

COMMENTS OF PACIFIC GAS AND ELECTRIC COMPANY  
ON UNITED STATES NUCLEAR REGULATORY COMMISSION'S  
DRAFT POLICY STATEMENT ON POSSIBLE SAFETY IMPACTS OF  
ECONOMIC PERFORMANCE INCENTIVES '90 DEC 10 P5:01

**Introduction.** Pacific Gas and Electric Company (PG&E) is pleased to provide the following comments on the draft policy statement entitled "Possible Safety Impacts of Economic Performance Incentives" issued by the U.S. Nuclear Regulatory Commission (Commission) on October 26, 1990. PG&E operates two Commission-licensed power plants, Diablo Canyon Power Plant Units 1 and 2, under a comprehensive performance-based ratemaking settlement approved in 1988 by the California Public Utilities Commission (CPUC). PG&E's comments primarily will address how the Diablo Canyon rate settlement provides long-term incentives for improvements in the reliability of the plant. In addition, PG&E will describe how the Diablo settlement exempts the plant from the types of short-term performance measurements and financial penalties identified by the draft policy statement as potentially adverse to safety.

**How the Diablo Canyon Settlement Works.** On December 19, 1988, the CPUC approved a settlement of the Diablo Canyon rate case. The settlement was entered into by PG&E, the California Attorney General, and the CPUC's Division of Ratepayer Advocates. The Division of Ratepayer Advocates had recommended that over \$4 billion of PG&E's \$5.5 billion investment in the plant be disallowed as imprudent. After hearings on the proposed settlement, the CPUC issued Decision 88-12-083 approving the

settlement with minor modifications. The settlement, effective July 1988, adopted alternative ratemaking for Diablo Canyon by basing revenues for the plant primarily on the amount of electricity generated, rather than on traditional cost-based ratemaking.

The settlement runs through the years 2015 for Unit 1 and 2016 for Unit 2. Under this long-term "performance-based" approach, the extent and timing of the recovery of actual operating costs, depreciation, and a return on the investment in the plant depend primarily on the amount of power produced and the level of costs incurred over the full, 28-year term of the settlement. In approving the settlement, the CPUC explicitly affirmed that Diablo Canyon costs and operations no longer should be subject to CPUC reasonableness reviews, such as prudence reviews of operations and maintenance costs and target capacity factor requirements.

The price per kilowatt-hour (kwh) for Diablo power under the settlement consists of a fixed component (3.15 cents per kwh) and an escalating component. Total prices for the years 1990 through 1994, effective January 1 of each year, are 8.93 cents, 9.6 cents, 10.34 cents, 11.16 cents and 11.89 cents per kwh. For 1995 through 2016, the escalating component will be adjusted by an inflation factor. Beginning in January of each year, during the first 700 hours of full-power operation outside

the peak period of June through September, the price is 70% of the stated amount. During the first 700 hours of full-power operation during the peak period, the price is 130% of the stated amount to encourage PG&E to utilize the plant during the peak period. At all other times, the price is 100% of the stated amount.

From the revenues received for Diablo Canyon, PG&E must recover the costs of owning and operating the plant, including all future capital additions. If power generation drops below specified capacity levels, PG&E may request floor payments which insure that the Company will receive some revenue, even if the plant stops producing power. Floor payments are based on the prices set in the agreement at a 36% capacity factor from 1988 through 1997 (reduced by 3% each time the floor provision is exercised and not repaid), with the floor capacity factor decreasing another 6% over the remaining 1998-2016 period. However, payments received must be refunded to customers under specified conditions, such as an offset to revenues received from future production. Decommissioning costs continue to be recovered through base rates and are not subject to plant performance.

The settlement also created an Independent Safety Committee to assess and make recommendations regarding the safety of Diablo operations. However, the Committee is advisory only,

and has no authority or responsibility for plant operations or to direct plant personnel.

The Diablo Canyon Settlement Provides Continued Incentive to PG&E to Improve the Reliability and Safety of Plant Operations Over the Long Term. The Commission's draft policy statement correctly notes that a desirable economic performance incentive program is one which provides incentives for the licensee to make improvements in operation and maintenance that result in long-term improvements in the reliability of the plant and its operational organization. The Diablo Canyon settlement is precisely the type of long-term economic performance incentive program that the Commission should encourage. This is because how PG&E does economically under the settlement depends not on short-term prudence reviews or target capacity factors, but on how well Diablo Canyon's two units operate over 28 year settlement period.

PG&E's financial future is closely tied to its ability to operate Diablo Canyon safely, reliably and at high performance levels over the long run. The achievement of high performance levels over the term of the settlement will require diligent planning and management attention. For example, unlike short-term performance schemes with sharp thresholds between rewards and penalties, the Diablo settlement provides a continuous incentive which rewards PG&E for making plant improvements which

maximize the long-term reliable and safe operation of the plant even if the plant's output may be reduced in one year due to the downtime required to make an improvement. Likewise, PG&E has no incentive to take short cuts during an unscheduled outage merely to meet a short-term performance goal. To the contrary, the Diablo settlement provides assurance to PG&E that it has the opportunity, unfettered by traditional ratemaking reviews, to have a "good year" next year even if it has had a "bad year" this year.

For the entire 28 year period of the settlement, PG&E assumes the risks associated with equipment failures, prolonged outages and new regulatory requirements that may be promulgated by the NRC. PG&E's economic incentive, in these circumstances, is to ensure that the plant operates well not just month to month, or year to year, but decade to decade.

The Commission's draft policy statement is also correct in recognizing that a well run plant and prompt correction of operating problems enhance safety. This is certainly true of the performance incentive under the Diablo settlement, which assures no potential conflict between operating the plant well and operating the plant safely. On the contrary, the two go hand-in-hand. Experience has demonstrated that nuclear plants with higher historical capacity factors and longer term continuous operation have encountered fewer challenges to plant safety

systems and fewer demands on safety equipment. In the long run, reduced challenges to plant systems also minimize any potential negative effects of cyclic operation on plant life.

In addition, reliability and safety are intertwined because continued operation is always contingent on meeting the stringent operating requirement of the Commission. The Commission maintains a continuous presence at the site in the form of on-site inspectors, and regularly reviews PG&E's operation and maintenance of Diablo Canyon. If regulatory requirements change in the future, PG&E will continue to take the steps necessary to insure that Diablo Canyon meets those requirements.

PG&E will continue to make those capital additions necessary to improve operations to keep the plant in safe, reliable and efficient operating condition. Capital additions which improve Diablo's operating capacity factor will also provide increased returns under the settlement. PG&E will not risk the penalty -- an extended plant shutdown -- that would result from operating the plant in a manner inconsistent with Commission safety requirements. Since PG&E's income from the plant is based on how well it performs, it would be "penny-wise, and pound-foolish" to decline to make appropriate expenditures that will ensure the continued safe and reliable operations of the plant.

The Diablo Canyon Settlement Does Not Rely on Short Term Performance Measurements with Sharp Thresholds and Does Not Use SALP Scores. The Commission's draft policy statement identifies three specific features of certain incentive plans used by the States which may adversely affect public health and safety.

The first feature is the use of sharp thresholds between rewards and penalties (or between penalties and null zones, or rewards and null zones). As an example, the Commission cites a target capacity factor under which a licensee has an incentive to achieve the target in order to avoid a penalty of bearing the resulting costs of replacement power if the target were missed. The Diablo settlement is not subject to any target capacity or availability factor, and thus is immune from this type of sharp threshold which the Commission believes could divert attention from safe plant operation.

The second feature identified by the draft policy statement is the use of short intervals in judging or measuring performance. As discussed above, the Diablo settlement is clearly immune from this feature because of its long term nature. In fact, the continuous nature of Diablo's performance incentive -- an incentive that is all "carrot" and no "stick" over time -- assures that management's attention remains on the long-term

goals of reliability and operational safety, rather than on achievement of any short-term target for capacity factor or plant availability.

The third feature identified by the draft policy statement is the use of the Commission's Systematic Assessment of Licensee Performance (SALP) or other Commission-developed performance indicators as standards for financial rewards or penalties. Again, the Diablo settlement is free of this type of perceived defect, since it relies strictly on the overall safety and reliability of plant operations over the long term, as opposed to year-to-year Commission SALP ratings or performance indicators. Moreover, one of the features of the Diablo settlement which distinguishes it from shorter term performance incentives is that Diablo Canyon costs are expressly exempted from prospective state utility commission prudence reviews. In fact, PG&E now classifies Diablo Canyon for financial reporting purposes as a separate line of business from its utility business. As a result, budgets and expenditures for the plant are planned on a basis separate from the traditionally-rate regulated utility business. In short, because of the unique nature of the Diablo settlement, PG&E does not manage Diablo costs under the pressures of traditional utility cost standards; it manages Diablo revenues under the long-term incentives of the settlement itself.



PG&E's Corporate Commitment to Operational Excellence at Diablo Canyon. PG&E's pursuit of operational excellence extends well beyond Diablo Canyon's nuclear organization. It is affirmed as one of PG&E's most explicit and widely communicated corporate goals: "Operate the Diablo Canyon Nuclear Power Plant at the highest level of safety, reliability, and performance."

This simple, direct statement sends a strong message to PG&E's employees, customers, and the communities the company serves that PG&E's most senior management has its attention squarely focused on the long term performance of the plant. Diablo Canyon continues to be numbered among the top performing nuclear plants in the nation.

In short, PG&E is sparing no effort to maintain and improve Diablo Canyon's excellent safety and performance record.

**Conclusion.** For the reasons stated above, PG&E requests that the Commission revise its draft policy statement to recognize that the Diablo Canyon settlement is the type of desirable performance incentive which enhances plant safety and reliability.



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FAX NUMBER: (415) 973-9271

FROM: C. Warner

DEPARTMENT: LAW 30TH FLOOR

COMPANY: PG&E

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