes the data obtained during Phase 1, provides an analysis of Phase 1 and comes to a conclusion regarding whether or not it is reasonable to move to Phase 2.

20. PG&E must make separate applications to the Commission for approval of subsequent phases of the CAES project.

21. CFC filed a NOI on November 30, 2009.

22. CFC is a customer whose participation would cause it financial hardship.

23. PG&E requests authority to establish a memorandum account to track the costs incurred on this project and a process to recover the revenue requirements booked to that account. Once PG&E receives approval from DOE and the Commission, PG&E proposes to transfer the balance in that account to the Distribution Revenue Adjustment Mechanism annually through the Annual Electric True-up advice letter filing.

Conclusions of Law

1. Greenhouse gas reduction is a policy goal of California utilities law.

2. The costs of Phase 1 of the CAES project, up to \$24.9 million, that PG&E will incur are reasonable.

3. California statutes including AB 32 (Stats. 2006, Ch. 488), AB (Stats. 2006, Ch. 47-1) 1925, SB 1368 (Stats. 2006, Ch. 598), and Executive orders S-7-04 and S-3-05 call for greenhouse gas reduction.

4. PG&E has met the notice requirements of Rule 3.2(c) and (d) of the Commission's Rules of Practice and Procedure.

5. It is reasonable to authorize PG&E to recover the costs of Phase 1 of the CAES project up to a total of \$24.9 million.

6. CFC is eligible to claim intervenor compensation.

7. CFC failed to make a substantial contribution to this proceeding.

8. It is reasonable for PG&E to establish a memorandum account to track the costs incurred on this project and a process to recover the revenue requirements booked to that account. The amount transferred is limited by the total expenditure cap of \$24.9 million established by this decision. PG&E should not track or recover costs to be paid for by Recovery Act Funds or grants received from the CEC.

O R D E R

IT IS ORDERED that:

1. Pacific Gas and Electric Company is authorized to recover up to \$24.9 million in costs for Phase 1 of the Compressed Air Energy Storage demonstration project.

2. Pacific Gas and Electric Company must submit progress reports to the Energy Division every six months over the course of Phase 1 of the Compressed

Air Energy Storage demonstration project. The submission of a progress report to Energy Division does not reopen the proceeding.

3. Pacific Gas and Electric Company must file with the Commission and serve the final report on the service list for Application 09-09-019 within 90 days of the completion of Phase 1 of the Compressed Air Energy Storage demonstration project. The final report must address the issues in Attachment A to this decision. The submission of this report does not reopen the proceeding.

4. Pacific Gas and Electric Company must utilize California's competitive Request for Offer process to complete the project in the most cost effective manner.

5. Pacific Gas and Electric Company shall file a Tier 1 advice letter to establish a memorandum account to track the costs incurred on this project and a process to recover the revenue requirements booked to that account. Pacific Gas and Electric Company may propose to transfer the balance in the memorandum account will be transferred to the Distribution Revenue Adjustment Mechanism annually through the Annual Electric True-up advice letter filing. The amount transferred is limited by the total expenditure cap of \$24.9 million established in this proceeding.

6. Pacific Gas and Electric Company must inform the Commission if the California Energy Commission awards the \$1.3 million in research funding sought for this project and reduce the amount sought for recovery through rates by an amount equal to the amount received from the California Energy Commission.

7. Application 09-09-019 is closed.

This order is effective today.

Dated January 21, 2010, at San Francisco, California.

MICHAEL R. PEEVEY
President
DIAN M. GRUENEICH
JOHN A. BOHN
TIMOTHY ALAN SIMON
Commissioners

Attachment A.

PG&E must file a final report with the Commission that includes information required by the DOE on the costs and benefits of the project at the conclusion of Phase 1. In addition, PG&E must include the following additional information in the final report filed with Commission:

- 1.0. Update Project Management Plan
- 2.0. Geologic Reservoir
- 3.0. NEPA & State Environmental Quality Act Compliance
- 4.0. CAISO System Impact Study & Approval
- 5.0. Baseline for Evaluating Project Performance
- 6.0. Update/Refine Plant Preliminary Design
- 7.0. Final Engineering & Design
- 8.0. Plant Spec's, RFO, Equipment Procurement, & Contracts
- 9.0. Smart Grid Plant Control & Communication System
- 10.0. California Public Utilities Commission Approval Process

The report must include a conclusion by PG&E as to whether or not it is technologically and economically feasible to proceed to Phase 2.

(END OF ATTACHMENT A)