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

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| Application of Pacific Gas and Electric Company (U 39 E) for Authority to Increase Revenue Requirements to Recover the Costs to Replace Steam Generators in Units 1 and 2 of the Diablo Canyon Power Plant. | Application 04-01-009<br>(Filed January 9, 2004) |

# OPENING COMMENTS OF

# SAN LUIS OBISPO MOTHERS FOR PEACE, SIERRA CLUB, PUBLIC CITIZEN, GREENPEACE, AND ENVIRONMENT CALIFORNIA

# ON THE PROPOSED DECISION OF ALJ O'DONNELL


Morgan Rafferty
San Luis Obispo Mothers For Peace
P.O. Box 164
Pismo Beach, CA 93448
(805) 474-4220

For: San Luis Obispo Mothers For Peace, Sierra Club, Public Citizen, Greenpeace, Environment California


February 14, 2005

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## INTRODUCTION AND SUMMARY

In accordance with Rules 77.2-77.4 of the Commission's Rules of Practice and Procedure, San Luis Obispo Mothers for Peace, the Sierra Club, Public Citizen, Greenpeace and Environment California (collectively "Joint Parties") hereby file these opening comments on the Proposed Decision ("PD") by ALJ O'Donnell on Pacific Gas and Electric Company's ("PG&E") Diablo Canyon Nuclear Power Plant ("DCNPP") Steam Generator Replacement Project ("SGRP") Application. The PD presents the proposed preliminary findings as to the cost-effectiveness of the DCNPP SGRP proposed by PG&E, and related matters. Preparation of the Environmental Impact Report ("EIR"), pursuant to the California Environmental Quality Act ("CEQA") is in progress at the Commission. The Joint Parties understand that the Commission will issue a final decision on the SGRP application only after the CEQA review is complete and that the preliminary findings in the PD are not to prejudge the outcome of the Commission's CEQA review.

Joint Parties' comments on the PD are summarized as follows:

1. The Commission's analysis of the cost effectiveness of the SGRP, in making certain changes to PG&E's cost effectiveness analysis, focuses exclusively on the expected net benefits and completely and improperly ignores the broader range of values associated with PG&E's base case estimate as well the Commission's own alternate estimates. The lower expected net benefits values presented by the Commission appear to significantly increase the likelihood that the SGRP will have negative net benefits. For each of the Commission's alternate scenarios the PD should be modified to determine the percentage of cases in the underlying Monte Carlo analysis in which that scenario shows zero or negative benefits.
2. The PD errs factually and uses faulty reasoning in concluding that $706 million is a reasonable base cost estimate for the SGRP. Joint Parties recommend that a 10-20% higher value be used.
3. The PD is inconsistent in the way it chooses to modify capital cost forecasts in response to parties' testimony, resulting in an increase about half as much as it ought to be.
4. The PD erroneously claims that its proposed O&M and capital forecasts are sufficient to cover additional outage, security, seismic, and other major capital project costs that are

not actually part of the proposed forecasts, leaving potentially huge dollar amounts outside of the cost effectiveness analysis.

5. The PD's basis for affirming the striking of Dr. Jay Namson's testimony on DCNPP seismic risks is flawed. The Commission should evaluate the effects of possible seismic redesign on SGRP cost effectiveness.
6. The PD fails to properly evaluate the question of whether the SGRP project is needed.
7. The PD errs in discounting the likelihood and relevance of departing bundled load following the lifting of current statutory restrictions.
8. The PD betrays an inappropriate prejudgment on the general merits of the application as well as an inappropriate judgment on its environmental merits.
9. The Commission should remedy the PD's deficiencies and reissue the PD after the SGRP EIR has been finalized. This subsequent PD should address the relevant environmental and non-environmental issues in a fully integrated manner.

**DISCUSSION**

**The Commission's Cost Effectiveness Analysis Indicates That There is a Significantly Increased Probability That The SGRP Could Result In <u>Negative</u> Net Benefits.**

In conducting its own SGRP cost effectiveness analysis the PD correctly included additional cost-related factors not included by the applicant. In doing so, however, the PD ignored the fact that the values it took as starting points are only the "expected" [1] values in a Monte Carlo forecasting process that also produces hundreds or thousands of other values—some lower and some higher than these expected values. The Commission is aware of this and yet the PD takes no notice of the probability distribution of costs and benefits that exists around each and every expected value. The PD does not explain whether its own cost effectiveness results reflect expected values or whether they simply took the expected PG&E's base case value as its starting point and used something other than the Monte Carlo method to produce its alternate results.

[1] In this modeling context, by definition the "expected" value is a statistical fiction calculated from values that the model actually generated. It is not what is meant by "expected" in the ordinary use of the word. In fact, the expected value is not necessarily a value that the model ever actually produces or one even to be expected to occur. It is simply a convenient way of summarizing the data the model produced.

Because every one of the PD's net benefits scenarios shows lower net benefits than PG&E's own analyses it follows that in every one of the PD's scenarios there is a higher probability that the SGRP would not be cost effective. Without performing a Monte Carlo analysis for each of the PD's scenarios it is impossible to say at what confidence level the SGRP could now be deemed to be cost effective. Clearly, however, those confidence levels have dropped significantly, since even in the most optimistic case analyzed in the PD the net benefits are now about 1/3 less than PG&E stated in its application (~$800 million versus ~$1.2 billion). Twenty-one of the thirty different scenarios in the PD show net benefits that are reduced by more than 2/3 compared to PG&E's expected value. Seven of the thirty show net benefits of $54 million or less, with three of these actually showing *negative* net benefits. With this many scenarios this much closer to the economic breakeven point (and this is before possible inclusion of recommended additional costs discussed in these comments and before possible inclusion of mitigation costs the Commission could order as a result of the CEQA process) the overall confidence with which the SGRP ultimately can be said to be cost effective has dropped dramatically compared to PG&E's own representation.

For example, in its application PG&E asserts that in 95% of the scenarios generated by it Monte Carlo analysis net benefits were greater than zero. This assertion is almost certain to be untrue given the changes made by the Commission in conducting its sensitivity analysis. In the case of the Commission's most optimistic scenario, which shows $800 million in net benefits, or $400 million less than PG&E estimates, if one assumes that the distribution of the output values around these expected values did not change, PG&E's statement would need to be amended to say that the cost effectiveness model indicates that 95% of the model runs would produce values greater than *negative $400 million*.[2] With the information available in the PD one cannot say with what degree of certainty that net benefits will be greater than zero, but one can say with certainty that the chances of there being positive net benefits under any of the Commission's scenarios is considerably lower than it is under PG&E's base case.

Because the Commission has properly developed alternate analyses that contain lower expected net SGRP benefits it must now also carry this effort further and evaluate the distribution

[2] Exh. PG&E-1, Revised Testimony Supporting PG&E's Application to Replace the Steam Generators in Units 1 and 2 of the Diablo Canyon Power Plant, 9/20/04 pg. 1-7: 21-22. PG&E states that, "the benefits of the Projects exceed the costs in 95 percent of the 9,630 scenarios evaluated."

of values that lie around each of these expected values. Just as PG&E has calculated that a net benefit of $1.2 billion means that 95% of the model runs will show positive net benefits, so too must the Commission do comparable kinds of analyses so that parties understand, for each of its scenarios, the percentage of cases in which that scenario can be expected to produce positive benefits and the corresponding percentage that can be expected to produce negative benefits. It is incumbent upon the Commission to perform this additional analysis before forming even an interim opinion on the question of SGRP cost effectiveness.

**The Proposed Decision Errs Factually and Logically in Using $706 Million as the SGRP Base Case Estimate.**

The PD errs factually, ignores the record, and uses faulty reasoning in concluding that $706 million is a reasonable cost estimate for the SGRP. The PD notes and simply dismisses without evaluation or a rationale of any kind numerous concerns expressed by various parties about the use of this value. In stating that no party offered an alternate estimate to the $706 million figure (PD at 13) it ignores its own statement contained in the preceding paragraph that Joint Parties in fact recommended that a value 10-20% higher than this be assumed in a future cost effectiveness analysis. Moreover, in making this observation the PD noted only one of numerous factors cited in Joint Parties' brief that justify using this higher cost range.

Joint Parties made its recommendation in view of numerous factors[3] in addition to the single one noted in the PD, which is that the procurement contract cost is now approximately 15% higher than PG&E's estimate. Additional facts cited by Joint Parties in support of its higher proposed cost estimate include: (1) PG&E assumed a zero probability that the SGRP cost might exceed $706 million, leaving no room for contingencies; (2) $24 million higher than expected installment contract cost; (3) PG&E testimony that it would be imprudent to budget installment contract costs at as little as $18 million despite the fact that this is in fact what they did; and (4) in its testimony PG&E listed a number of "uncertainties" associated with Project components, "major assumptions" and "exclusions from estimate, together creating a reasonable likelihood of higher costs than contained in PG&E's estimate."[4] All of this and more were included in Joint

[3] Exh. MFP Opening Brief, 10/29/04, pp. 36-38.
[4] Exh. PG&E-1., pp. 3-33 to 3-35, 4-24 to 4-26.

Parties' opening brief, yet the PD ignored it. In view of the deficient basis for the PD's position that the $706 million estimate is an appropriate base case estimate Joint Parties recommend that the Commission accept Joint Parties' recommendation that a value in the range of 10-20% higher than $706 million be used as the base case estimate.

**The Proposed Decision Should Be Amended To Correct Inconsistencies in the Way Base Capital and Major Capital Cost Forecasts are Adjusted for the 2016-2024 Period.**

PG&E's application breaks capital expenditures into two components: Base Capital Additions and Major Capital Projects. While the PD agrees with Aglet's suggestion that Base Capital Additions should be increased to $87 million per year adjusted to nominal dollars for the years 2016 to 2024, it did not adopt Joint Parties' recommendation to increase Major Capital Projects by $88 million per year over the same period despite the fact that the reasoning on which this is based is essentially the same as that used to justify Aglet's recommendation, specifically, that average annual costs encountered in the 2016-2024 period are likely to be similar to those experienced on average during the relevant preceding period.

Joint Parties' $88 million annual figure is based on PG&E's expected average annual cost of Major Capital Projects from 2003-2015. As the basis for rejecting Joint Parties' recommendation that this figure be used to forecast additional Major Capital Projects for the years 2016-2024 PD states that Joint Parties "…appears to imply… [that]…PG&E's forecast of major capital additions translate to greater uncertainty…" PD at 18. The PD goes on to say, without substantiation, that "We believe the …[Aglet-proposed] increase to <u>base capital additions</u> is sufficient to take care of uncertainty. PD at 18. [emphasis added]

The PD's interpretation of the basis for Joint Parties' recommendation rests on a misreading of Joint Parties' testimony, the record in general, and Joint Parties' briefs. Joint Parties have not, in fact, implied or stated that that PG&E's forecast of major capital additions translates to greater uncertainty. We are saying that the basis for PG&E's forecast is factually deficient, a position that is based on the record. Joint Parties' testimony and briefs on this subject boil down to two clear points in the record. The first point is that PG&E has assumed, without factual substantiation, that the need for major capital additions will somehow suddenly disappear starting in 2016.[5] The second point is that the record—specifically, Lochbaum's unrefuted testimony—indicates a broad pattern in the U.S. nuclear industry that major capital additions increase—not decrease, certainly not shrink to zero--as nuclear power plants age.[6] This testimony is based on a May 2004 report prepared by Lochbaum, cited in his testimony, which is based on empirical data on aging-related costs in the U.S. nuclear power industry, as well as a study conducted by the Oak Ridge National Laboratory[7]. Nothing in the record undermines the data or conclusion in these reports, which inform Lochbaum's testimony.

The essential rationale for adopting the higher base capital expenditures recommended by Aglet is that such expenditures between 1988 and 1997 were substantially higher than what PG&E modeled for the 2015-2024 period. PD at 17. In adopting Aglet's recommendation the Commission stated:

> "It is reasonable to assume that there will be plant additions that are not known at present. Additionally, as a plant ages, one would expect to see an increase in plant additions as components are replaced." PD at 17. [Emphasis added to original.]

Here the Commission correctly acknowledges two fundamental truths about forecasting future capital costs: (1) in spite of a degree of inherent uncertainty they must be forecast to occur—not assumed to be negligible or nonexistent, i.e., it is not prudent to assume a zero value simply because a precise value cannot be known ahead of time; and (2) as a plant gets progressively older it is reasonable to forecast increased rates of capital additions. Joint Parties endorse these principles. Despite the Commission's quoted statement above and its inherent forecasting principles, what the PD does, however, is simply set the 2016-2024 base capital addition costs on an even keel with the historic costs cited by Aglet, and continues to forecast Major Capital Project costs at zero for an entire nine-year period (2016-2024). Both are at odds with the Commission's above-quoted position and with the record in this case.

To be true to its own reasoning the Commission would have to increase these forecasted base capital costs relative to their associated historic costs to reflect that the rate of base capital additions will tend to increase as the plant progressively ages. The Commission would also have to adopt Major Capital Project costs for 2016-2024 that are higher than those

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[5] See MFP *et al* Opening Brief, October 29, 2004 for the list of citations to the record.
[6] Exh. MFP-6, Testimony of David Lochbaum, 9/29/04, pg. 3: 8-16; pg. 5:4-9.
[7] Id., pp.9-11. See footnote 5 in Lochbaum testimony for specific reference to the ORNL study.

actually incurred during the same historic period that Aglet and the Commission relied upon in adjusting the base capital cost forecast, not assume them to be zero for the entire 2016-2024 period. This suggests that the Commission should trend both Base and Major Capital costs in the way that it has trended O&M costs, namely, to increase them at a nominal annual rate of 4.5%, which corresponds to a real escalation rate of 2%.

Joint Parties concede that in adopting Aglet's recommendation for the Base Capital forecast, while declining to apply an escalator, the Commission has at least remedied the bulk of the under-forecast problem for Base Capital costs. But in the case of the Major Capital Project forecast the Commission has failed to follow its own principles and failed to acknowledge the record in this case, which supports a substantial Major Capital Project forecast for the years 2016-2024. At a minimum, the Commission should apply the same basic reasoning to the Major Capital Project forecast as it has for the Base Capital forecast and adopt for 2016-2024 an annual forecast of $88 million forecast adjusted to nominal dollars.

**The Proposed Decision Erroneously Concludes that its Recommended Increases in O&M and Capital Expenditures are Sufficient to Cover Any and All Additional Security, Seismic, and Outage Costs.**

Joint Parties agree with the decisions in the PD to increase the O&M escalation rate and Base Capital Expenditures. Joint Parties hope that the Commission will also adjust the Major Capital Project forecast as recommended in the preceding section of these comments. However, Joint Parties disagree with the PD's position that the two increases the Commission has made are somehow sufficient to cover every other additional type of cost identified by parties in the case and that the PD has indicated have some likelihood of occurring.

The PD contains no quantitative estimates that support this contention and were such estimates to be attempted they would fail since the cost terms increased by the PD are explicitly limited to two specific issues: (1) an increase in forecasted O&M costs to reflect that such charges are likely to increase in real terms; and (2) an increase in Base Capital costs that reflects the Commission's acknowledgment that such costs are likely to mirror actual Base Capital costs during the historic period identified by Aglet. In other words, the O&M and Base Capital adjustments made by the PD are fully earmarked; they are not "available" to address any of the other cost issues (relating to outages, seismic redesign, and security enhancements, among others) raised by parties, all of which—to one degree or another—are acknowledged by the Commission as legitimate and possible.

For example, there are no other dollars that can be used to pay for any Major Capital projects during 2016-2024, which is why Joint Parties above restate their recommendation that Major Capital costs be set at a level that matches the historic and projected levels of the 2003-2015 period.

There are also no dollars to be used for additional outage costs, yet the PD cites as Finding of Fact 57: "The possibility of a 12-month outage after the SGRP is completed could occur supports our conclusion that some increase in future capital additions and O&M expenses above the amount forecasted by PG&E is appropriate." While it is entirely appropriate that the PD acknowledge the possibility of a year-long outage, it does not follow that the possibility of a year-long outage supports the particular increases adopted by the PD, which are specifically for higher O&M costs and Base Capital costs. It is true that the PD includes the assumption of a year-long outage in two of its cost effectiveness scenarios but this is different from adopting a specific probability of such an outage and building it into the base case cost effectiveness analysis, as TURN has recommended and as Joint Parties have supported. The Commission should assign a significant non-zero probability of a year-long outage and build this into the cost effectiveness analysis.

A similar situation holds for possible seismic redesign costs and enhanced security costs associated with the SGRP application. The PD properly acknowledges that each is possible, but claims that both are beyond quantification, and yet then goes on to assert that each lends support to the O&M and Base Capital increases it has adopted, despite the fact that all those increases are earmarked specifically for O&M and Base Capital costs. Once again, a more proper method for the Commission to use to build in cost coverage for possible seismic design costs and enhanced security costs is to seriously evaluate and assign a non-zero probability that each of these conditions may be imposed, evaluate and decide on a reasonable range of costs for each, and to factor these assumptions into PG&E's cost effectiveness model adopted in the PD. The fact that no intervening party in this case has provided specific or formal estimates of probabilities and costs does not excuse the Commission from its responsibility to undertake these efforts, for it is the Commission's statutory responsibility, not the intervenors', to protect ratepayer interests.

**The Commission's Basis for Affirming the Ruling to Strike Witness Namson's Testimony is Flawed.**

The enjoined issue of DCNPP and seismic safety has been in existence for approximately forty years and as a key participant in its making the Commission knows this history well. Since the approval of PG&E's SGRP application would likely mean at least another 11 years of reactor operation at DCNPP as well as the creation and storage of additional radioactive wastes on site, it is vitally important that the Commission take this opportunity to carefully address the issue of DCNPP seismic safety, including its possible impact on the cost effectiveness of the SGRP. To this purpose Joint Parties submitted testimony in this case prepared by Dr. Jay Namson, testimony that addressed seismic concerns related to DCNPP's continued operation. This testimony was subsequently struck by the assigned ALJ.

In affirming this action the PD cites three reasons. Joint Parties submit that the reasoning applied in the PD is flawed. The first reason given by the PD is that Namson "effectively asked that this proceeding be suspended." PD at 50. The second set of reasons given are that the Commission does not have the authority to order any changes should the seismic review recommended by Namson indicate that such changes were needed, that the NRC is the only entity that would undertake such a study, and that Namson did not indicate that the NRC was likely to order such a study. The final set of reasons were that Namson did not provide any probabilities of the NRC requiring a seismic study, of the NRC recommending a seismic retrofit, any cost estimate of such ordered retrofit, a schedule for performing the retrofit, nor whether the retrofit would be required with or without the SGRP. The PD concludes by stating that since Namson did not "specifically address the cost-effectiveness of the SGRP, the need for the SGRP, or ratemaking issues…" that his testimony was beyond the scope of this proceeding." PD at 51.

This final set of reasons is applied several times in the PD to other issues by various parties. They improperly place the burden of proof on the intervening party to making a definitive showing as to what specific values should be adopted in a highly technical quantitative modeling process. As noted previously it is the Commission's obligation to protect ratepayer interests and the fact that an intervening party has not provided sufficiently detailed or formalized information for ready inclusion in a technical modeling exercise does not excuse the Commission from taking a party's requests seriously and where appropriate to take affirmative action in response to legitimate concerns raised by parties or members of the public.

The PD is incorrect that the NRC is the only entity that could have accepted Namson's recommendation to begin studying the issues highlighted in his testimony. Namson's recommendation was that the Commission direct PG&E to undertake this study for the purpose of developing potential cost estimates associated with mitigating the type of earthquake identified and discussed in his testimony, and that the Commission consider undertaking its own study as well. The Commission could have directed PG&E to undertake relevant studies and their analyses results could have contributed to a stronger record on which to base the Commission's ultimate decision in this case. The Commission also could have decided to undertake its own study, hiring appropriate experts, to provide an independent perspective as to whether PG&E's application omits information or analysis relevant to the question of DCNPP seismic risks. The results of both sets of studies could then have been used to develop probabilistic and cost estimate inputs for inclusion in the SGRP cost effectiveness analysis. These inputs could have addressed both the probability and associated cost estimates of NRC ordering seismic upgrades as well as inputs characterizing the potential costs/risks that NRC might fail to act prudently with respect to ordering appropriate upgrades, since such a failure exposes ratepayers to financial risk. At present, all these values are implicitly set at zero in the SGRP cost effectiveness analysis; a reasonable amount of study could have improved markedly on those values. The Commission could still see to it that these studies are undertaken and the Joint Parties urge the Commission to do so.

Joint Parties filed Namson's testimony out of a genuine concern that the seismic risks associated with DCNPP may be fundamentally different than they were understood to be when the last major study was performed about 20 years ago. There is no evidence in the PD of even the slightest bit of concern that the scientific information presented in Namson's testimony might bear on the advisability of extending DCNPP's operating lifetime for an additional 11 or more years, and that people living in the vicinity of DCNPP might be facing an even greater risk than the Commission has understood based on dated information. The history of DCNPP demonstrates that drastic and very costly action in response to erroneous assumptions regarding earthquake hazards can and do occur. With a final decision in this case not expected until sometime in late summer, Joint Parties urge the Commission to take this concern more seriously by undertaking and/or ordering the requisite studies and analysis and to factor the results into the final SGRP cost effectiveness analysis. There is still time to complete this work and abide by the Commission's schedule.

**The Proposed Decision Ignores Completely the Fundamental Question of Whether the SGRP Project is Needed as Part of PG&E's Future Resource Mix.**

In its treatment of the need for the SGRP the PD ignores completely the fact that the applicant never provided a showing a need for the SGRP in terms of its overall projected loads and resources. Joint Parties pointed out in their Opening Brief that PG&E ignored this issue;[8] now the Commission has ignored it as well. This is a critically important omission both in the applicant's submissions and in the PD. The Commission must make a reasoned determination that the SGRP is in fact needed. Making this determination obligates the Commission to consider whether DCNPP's gradual demise in the face of progressive tube plugging might be compensated for by means other than replacing DCNPP's steam generators. The PD is deficient in that it is completely silent on this issue. Joint Parties urge the Commission to remedy this deficiency by undertaking this sort of reasoned assessment, using the wealth of information at its disposal in the Commission's resource procurement case (R.04-04-003) and elsewhere where precisely these sorts of questions are being examined.

**The Commission Should Modify Its Cost Effectiveness Analysis To Account For The Likelihood Of Departing Bundled Load Once Present Statutory Prohibitions Are Lifted.**

The PD's finding that the prospect of DA load causing PG&E's load obligation to decrease significantly within the relevant timeframe should have no bearing on the cost effectiveness analysis is flawed. Just because there is no definitive probability of or timeframe for this happening in the record does not excuse the Commission from taking this very real possibility into account. Joint Parties urge the Commission to consult its own staff in making reasonable

[8] MFP *et al* Opening Brief at pp. 2-3.

load reduction estimates, probabilities, and time frames for the departure of bundled load associated with the lifting of the statutory prohibition on customers leaving bundled service. Based on the outcome of these consultations the Commission can then develop reasonable values for inclusion in a subsequent run of PG&E's cost effectiveness analysis.

**The Proposed Decision Betrays an Inappropriate Prejudgment and Bias on the Merits of the Application**

The Joint Parties believe that the PD impermissibly prejudges the environmental review mandated under CEQA. On the very first page of the PD's discussion the Commission states: "Based on our analysis of the SGRP as discussed herein, our preliminary determinations are: The SGRP is cost-effective…" PD at 3. The PD does not make this statement and then add that such a conclusion is of course subject to change if mitigation costs required in the context of the CEQA process presently underway turn out to be high enough to negate the cost effectiveness of the project. In failing to express such a qualifier the PD makes an inappropriate prejudgment on the merits of the SGRP application.

The Commission betrays its prejudgment again, as well as strongly implying a bias toward SGRP approval, when it concludes its discussion regarding the cost effectiveness of the SGRP:

> Additional benefits that derive from the SGRP are the increased likelihood that Diablo will remain in operation as a reliable energy source, reduced air pollution compared to fossil generation, reduced dependence on fossil fuel, and diversity of electricity resources.
>
> These unquantified benefits increase the cost-effectiveness of the SGRP. PD at 43.

The claim of reduced air pollution is unambiguously making an environmental judgment about the project. The primary problem with doing so in the PD is that there is no effort whatsoever to present a balanced environmental perspective on the SGRP, or for that matter, a balanced perspective on the SGRP as a whole. For example, from an environmental perspective the PD could have mentioned that the SGRP would likely result in at least an additional 11 years of continued exposure to the entire set of public heath and safety risks associated with the routine and non-routine operation of a large commercial nuclear power plant as well as the additional risks of increased levels of storage of the incremental levels of radioactive wastes produced during this additional operating period. The PD might also have mentioned non-environmental costs that were unquantified in the SGRP analysis and that provided at least a conceptual counterweight to the stated non-environmental benefits. The PD did neither of these things, creating a strong impression that the Commission has inappropriately prejudged the SGRP application and done so with a clear bias in favor of approving the SGRP despite the fact that the CEQA process is still underway.

Joint Parties, along with TURN, expressed this exact concern in a response to PG&E's June 30, 2004 motion requesting the very Interim Opinion to which these present comments are responding:

> …Joint Parties[9] are very concerned that the issuance of an Interim Decision could impermissibly prejudge the environmental review mandated under CEQA. Even with the proposed delay in the hearing schedule the Interim Decision would precede the FEIR by three months and the final decision by eight months. PG&E believes that there is "some remaining risk" with regard to the environmental review, but that an Interim Decision is sufficient certainty to move forward. (Motion at 4.) This is exactly the concern. The CEQA review process cannot be treated as an incidental digression or administrative afterthought. Moreover, as part of the CEQA process the Commission may well impose mitigation measures that would alter the prior cost-benefit analysis or select a preferred alternative to the SGRP.

It would appear that the Joint Parties' concerns were well founded.

In order to at least partially remedy this situation the Commission should withdraw the PD and wait until the EIR is finalized before issuing a subsequent one. The reissued PD should address environmental and non-environmental issues in a fully integrated manner.

## CONCLUSION

Joint Parties support the Commission's finding that the likely net benefits of the SGRP are substantially less than PG&E's forecast. At the same time, the record shows that the PD is unduly restrictive as far as admitting important inputs into the cost effectiveness analysis that would have a dampening effect on the net benefits result, making the net benefits seem higher than they actually are. The Commission must remedy this by adopting the Joint Parties' recommendations regarding additional types of costs to be included and methods for including

[9] In this case, as noted, "Joint Parties" included TURN as well the Joint Parties presently filing these comments.

them. Even after this situation is remedied there is the very real possibility that mitigation measures relating to PG&E's SGRP application will be imposed that will further affect the cost effectiveness of the SGRP.

Joint Parties believe that the PD is consistently misleading in its statements about SGRP's net benefits in that it nearly exclusively relies on the "expected" net benefit values of the analysis as if this number provides some implicit level of certainty as to what level of net benefits the SGRP will actually produce. The PD repeatedly states that the "SGRP [will be/remains] cost effective ..."[10] never mentioning or referring to the underlying range of values produced by the Monte Carlo analysis to generate the net benefits numbers it references. As the expected net benefits get lower and lower the chances get correspondingly greater that the SGRP will actually turn out <u>not</u> to be cost effective because a larger proportion of model's results will be negative. Because the Commission's own sensitivity analyses are presented in terms of single values as well, in their present form they are methodologically deficient as a basis for responsible decision making since no one can know the likelihood that a given scenario might actually yield zero or negative benefits. These facts must be known and presented in a subsequent PD.

Fortunately, since the final decision in this case is not scheduled to be issued for another half a year or more there is ample time for Commission to remedy the various problems with the PD and reissue it, especially if the Commission accepts our recommendation not to issue another PD before the EIR is finalized. Joint Parties urge the Commission to take the time to develop the additional model inputs recommended in the comments above, to better clarify the results of its own cost effectiveness analyses, and to make the changes recommended by the Joint Parties. Joint Parties also suggest that the Commission consider convening workshops in which parties can stipulate additional inputs to PG&E's cost effectiveness model and have PG&E perform illustrative runs. This practice has been used to good effect in R.02-01-011 in fostering understanding of the effects of different sets of assumptions on direct access cost responsibility charges and could be helpful in this case as well.

Joint Parties appreciate the opportunity to provide comments to the Commission in this vitally important case.

Respectfully submitted:

[10] PD Findings of Fact 105-107, pp.64-65.

By: ___________________________

Morgan Rafferty
San Luis Obispo Mothers For Peace
P.O. Box 164
(805) 474-4220

**For:**
**SAN LUIS OBISPO MOTHERS FOR PEACE, SIERRA CLUB, PUBLIC CITIZEN GREENPEACE, ENVIRONMENT CALIFORNIA**

February 14, 2005

<u>**Appendix**</u>

**Joint Parties' (Mothers for Peace *et al*) Proposed Modifications to**

**Proposed Decision/Interim Opinion Findings of Fact and Conclusions of Law**

<u>**Modified Findings of Fact**</u>

4. ~~Since the load would still have to be served, it does not follow that the demand for electricity would be reduced, or that Diablo would not be needed as a result of the end of the current statutory prohibition on customers leaving bundled service.~~

5. ~~There is no reason to adjust the~~ The cost-effectiveness analysis should be amended to consider the effect of the end of the current statutory prohibition on customers leaving bundled service. ~~, and no basis for determining what adjustment to make.~~

29. ~~Since PG&E's major capital additions are intended to reduce uncertainty to a substantial degree, it does not follow that PG&E's forecast of major capital additions translates to greater uncertainty as MFP appears to imply by its proposal to increase capital additions by an additional $88 million based on PG&E's forecast of major capital additions.~~

48. The possibility of future revisions to Diablo's seismic design criteria supports the conclusion that <u>the Commission and PG&E should each undertake studies aimed at providing probabilistic and potential cost estimates for inclusion in a subsequent run of PG&E's cost effectiveness model.</u> ~~some increase in future capital additions and O&M expenses above the amount forecast by PG&E is appropriate.~~

~~56. There is no reason to believe a 12-month outage after the SGRP is completed is likely.~~

~~57~~. The possibility that a 12-month outage after the SGRP is completed could occur supports our conclusion that <u>that the base capital and major capital budget forecasts should be increased each</u>

year by $87 million and $88 million, respectively over the 2016-2024 period. ~~some increase in future capital additions and O&M expenses above the amount forecast by PG&E is appropriate.~~

~~105. The SGRP will be cost-effective, assuming the most probable date for one unit to go out of service without the SGRP is extended by one refueling cycle, the low gas price and the $815 million SGRP cost, as long as the capacity factor remains above approximately 86%~~.

~~106. Assuming the most probable date for one unit to go out of service without the SGRP is extended by one refueling cycle, the low gas price, the $815 million SGRP cost, and a one-year outage in 2015, the SGRP remains cost-effective as long as the capacity factor remains at about 90.6%.~~

~~107. Assuming that the tube inspections during the 2004 refueling outages extend the most probable date for both units to go out of service without the SGRP by two refueling cycles, the SGRP will be cost effective at the low gas price, and the $815 million SGRP cost as long as the capacity factor remains above 85%.~~

110. ~~Additional unquantified benefits that derive from the SGRP are the likelihood that Diablo will remain in operation as a reliable energy source, reduced air pollution compared to fossil generation, reduced dependence on fossil fuel, and diversity of electricity resources.~~

~~121. Namson's testimony effectively asked that this proceeding be suspended while a recommended seismic review is conducted.~~

123. ~~Since Namson's testimony did not specifically address the cost-effectiveness of the SGRP, the need for the SGRP, or ratemaking issues, it was beyond the scope of this proceeding.~~

New Findings of Fact

A. The experience of the nuclear industry indicates that component failures are subject to a bathtub curve, in which failure rates are high in the early and later years of component life.

B. There is insufficient evidence in the record to indicate that the average industry experience with respect to age-related component failure is a poor predictor of what is likely to occur at DCNPP.

C. PG&E has not thoroughly considered the impact of age-related component failures unrelated to the steam generators on the net benefits of the SGRP.

D. Age-related component failures are likely to result in reduced capacity factors and increased capital and O&M costs.

E. The modifications to the assumptions used by the Commission in its sensitivity analyses indicate that the expected value of net benefits of the SGRP has declined by anywhere from $400 million to over $1.3 billion compared to the $1.2 billion value PG&E identified in its application.

F. The reduction in net benefits below what PG&E stated in its application strongly suggests that the certainty with which PG&E can guarantee that the SGRP will produce positive net benefits has declined substantially.

G. In its application PG&E has not attempted to justify the need for the SGRP in the context of the Commission's resource procurement proceeding (R.04-04-003).

## Modified Conclusions of Law

5. PG&E's SGRP cost estimate of $706 million is reasonable, as is a cost estimate that is in the range of 10 to 20% higher than $706 million.

11. MFP's proposal to increase annual major capital additions by an additional $88 million for the 2016-2024 period based on PG&E's forecast of major capital additions should ~~not~~ be adopted.

29. ~~The Commission should preliminarily determine that the SGRP is cost-effective.~~

42. ~~The Commission should affirm the ALJ's ruling striking Namson's testimony~~.

**SUBJECT INDEX OF RECOMMENDED CHANGES TO THE PROPOSED DECISION**

**CERTIFICATE OF SERVICE**

I, Clyde Murley, certify that I have, on this date, caused this OPENING COMMENTS OF SAN LUIS OBISPO MOTHERS FOR PEACE, SIERRA CLUB, PUBLIC CITIZEN, GREENPEACE, AND ENVIRONMENT CALIFORNIA ON THE PROPOSED DECISION OF ALJ O'DONNELL to be served by electronic mail on the parties listed on the Service List, and by U.S. Mail for those who have not provided an electronic address, for the proceeding in California Public Utilities Commission Docket No. A.04-01-009.

I declare under penalty of perjury, pursuant to the laws of the State of California, that the foregoing is true and correct.

Executed on February 14, 2005 in Albany, California.

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Clyde Murley