

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

Application of Pacific Gas and Electric  
Company for Approval of Ratepayer  
Funding to Perform Additional Seismic  
Studies Recommended by the California  
Energy Commission.

(U 39 E)

Application No. 10-01-014

**MOTION OF PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)  
TO RE-OPEN APPLICATION 10-01-014 AND TO RECOVER  
INCREASED COSTS OF SEISMIC STUDIES**

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**I. INTRODUCTION**

Pursuant to Ordering Paragraph 8 of Decision 10-08-003, Pacific Gas and Electric Company (PG&E) respectfully requests the California Public Utilities Commission (Commission or CPUC) to re-open the above-captioned application to approve additional funding necessary to perform seismic studies in the area at and around the Diablo Canyon Power Plant (DCPP or Diablo Canyon) recommended by the California Energy Commission (CEC) in the CEC's November 2008 report titled, "An Assessment of California's Nuclear Power Plants: AB 1632 Report" (AB 1632 Report).<sup>1/</sup> Specifically, PG&E requests the Commission re-open Application 10-01-014 to approve revised estimates for the seismic studies approved in Decision 10-08-003.

PG&E's revised estimate to perform the seismic studies approved in D.10-08-003 is \$64.2 million, an increase of \$47.5 million from the estimate of \$16.7 million previously approved by the Commission. This increase is due primarily to the expanded scope of the seismic studies: the area PG&E will be studying for the 3D offshore studies and 2D onshore studies has more than doubled. As explained in more detail below, expanding

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<sup>1/</sup> <http://www.energy.ca.gov/2008publications/CEC-100-2008-009/CEC-100-2008-009-CMF.PDF>.

the area from which seismic information for the 3D offshore and 2D onshore seismic studies will be collected is consistent with safe operation of Diablo Canyon and with PG&E's commitment to supporting the activities necessary to ensure seismic safety. It is also responsive to comments and feedback from the Independent Peer Review Panel (IPRP) established by the Commission in D.10-08-003 and to information from other stakeholders, e.g. the United States Geological Survey. Enhanced knowledge of the seismic hazard near Diablo Canyon provides a clear benefit to PG&E's customers in that, as noted above, it enables PG&E to ensure safe operation of this valuable generation resource. The seismic studies are ongoing; PG&E respectfully requests prompt action on this Motion so that they may be completed as soon as possible.

## **II. BACKGROUND**

In 2006, the California legislature enacted Assembly Bill (AB) 1632 (Blakeslee, Chapter 722, Statutes of 2006), which was codified as Public Resources Code 25303. AB 1632 directed the CEC to: assess the potential vulnerability of California's largest base load power plants, Diablo Canyon and San Onofre Nuclear Generating Station (SONGS), to a major disruption due to a major seismic event or plant aging; assess the impacts of such a major disruption on system reliability, public safety, and the economy; assess the costs and impacts from nuclear waste accumulating at these plants; evaluate other major issues related to the future role of these plants in the state's energy portfolio; and include the assessment in the CEC's "2008 Integrated Energy Policy Report Update" (2008 IEPR Update). PG&E supported passage of AB 1632. In response to AB 1632, as part of its 2008 IEPR Update released in November 2008, the CEC issued the AB 1632 Report recommending, among other things, that PG&E use three-dimensional seismic mapping and other advanced geophysical techniques to study fault zones near Diablo Canyon.

In PG&E's 2007 General Rate Case Decision, the Commission directed PG&E to address and incorporate the recommendations from the AB 1632 Report into its Diablo

Canyon license renewal feasibility study. (D.07-03-044, Conclusion of Law No. 11) PG&E filed Application 10-01-014 to address the CEC's recommendation that PG&E perform additional seismic studies because the estimated \$16.73 million cost of these additional seismic studies was not included in the cost estimates presented in the 2007 or 2011 General Rate Cases for PG&E's Long Term Seismic Program.

In Decision 10-08-003, the Commission granted PG&E's application, authorizing PG&E to recover in customer rates \$16.73 million to perform the seismic studies. In that decision, the Commission explicitly recognized that the \$16.73 million was a preliminary estimate and that the cost to complete the seismic studies might increase, noting that "the permitting process has the potential to delay the anticipated schedule for completion and increase the costs of performing the seismic surveys and studies." (D.10-08-003 at 6.) Accordingly, the Commission authorized PG&E to apply to increase authorized funding when it became clear to PG&E that costs for the seismic studies would exceed \$16.73 million. (Id. at 11 and Conclusion of Law No. 8.)

### **III. THE SCOPE OF THE SEISMIC STUDIES REVIEWED AND APPROVED IN DECISION 10-08-003 HAS INCREASED SIGNIFICANTLY**

A number of things have happened since PG&E filed its initial application that have influenced the scope of the seismic studies (by expanding the scope) and, in turn, have resulted in a significant cost increase to perform the seismic studies approved in Decision 10-08-003. As PG&E developed more detail around the seismic study plans through interactions with third party vendors and environmental agencies, as well as through meetings with the IPRP, we gained important knowledge regarding how to undertake the seismic studies to optimize the collection of information important to seismic safety at Diablo Canyon. Also, the accident at the Fukushima Daiichi nuclear power plant following the M 9 Tohoku, Japan earthquake and subsequent tsunami sharply focused PG&E on the need to collect seismic information from a much larger area around the plant in order to perform a comprehensive, conservative assessment of

seismic hazards. Public comments made recently by the United States Geological Survey (USGS) raising questions about regional fault characterizations along the central coast of California have also impacted the scope of the seismic studies. In addition, as provided in D.10-08-003, the members of the IPRP reviewed PG&E's seismic study plans and suggested the area of study be expanded, in particular in connection with the onshore 2D seismic studies.

Environmental stakeholders and agencies have also provided feedback, the result of which is that environmental permitting and mitigation will be significantly more expensive than PG&E anticipated in its initial filing. Other additional costs include the costs of the IPRP, which will be invoiced to PG&E, and the costs to implement a nuclear quality assurance review of the 2-D and 3-D seismic studies.

As the scope of the seismic studies has expanded, the cost to perform the seismic studies has increased. As noted above, at this time, PG&E expects the total cost of the seismic studies to be \$ 64.2 million. PG&E must note that there is some possibility for the costs to significantly increase even further if the California State Lands Commission or the California Coastal Commission do not permit 24/7 marine survey operations (as was originally estimated), if the permitting process delays implementation of the seismic surveys, and if those state agencies require more significant environmental mitigation as a condition of permitting the projects. There is also some possibility for the costs to decrease if the State Lands Commission determines there is no way to adequately mitigate the environmental impacts of implementing the off shore high energy 3-D seismic studies. Accordingly, PG&E continues to request authority to recover the actual costs of the seismic studies up to \$64.2 million in the Diablo Canyon Seismic Studies Balancing Account (DCSSBA), and also seeks authority to record costs in the DCSSBA through submission of a Tier 3 advice letter in the event the actual costs exceed \$64.2 million.

The original estimate of \$16.73 million was a preliminary estimate based on a narrow scope of activities and estimates available from vendors at the time the application was submitted. The breakdown of the costs was as follows: (1) \$0.5 million for the seismic surveys design; (2) \$11 million for the offshore 3D seismic surveys for a total area up to 400 square km, (3) \$2.03 million for the onshore 2D seismic survey; (4) \$2.05 million for the installation of OBS; and (5) \$1.15 million to manage and administer the project. The table below shows the increase in costs for each of these elements, which are discussed further in Section IV:

<b>Activity</b>	<b>Original Estimate</b>	<b>Current Request</b>
Seismic Survey Design for 2-D and 3-D Seismic Studies	\$0.5 million	\$0.8 million
Offshore 3-D Studies (High Energy)	\$11.0 million	\$30.4 million
Offshore 3-D Studies (Low Energy)	Cost included in \$11.0 million above	\$13.8 million
Onshore 2-D Studies	\$2.03 million	\$13.4 million
OBS Installation	\$2.05 million	\$2.05 million
Project Management	\$1.15 million	\$3.8 million
<b>Total</b>	<b>\$16.73 million</b>	<b>\$64.25 million</b>

#### **IV. ENHANCED SCOPE OF SEISMIC STUDIES**

This section describes the categories of costs set forth in Section III above, providing more detail supporting increased costs associated with performing those tasks.

##### **A. Seismic Survey Design**

In 2010, PG&E provided an initial cost estimate of \$0.5 million for the design of a 3D seismic survey along the Shoreline fault zone that included costs to *purchase* and

*reprocess* existing industry data, *design* 2D and 3D surveys and *evaluate* permit requirements and property access agreements.

The Seismic Survey Design task lays the foundation for all of the project seismic survey activities. In 2011, PG&E constructed a series of detailed geologic models for input to seismic illumination modeling as part of the 2D and 3D survey planning process. These models utilized data collected as part of the Long Term Seismic Program (LTSP) and a Legacy Archive database that contains all of the marine seismic data collected in the central coast of California. The Illumination study was used to optimize the proposed onshore and offshore source and receiver routes and increase the sampling density across specific targets or features of interest.

PG&E also retained a number of geophysical and environmental consultants during this phase to assist in evaluating permit requirements for both the offshore 3D and onshore 2D seismic programs.

To date, PG&E has spent \$0.8 million towards these first phase start-up activities.

#### **B. Off-shore 3-D Seismic Surveys (High Energy and Low Energy)**

PG&E provided an initial cost estimate of \$11 million to conduct off-shore 3D high energy seismic surveys over a 400 km<sup>2</sup> survey area, from Point Buchon to Point San Luis. Since the initial PG&E submittal to the Commission in 2010, the occurrence of the M9 Tohoku, Japan earthquake and tsunami, and subsequent catastrophic failures of the Fukushima Daiichi nuclear power plant, have focused considerable attention on the seismic safety of coastal power plants located near active fault zones. In addition, public comments by the United States Geological Survey (USGS) have raised questions about regional fault characterizations along central coastal California.

In response, PG&E proposes to expand the 3D high energy seismic survey area from 400 km<sup>2</sup> to ~ 1000 km<sup>2</sup>. This larger area includes the original 400 km<sup>2</sup> area from Point Buchon to Point San Luis and adds an additional 600 km<sup>2</sup> area from Point Estero to Cambria. The former survey area will focus on deep imaging of the intersection of the

Hosgri and Shoreline fault zones, and the latter area will focus on deep imaging of the intersection, or step-over zone, between the Hosgri and San Simeon faults.

In addition to more than doubling the area to be studied using 3D technology, PG&E is performing two types of 3D seismic surveys, high energy and low energy. The low energy survey provides high resolution imagery at subsurface depths of ~1/2 kilometer. The high energy survey provides imagery at depths to 12 kilometers (as long as the basement rock is not acoustically opaque) but provides poor resolution imagery at shallow depths, so the high and low energy complement each other. PG&E's original cost estimate of \$11 million for the offshore 3D seismic surveys did not include the full cost of the low energy 3D surveys. As PG&E developed implementation details and began the permitting process, it quickly became clear that permitting the high energy surveys will be significantly more complicated and less certain than we originally thought. On the other hand, additional permits were not required for the low energy surveys. Accordingly, PG&E plans to pursue completion of both high and low energy 3D surveys to illuminate shallow and deep structures and resolve uncertainties related to both the Shoreline and Hosgri-San Simeon fault zones. Understanding the geometry of these faults at seismogenic depths, coupled with possible slip rate information from the low energy surveys, will improve our definition of seismic hazard in the region.

The additional cost for doubling the area to be studied and for performing low energy surveys in addition to high energy surveys is \$33.2 million, for a total of \$44.2 million to perform high energy and low energy offshore 3D studies.

#### **1. High Energy 3D Seismic Surveys**

##### ***Data Acquisition (\$21 million)***

The highly specialized nature of 3D seismic survey vessels, their limited availability, and high transit costs are all factors influencing the program budget. In 2011, PG&E solicited and reviewed proposals from both industry and academic sources to conduct a 3D seismic survey offshore central coastal California during the fall of 2012.

Three proposals were evaluated with respect to overall cost and their ability and availability to conduct the proposed survey. A vendor has been selected and PG&E is currently in contract negotiations with that vendor. The estimated cost to acquire these 3D and related geophysical data is \$12.9 million. This estimate also includes the cost to implement nuclear quality assurance program oversight for the data collection as well (see Section E). PG&E is also including a weather down- time cost as a contingency in the budget (at 25% of survey duration or ~\$3 million).

In addition to identifying an appropriate geophysical survey vessel for the deeper water portions of the 3D seismic survey, PG&E is also addressing the logistical challenges of surveying across portions of the Shoreline fault zone that occur within the intertidal or transition zone. PG&E proposes to deploy a series of autonomous sea floor nodal geophones in the shallow waters offshore DCPD as well as a series of onshore geophones to record both offshore and onshore sound sources to better image the Shoreline fault zone. The estimated cost to acquire data within the transition zone portion of the survey is \$5.2 million.

#### ***Data Processing and Interpretation (\$5.4 million)***

Aside from basic set up charges, costs for data processing and interpretation are dependent on the volume of data acquired during the survey. At this time, PG&E has estimated processing and interpretation costs using a percentage of the total data acquisition costs. These percentages (15-20% and 10%, respectively) are based on experience with previous seismic survey projects. Budgets will be finalized in 2012 once permit conditions, hence actual survey plans, have been established.

#### ***Mitigation Activities (\$2.2 million)***

PG&E has developed a marine wildlife contingency plan to address the effects of high-energy sound sources on marine life. The mitigation plan includes marine mammal observers, scout boats, and fixed wing aircraft monitoring of safety and exclusion zones around the survey vessel. The definition of the safety and exclusion zones is based on

current National Oceanic and Atmospheric Administration (NOAA) Fisheries guidance for an Incidental Harassment Authorization. While the actual sizes of these zones have been estimated using computer simulations and some empirical field data, the final determination will be made on site prior to the commencement of survey operations once the necessary permits have been issued.

***Permitting (\$1.75 million)***

PG&E initiated the permit application process in the spring of 2011. The 3D survey area covers both federal and state jurisdictions. A California State Lands Commission application was submitted in April 2011, and the corresponding Federal Incidental Harassment Authorization (IHA) application is scheduled to be submitted in mid-September 2011. Costs for the 3D seismic permitting include California State Lands Commission Environmental Impact Report (\$0.7 million) and PG&E Environmental Contractor Support (application preparation, environmental surveys and coordination, seafloor habitat mapping, acoustic modeling, etc.) (\$1.05 million).

**2. Low Energy 3-D Seismic Surveys**

In addition to the High Energy 3D Survey work described above, PG&E has also initiated a program of Low Energy 3D surveys to provide high resolution imaging of the shallow sea floor to the top of the acoustic basement. These high resolution, shallow surveys can be used to map buried channels, marine terraces and other features that have been offset by motion along the Hosgri, Shoreline and other faults in the area. Dating these offset features helps constrain the fault slip rate – a fundamental parameter required for a Probabilistic Seismic Hazard Assessment (PSHA).

***Survey Activities – Shoreline Fault Zone***

Just after the Commission issued Decision 10-08-003, PG&E conducted a low energy shallow 3D survey of the northern segment of the Shoreline Fault Zone near Point Buchon during the winter of 2010/2011. The IPRP noted that this activity was consistent with the AB1632 recommendations, and focused on an area that was identified as having

a high potential for being relevant and of great scientific interest (IPRP, 2010). This survey provided an opportunity to conduct an exploratory pilot survey of the target area during the 2010 season. The survey allowed PG&E to obtain and review preliminary seismic results during the permit application and review process, which was expected to take 1 to 2 years. The initial survey was a success and a report is in preparation. Costs to date for this activity include \$3.5 million for 3D data acquisition and processing, and \$0.2 million for data interpretation and report review

In addition to mapping the northern Shoreline fault zone and its intersection with the Hosgri fault zone, reconnaissance mapping offshore Point San Luis in 2010 also identified a buried ~100,000 year-old San Luis Obispo Creek stream channel that pierces the southern segment of the Shoreline fault zone. With more detailed mapping, channel offsets have the potential to constrain the rate of fault slip, which in turn can reduce the uncertainty in PSHA calculations for the Shoreline fault zone. PG&E presented a *proposal* to conduct a low energy 3D survey of this channel and the surrounding region during the fall of 2011 to the IPRP on July 20, 2011. The survey area is estimated to cover ~ 10 km<sup>2</sup>. Budget estimates to complete low energy 3D mapping along the southern Shoreline fault zone includes \$3.8 million for data acquisition and data processing and \$0.3 million for data interpretation and report review.

***Low Energy, High Resolution 2D Survey Activities – Hosgri/ San Simeon Fault Zone***

PG&E presented a proposal to conduct additional low energy, high resolution 2D seismic profiling along the Hosgri/ San Simeon junction or step over region from Point San Simeon to Point Estero during the fall of 2011 to the IPRP 20 July 2011. This survey will provide a higher resolution picture of the complex faulting in this area and address the issue of whether there, is in fact, a stepover or segment boundary between the Hosgri and San Simeon faults (as was identified in the 1988 LTSP report). Like the low energy mapping along the Hosgri and Shoreline fault zones to the south - identification of offset

channels and other geologic features can also provide slip rate information for the Hosgri and San Simeon faults in this region.

This 200 km<sup>2</sup> area will be surveyed at ~ 100 to 200 m line spacing, a significantly higher density than earlier USGS (2010) surveys (~800 m line spacing). The higher data density is necessary to confidently trace faults from one profile to the next and to identify and examine possible fault piercing points and other localities that could be used to constrain the history of faulting and fault slip rates. Budget for this high resolution 2D seismic survey includes \$5.4 million for data acquisition and processing; and \$0.5 million for data interpretation, report preparation and review.

#### **D. Onshore 2-D Seismic Studies**

PG&E's initial estimate of \$2.03 million for four on-shore 2D seismic surveys (~ 50 miles in length) included \$0.38 million for actual survey planning (e.g., permitting and route surveying for source and receiver locations) and \$1.65 million for data acquisition/ processing and interpretation. The revised estimate of \$13.4 million results primarily from more than doubling the area to be studied and a decision to use two seismic sources to collect information.

Several factors weighed in PG&E's decision to expand the study area and to use two seismic sources to collect information. The California Energy Commission recommended that on-shore studies be performed to identify new or significant seismic issues in this area (IPRP, 2010). Additionally, the Shoreline Fault Zone Report (PG&E, 2011) identified the Los Osos and San Luis Bay fault zones as having a deterministic seismic hazard that was comparable to the offshore Shoreline fault zone. Reducing the uncertainty in the source characterization (geometry, slip rate) of these fault zones is another key element to improving the Probabilistic Seismic Hazard Assessment (PSHA) for DCCP. The IPRP also noted that 2D seismic surveys were preferred over 3D surveys because of the difficulty and cost of using instruments in rugged hilly terrain, as well as land ownership and environmental issues. The highly folded and deformed nature of the

rocks in the Irish Hills region; however, limit the resolution possible with conventional 2D seismic surveys.

In recognition of these challenges, computer-based illumination studies were conducted to optimize the proposed on-shore source and receiver routes. PG&E modified the original four survey routes based on this analysis, and proposes to survey ~ 122 miles of road during the fall of 2011. This revised survey plan covers ~2.5 times the mileage originally proposed in 2010 and uses two types of seismic sources – (a) Vibroseis trucks for deep (~10 km) penetration and (b) Accelerated Weight Drop (AWD) trucks for shallow (~ 5km ) penetration and infilling in areas where the larger Vibroseis trucks are unable to access. The seismic sources will be recorded by ~5400 self-contained portable nodal units that will be deployed throughout the survey area and a 1000 channel high-resolution geophone cable that will be deployed along the survey routes themselves.

The additional line mileage, the deployment of 5000+ geophones, and the use of two different types of seismic source will enable improved imaging of fault structures at depth that will approach the resolution of conventional 3D seismic coverage. As a result of this aggressive approach, the budget for the data acquisition /processing and interpretation has increased substantially from \$1.6 million to \$11.4 million. This includes charges for data acquisition (~ \$9 million), data processing (~ \$1.6 million), and data interpretation (~\$0.8 million).

In addition to these basic costs, additional costs will be incurred to: improve the geologic and geophysical mapping along the survey routes, conduct environmental compliance monitoring, map buried infrastructure along onshore survey routes in urban/suburban areas, and implement a nuclear quality assurance program at the field level.

### ***Geologic and Geophysical Route Mapping (\$0.89 million)***

Geological and geophysical (potential field) mapping along the seismic survey routes helps support the interpretation of the subsurface seismic data. Much of the existing geological and geophysical data for the Irish Hills is incomplete and detailed geological/geophysical mapping is required to prepare geologic cross sections along the proposed seismic transect lines. The inclusion of potential field data (gravity and magnetics) provides further constraints on subsurface geometry of larger scale structures in the area.

### ***Environmental Compliance monitoring (\$0.5 million)***

Compliance monitoring is required by PG&E to avoid and minimize impacts to sensitive biological and cultural resources in the project area. Monitoring involves pre-activity surveys conducted by biologists and cultural resources experts to identify sensitive resources, the implementation of recommended mitigation measures during the seismic surveys, and post-survey documentation of the avoidance and compliance measures.

### ***Infrastructure mapping (\$0.64 million)***

Buried infrastructure (pipelines, fiber optic cables, water/wastewater, etc.) mapping is being required by many of the communities in the survey area that will issue the required encroachment permits for the 2D onshore seismic profiling. This data, in addition to noise and ground vibration testing of the Vibroseis and AWD trucks, will be used to inform utility structure risk analyses, develop mitigation control measures, and establish setbacks from structures and facilities during actual survey activities.

#### **E. Nuclear Quality Assurance Program**

PG&E has implemented a Nuclear Quality Assurance (NQA) program for both the 3D and 2D seismic surveys. This program documents and verifies all seismic data acquisition processes and procedures, as well as data acquisition equipment and data processing software. All reports considered quality related are prepared, reviewed, and

approved according to NQA standards. While all of the contractors selected for the 3D Seismic Program implement their own industry level QA programs, none have had experience with a nuclear level program. As a result, additional costs were incurred to test equipment at NQA-approved testing facilities and to develop NQA procedures for the data collection and processing. These survey-related NQA costs are separate and distinct from the costs presented in Section F for NQA Project Management and Oversight.

#### **F. Project Management**

PG&E's initial cost estimate for Project Management (\$1.15 million) included \$0.5 million to produce a Final Report, \$0.4 million for Project Management (advise and review consultants work, track scopes and manage costs and schedules), and \$0.25 million for DCPD personnel support (e.g., on site work to support OBS installation, seismic survey route preparation). Currently, PG&E projects \$3.8 million in actual costs through 2013. This revised projection includes additional expenses for management activities and 3<sup>rd</sup> party oversight of the NQA program, as well as supporting the IPRP.

#### ***Nuclear Quality Assurance/ Quality Control Program (\$0.54 million)***

As noted in Section E above, PG&E has determined that all of the geological and geophysical data collected as part of this program is subject to nuclear-level Quality Assurance (NQA) program specifications. Project management costs for administering a NQA program by an independent 3<sup>rd</sup> party are estimated to be ~\$0.54 million for three years. Note that this cost is in addition to the costs to implement QA program requirements for the 2D and 3D seismic surveys themselves.

#### ***Independent Peer Review Panel (\$0.9 million)***

The revised budget includes estimated costs to support activities of the IPRP. In Decision 10-08-003 the CPUC established the IPRP, whose members include the California Energy Commission, California Geological Survey, California Coastal Commission, and the California Seismic Safety Commission. More recently, the County/City of San Luis Obispo has expressed an interest in participating in the IPRP as

well. The IPRP will review and comment on PG&E's seismic study plans and results. The IPRP has already issued two reports in connection with PG&E's seismic studies. (IPRP, 2010, 2011.) PG&E learned recently that it will be invoiced for the cost of the IPRP members to perform their responsibilities. This additional cost was not included in PG&E's original request.

## **V. PG&E's RATEMAKING PROPOSAL**

The Commission approved a ratemaking methodology for the seismic study costs in D.10-08-008. PG&E proposes to use the existing ratemaking approach adopted in D.10-08-003, with two proposed changes. First, as described above, PG&E requests that the "cap" on cost recovery in the Diablo Canyon Seismic Study Balancing Account (DCSSBA) be increased from \$16.73 million to \$64.25 million. PG&E will continue to record its actual costs in the DCSSBA and, on an annual basis, PG&E will transfer up to the amount authorized by the Commission from the DCSSBA to the Utility Generation balancing Account (UGBA) or its successor, as part of the Annual Electric True-Up for recovery through CPUC-jurisdictional rates.

Second, if the costs increase beyond the cost recovery authorized amount of \$64.25 million, PG&E requests authority to record these excess costs in the DCSSBA and request Commission approval for recovery of those costs in excess of \$64.25 million through the submission of a Tier 3 Advice Letter.

## **VI. CONCLUSION**

PG&E respectfully requests that the Commission re-open Application 10-01-014 to authorize increased funding for the seismic studies reviewed and approved in D.10-08-003. In light of the uncertainty associated with the environmental permitting process required to complete the seismic studies, PG&E also requests the Commission authorize PG&E to record any costs in excess of \$64.25 million in the DCSSBA and requested

Commission approval for recovery of cost in excess of \$64.25 million through the submission of a Tier 3 advice letter.

Respectfully submitted,

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