

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

EVALUATION AND COMPLIANCE DIVISION
Advisory, Evaluation and Research Branch

RESOLUTION E-3041
June 15, 1987

R E S O L U T I O N

PACIFIC GAS AND ELECTRIC COMPANY (PG&E). ORDER AUTHORIZING PG&E TO REVISE ELECTRIC RATES TO REFLECT THE RECOVERY OF THE FUTURE DECOMMISSIONING COSTS FOR THE HUMBOLDT BAY POWER PLANT, UNIT 3 AS PROVIDED IN ORDERING PARAGRAPH 3 OF DECISION 85-12-022.

(Advice Letter No. 1152-E, Filed May 5, 1987)

SUMMARY

1. By Advice Letter No. 1152-E, filed May 5, 1987, Pacific Gas and Electric Company (PG&E) requests an electric rate increase to recover over a four year amortization period the future decommissioning costs of Humboldt Bay Power Plant, Unit 3 (Humboldt 3). Rate recovery of \$58 million (in 1986 dollars) is authorized, subject to refund. A schedule of ruling amounts is adopted, in order that PG&E may establish a tax free decommissioning fund in accordance with Internal Revenue Service (IRS) rules.

BACKGROUND

2. In Decision (D.)85-12-022, issued December 4, 1985, the Commission authorized the recovery over a four year amortization period of future costs incurred by PG&E to decommission Humboldt 3, a small nuclear power plant that is now closed. A decommissioning cost of \$58 million (in 1986 dollars) was adopted, with the provision that PG&E allocate the cost between decommissioning of prudently constructed and imprudently constructed plant. That allocation was to be approved by the Evaluation and Compliance Division prior to filing of rates. D.85-12-022 also reduced PG&E operating and maintenance expenses due to the permanent closure of the plant, and concluded that previous low estimates of decommissioning costs were not imprudent or unreasonable.

3. Humboldt 3 is now in SAFSTOR status, essentially closed and "mothballed" until Federally approved nuclear disposal facilities are available. Eventually the contaminated portions of the plant will be dismantled and, along with spent nuclear fuel, shipped to the disposal site. This is called the DECON option, and PG&E will not require the future value of the \$58 million until that time. PG&E estimates that the dismantling will begin in the year 2015.

4. By letter dated December 19, 1986 from Mr. Louis Vincent to Division Director Bruno A. Davis, PG&E informed the Evaluation and Compliance Division that the \$58 million decommissioning estimate does not include any imprudently constructed plant. An affidavit from cost consultant Thomas S. LaGuardia was attached to the letter. PG&E further explained its need for tax-related findings, in a letter dated April 1, 1987, also from Mr. Vincent to Mr. Davis.

5. By letter dated April 14, 1987, Mr. Davis approved PG&E's estimate of recoverable costs, with several conditions. The letter is reproduced as Attachment A to this Resolution. The important conditions were that the rate calculations be updated for current data and a July 1, 1987 effective date, and that the rates be subject to refund, pending Commission review of a revised decommissioning cost study anticipated by PG&E.

6. On May 5, 1987 PG&E filed Advice Letter No. 1152-E, in which the company requests:

- A. amortization rates for four years beginning July 1, 1987;
- B. Commission approval of a schedule of ruling amounts, which are estimates of annual revenues that will be eligible for deposit in a tax free external fund;
- C. certain language on the rate treatment of decommissioning costs.

PG&E included in the advice filing revised work papers and rate calculations per the terms of Mr. Davis' letter of April 14, 1987.

(Note: In this instance "tax free" means that ratepayer contributions through rates are not subject to corporate income taxes. The earnings by the fund are taxable or tax exempt according to conventional tax regulations.)

7. On March 6, 1987 the Commission issued D.87-03-029, which authorized decommissioning rates for PG&E's Diablo Canyon Power Plant, Units 1 and 2. On May 29, 1987 the Commission issued D.87-05-062, which approved schedules of ruling amounts for the Southern California Edison Company (Edison) share of Palo Verde Nuclear Generating Station, Units 1, 2 and 3 (Palo Verde), and for the San Onofre Nuclear Generating Station, Units 1, 2 and 3 (SONGS), owned in part by Edison and San Diego Gas and Electric Company.

8. With the adoption of this Resolution, decommissioning costs will have been considered by the Commission for all nuclear plants owned by regulated California utilities.

REQUESTED INFORMATION

9. Much of Advice Letter No. 1152-E is dedicated to adoption of certain language and schedules, in order that PG&E can comply with IRS rules regarding tax free decommissioning funds. For Humboldt 3 the requested information is presented herein.

10. Attachment VII to Advice Letter No. 1152-E is reproduced as Attachment B to this Resolution. Attachment B contains work papers which will be filed with the IRS in requesting approval of a schedule of ruling amounts pursuant to Section 468A of the Internal Revenue Code of 1954. The work papers include revenue requirements calculations, cost recovery assumptions, escalation rates and trust fund revenue analyses.

11. Attachment IX to Advice Letter No. 1152-E is reproduced as Attachment C to this Resolution. Attachment C presents in summary form the revenue requirements for the four year collection period and a proposed schedule of IRS ruling amounts.

12. The assumptions, calculations and development of schedule of ruling amounts shown in Attachments B and C to this Resolution are reasonable and are adopted.

13. This Commission recognizes that it is to the benefit of ratepayers that the maximum amount of decommissioning costs be tax deductible for both Federal and State tax purposes. The Commission recognizes that a ruling must be obtained from the IRS and California Franchise Tax Board (FTB) before the tax status of the decommissioning funds can be known with certainty. Consequently, this Commission will cooperate with PG&E to ensure that the maximum tax qualification is obtained from the IRS and the FTB.

14. In the event that the IRS or FTB reduces PG&E's ruling amount request below the levels assumed in this Resolution (or eliminates PG&E's tax qualifying percentage entirely), PG&E may request that authorized income tax expenses be increased over the amounts reflected in this Resolution. The ratemaking treatment of such an adverse IRS or FTB determination may be addressed in a future advice letter filing in order to allow PG&E to apply to recover any unforeseen tax costs and to make appropriate adjustments, if necessary, to the decommissioning funding policy.

DISCUSSION

15. The Evaluation and Compliance Division has reviewed PG&E work papers calculating the four year amortization rates. The company calculations are done correctly. Using assumed cost escalation rates, assumed trust fund return rates and factors from PG&E's Test Year 1987 general rate case, the annual revenue requirement is \$26,894,000. These annual revenues should be collected from July 1, 1987 through June 30, 1991.

16. The escalation rates, trust fund return rates and calculations of revenue requirement for Humboldt 3 are consistent with analyses adopted for California's other nuclear plants.

17. The scope of the anticipated revised decommissioning cost study is shown as Attachment D to this Resolution. It was included as Attachment III to Advice Letter No. 1152-E. Because the results of the study could change the decommissioning revenue requirement, PG&E should recalculate decommissioning rates following the study and file, by advice letter or application, for revised rates, using the same four year amortization period adopted herein.

18. Although the rate calculations for Humboldt 3 are reasonable and consistent with calculations for other plants, the Evaluation and Compliance Division recommends that future review of all plant decommissioning costs include scrutiny of cost escalation rates and fund returns. California utilities have consistently estimated that escalation rates will exceed fund returns. It is possible that dismantling costs will escalate faster than general inflation, and the conservative investment policy restrictions on decommissioning funds may limit returns. However, as a general notion long run investment returns usually track inflation.

19. In A.84-06-014 PG&E estimated that the Diablo Canyon fund will earn 6% on tax free securities, and that most costs will escalate at rates in the 5.6-7.3% range. In Order Instituting Investigation (OII) 86 Edison assumed after-tax returns of 5% on nuclear funds, and used 6.3-7.4% escalation rates for most costs. For Humboldt 3 PG&E uses a 7% fund return and somewhat higher escalation rates.

20. The disparities between escalation rates and fund returns are not huge, but over 30 years the ratepayer effects are significant. For Humboldt 3 the requested revenue requirement is \$26.9 million per year. To collect the necessary \$58 million (in 1986 dollars) over the next four years, without consideration of 30 years of escalation and de-escalation, approximately \$22.9 million per year would be required. The difference of \$4 million per year may be entirely subsumed by cost estimate contingency factors and forecasting inaccuracy, but it is worth revisiting in subsequent decommissioning studies. Comparison of recorded, not forecast, escalation rates and fund returns should be made in future studies. It is possible that even after the four year rate amortization period is completed, but prior to commencement of work at the plant, additional rates or refunds may be in order.

21. No protests to Advice Letter No. 1152-E were received.

THEREFORE:

1. The Pacific Gas and Electric Company (PG&E) revised electricity tariff sheets included as Attachment I to Advice Letter No. 1152-E are approved, effective July 1, 1987. The decommissioning rate increases shown therein shall be collected subject to refund, pending further Commission review of an anticipated new decommissioning study for Humboldt Bay Power Plant, Unit 3 (Humboldt 3).
2. PG&E shall file, by advice letter or application, revised rates for recovery of decommissioning costs at Humboldt 3, following completion of the anticipated new decommissioning study.
3. The schedule of ruling amounts shown in Attachment C to this Resolution is approved.
4. PG&E shall file testimony on decommissioning costs and fund revenues for Humboldt 3 in its next general rate case.
5. This order is effective today.

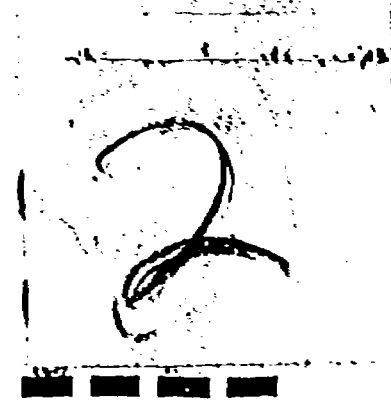
I certify that this Resolution was adopted by the Public Utilities Commission at its regular meeting on June 15, 1987. The following Commissioners approved it:



Executive Director

STANLEY W. HULETT
President
FREDERICK R. DUDA
G. MITCHELL WILK
JOHN B. CHANIAN
Commissioners

Commissioner Donald Vial, being necessarily absent, did not participate.

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IMAGE QUALITY



ADDRESS ALL COMMUNICATIONS
TO THE COMMISSION
CALIFORNIA STATE BUILDING
SAN FRANCISCO, CALIFORNIA 94102
TELEPHONE (415) 895-9102

Public Utilities Commission
STATE OF CALIFORNIA

April 14, 1987

FILE NO. A.83-09-49

Mr. Louis E. Vincent
Attorney at Law
Pacific Gas and Electric Company
77 Beale Street
San Francisco, CA 94106

APR 14 1987
10964
ACTING LEV
C. J. J.

Re: HUMBOLDT BAY POWER PLANT UNIT 3 DECOMMISSIONING

Dear Mr. Vincent:

In Decision (D.)85-12-022 Pacific Gas and Electric Company (PG&E) was ordered to submit to the Evaluation and Compliance Division an estimate of the Humboldt Unit 3 decommissioning costs attributable to imprudently constructed plant. D.85-12-022 specified a four year period to recover the costs in rates.

In compliance with that order PG&E filed on December 19, 1986 a letter from you to me in which you stated that the adopted decommissioning cost estimate was made (by Nuclear Energy Services, Inc.) without consideration of seismic modifications made after 1976. Because the imprudently constructed plant is associated solely with post-1976 construction, the \$58 million decommissioning estimate adopted in D.85-12-022 need not be adjusted to exclude decommissioning of imprudent plant.

However, Mr. Bruce Smith of PG&E's Rates Department has informed my staff that PG&E anticipates conducting a new decommissioning study for Humboldt Unit 3 that will specifically address decommissioning costs of both prudently constructed and imprudently constructed plant.

With these facts in mind I approve PG&E's estimate of \$58 million in 1986 dollars for decommissioning of the prudently incurred costs of Humboldt Unit 3. PG&E may file by Advice Letter tariffs reflecting that amount to be recovered in rates, with the following conditions:

1. PG&E shall allow 40 days for processing time for the Advice Letter filing.
2. The calculations of revenue requirement shown in your December 19, 1986 letter shall be updated to include a July 1, 1987 effective date for rates, and values for electric

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Jurisdictional factor and franchise fee and uncollectible factors adopted in D.86-12-095 in PG&E's Test Year 1987 General Rate Case, Application 85-12-050.

3. PG&E shall attach to the Advice Letter work papers which will provide necessary information for the Internal Revenue Service regarding the assumptions used to calculate the rate change.
4. The rates requested by the Advice Letter should be subject to refund pending further Commission review of the anticipated new decommissioning study.
5. The Advice Letter filing shall include statements of the scope and scheduled completion date of the new decommissioning study, as well as the anticipated date for PG&E's filing of revised decommissioning rates.

If you have questions regarding the Advice Letter filing requirements, please contact me or Mr. James Weil at (415) 557-9102.

Sincerely,


Bruno A. Davis, Director
Evaluation and Compliance Division

cc: James Weil
Commissioner Vial
ALJ Wu
Bob Cagen
Bruce Smith, PG&E
all parties to A.83-09-49

TABLE 1

PACIFIC GAS AND ELECTRIC COMPANY
HUMBOLDT BAY POWER PLANT, UNIT 3
CPUC JURISDICTIONAL REVENUE REQUIREMENTS
(IN 000'S)

	1987	1988	1989	1990	1991
	-----	-----	-----	-----	-----
Qualifying Amount - Note 1	\$ 5,144	\$ 10,287	\$ 10,287	\$ 10,287	\$ 5,144
Non-qualifying Amount	5,144	10,289	10,289	10,289	5,144
Income Taxes	4,340	6,956	6,956	6,956	3,478
	-----	-----	-----	-----	-----
Annual Accrual	14,628	27,532	27,532	27,532	13,766
CPUC Jurisdictional Factor - Note 2	.96927	.96927	.96927	.96927	.96927
Qualifying Amount	4,986	9,971	9,971	9,971	4,986
Non-qualifying Amount	4,986	9,972	9,972	9,972	4,986
Income Taxes	4,207	6,742	6,742	6,742	3,371
	-----	-----	-----	-----	-----
Annuity for CPUC	14,179	26,686	26,686	26,686	13,343
Franchise and Uncollectibles - Note 2					
Qualifying Amount	39	78	78	78	39
Non-Qualifying Amount	72	131	131	131	65
	-----	-----	-----	-----	-----
	111	208	208	208	104
CPUC Revenue Requirements	\$ 14,289	\$ 26,894	\$ 26,894	\$ 26,894	\$ 13,447
	=====	=====	=====	=====	=====
Federal Tax Rate	40.0%	34.0%	34.0%	34.0%	34.0%
State Tax Rate	9.6%	9.6%	9.6%	9.6%	9.6%
Net to Gross Multiplier	1.844	1.676	1.676	1.676	1.676

Note 1: Schedule of IRS Ruling Amounts

Note 2: PGandE and CPUC Staff Proposal
Decision Analysis
PGandE 1987 General Rate Case
Application No. 85-12-50



ATTACHMENT 1

March 26, 1986
P01-25A-GC-01

Ms. Kathleen Balmes
Revenue Requirements Department
Room 1053
Pacific Gas & Electric Company
77 Beale Street
San Francisco, CA 94106

Subject: Decommissioning Study for Humboldt Bay Unit 3

Reference: Telecon between K. Balmes and T. LaGuardia, 3/25/86

Dear Kathys:

I discussed our phone conversation of yesterday with my engineering staff regarding whether we included the cost of removal of seismic modifications in the subject study we prepared while at Nuclear Energy Services, Inc. It was not our practice at that time (March, 1982) to include such minor details as pipe hangers and seismic restraints in our cost estimates. This material is generally noncontaminated and the associated cost of removal insignificant for a plant as small as Humboldt Bay Unit 3.

The advent of micro-computer technology to cost estimating has since made it possible to easily include such details in subsequent decommissioning cost estimates. Virtually all our studies made after 1982-1983 include an estimate for pipe hangers and major seismic supports.

If I can be of any further help to you, please call me.

Sincerely,

Thomas S. LaGuardia
Thomas S. LaGuardia, PE
President

TSL:kh

PACIFIC GAS AND ELECTRIC COMPANY
HUMBOLDT BAY POWER PLANT, UNIT 3

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PACIFIC GAS AND ELECTRIC COMPANY
DECOMMISSIONING COST RECOVERY ASSUMPTIONS
HUMBOLDT BAY POWER PLANT, UNIT 3

1. The cost to decommission Unit 3 is based on an estimate of \$42.0 million in 1981 dollars. Decision 85-12-022 authorized the current estimate of \$58.0 million in 1986 dollars to decommission the Unit.
2. A four year decommissioning period starting in year 2015 and ending in year 2018. This schedule is based on a study prepared by Gibbs and Hill, Inc., and Nuclear Energy Service, Inc.
3. Revenue requirements will be collected over a four year period beginning on July 1, 1987.
4. The qualifying and non-qualifying trust fund will earn an after-tax return of 7% per annum on investments.
5. The escalation rates used to determine the estimated future cost of decommissioning are those file by PGandE in the Humboldt proceedings (see page 2 of Attachment 2).
6. The federal tax rate is assumed to be 40% in 1987 and 34% from 1988-2018.

PACIFIC GAS AND ELECTRIC COMPANY
HUMBOLDT BAY POWER PLANT, UNIT 3
ESCALATION RATES

<u>Year</u>	<u>Labor Percent(%)</u>	<u>Material Percent(%)</u>	<u>Other Percent(%)</u>
1986	5.6	2.4	3.2
1987	6.7	5.5	5.6
1988	7.1	5.9	6.1
1989	7.5	6.1	6.3
1990	7.8	6.4	6.6
1991	8.1	6.6	6.7
1992	8.3	6.5	6.7
1993	8.4	6.5	6.8
1994	8.4	6.3	6.6
1995	8.4	6.1	6.6
1996	8.3	6.0	6.5
1997	8.2	5.8	6.3
1998	8.1	5.6	6.2
1999	7.9	5.5	6.1
2000	7.8	5.3	5.9
2001	7.6	5.1	5.8
2002	7.5	5.1	5.8
2003	7.4	5.1	5.7
2004	7.3	5.0	5.7
2005	7.3	5.0	5.7
2006	7.3	5.0	5.7
2007	7.3	5.0	5.7
2008	7.3	5.0	5.7
2009	7.3	5.0	5.7
2010	7.3	5.0	5.7
2011	7.3	5.0	5.7
2012	7.3	5.0	5.7
2013	7.3	5.0	5.7
2014	7.3	5.0	5.7
2015	7.3	5.0	5.7
2016	7.3	5.0	5.7
2017	7.3	5.0	5.7
2018	7.3	5.0	5.7
2019	7.3	5.0	5.7
2020	7.3	5.0	5.7

PACIFIC GAS AND ELECTRIC COMPANY
GLOSSARY OF VARIABLE NAMES AND TIMELINE
USED IN WORKPAPERS

- DCEST Decommissioning cost in 1985 (year 0) year dollars.
- DC Decommissioning cost in current year dollars reduced by each year's decommissioning expenditure (years 30 through 33 only) in current year dollars.
- RESSPEND Each year's decommissioning cost in current year dollars.
- NEED Each year's decommissioning cost expressed in final-year-of-life dollars ("ultimate year dollars").
- NEEDSUM Cumulative NEED.

TIMELINE FOR WORKPAPERS:

<u>Year</u>	<u>Calendar Equivalent</u>	<u>Year</u>	<u>Calendar Equivalent</u>
0	1985	17	2002
1	1986	18	2003
2	1987	19	2004
3	1988	20	2005
4	1989	21	2006
5	1990	22	2007
6	1991	23	2008
7	1992	24	2009
8	1993	25	2010
9	1994	26	2011
10	1995	27	2012
11	1996	28	2013
12	1997	29	2014
13	1998	30	2015
14	1999	31	2016
15	2000	32	2017
16	2001	33	2018

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DOCUMENTS

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RESPONSIBILITY FOR THE

IMAGE QUALITY

REVENUE ANALYSIS FOR MEMPHIS DECOMMISSIONING
 QUALIFIED PORTION
 THOUSANDS OF CURRENT DOLLARS

INTERNAL SINKING FUND
 EVENTS NOT TAXED
 .0% INTEREST RATE ON FUND

YEAR	TOTAL ANNUITY	TOTAL INTEREST	TOTAL BALANCE	ANNUITY FOR FUND	INT. ON FUND BAL.	FUND BALANCE	ANNUITY FOR TAX	INT. ON TAX BAL.	TAX BALANCE	INC. TAX ON FUND INT.	REMOVAL COST	COST PAID BY FUND	INC. TAX ON TOT. ANNUITY	INCOME TAX	REVENUE REQD.	YEAR
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2	5144	0	5144	5144	0	5144	0	0	0	0	0	0	0	0	5144	2
3	10287	360	15791	10287	360	15791	0	0	0	0	0	0	0	0	10287	3
4	10287	1105	27104	10287	1105	27104	0	0	0	0	0	0	0	0	10287	4
5	10287	1903	39374	10287	1903	39374	0	0	0	0	0	0	0	0	10287	5
6	5144	2756	47276	5144	2756	47276	0	0	0	0	0	0	0	0	5144	6
7	0	3309	50584	0	3309	50584	0	0	0	0	0	0	0	0	0	7
8	0	3341	54125	0	3341	54125	0	0	0	0	0	0	0	0	0	8
9	0	3789	57913	0	3789	57913	0	0	0	0	0	0	0	0	0	9
10	0	4054	61947	0	4054	61947	0	0	0	0	0	0	0	0	0	10
11	0	4338	66305	0	4338	66305	0	0	0	0	0	0	0	0	0	11
12	0	4641	70946	0	4641	70946	0	0	0	0	0	0	0	0	0	12
13	0	4966	75912	0	4966	75912	0	0	0	0	0	0	0	0	0	13
14	0	5314	81216	0	5314	81216	0	0	0	0	0	0	0	0	0	14
15	0	5686	86912	0	5686	86912	0	0	0	0	0	0	0	0	0	15
16	0	6084	92996	0	6084	92996	0	0	0	0	0	0	0	0	0	16
17	0	6510	99506	0	6510	99506	0	0	0	0	0	0	0	0	0	17
18	0	6965	106471	0	6965	106471	0	0	0	0	0	0	0	0	0	18
19	0	7453	113924	0	7453	113924	0	0	0	0	0	0	0	0	0	19
20	0	7975	121899	0	7975	121899	0	0	0	0	0	0	0	0	0	20
21	0	8533	130432	0	8533	130432	0	0	0	0	0	0	0	0	0	21
22	0	9130	139542	0	9130	139542	0	0	0	0	0	0	0	0	0	22
23	0	9769	149331	0	9769	149331	0	0	0	0	0	0	0	0	0	23
24	0	10453	159785	0	10453	159785	0	0	0	0	0	0	0	0	0	24
25	0	11185	170949	0	11185	170949	0	0	0	0	0	0	0	0	0	25
26	0	11968	182937	0	11968	182937	0	0	0	0	0	0	0	0	0	26
27	0	12804	195743	0	12804	195743	0	0	0	0	0	0	0	0	0	27
28	0	13702	209443	0	13702	209443	0	0	0	0	0	0	0	0	0	28
29	0	14661	224106	0	14661	224106	0	0	0	0	0	0	0	0	0	29
TOTAL	41149	182955	2856994	41149	182955	2856994	0	0	0	0	0	0	0	0	41149	30
0	0	15687	144478	0	15687	144478	0	0	0	0	93316	93316	0	0	0	31
1	0	10113	85042	0	10113	85042	0	0	0	0	69550	69550	0	0	0	32
2	0	5953	16914	0	5953	16914	0	0	0	0	24080	24080	0	0	0	33
3	0	1184	0	0	1184	0	0	0	0	0	18098	18098	0	0	0	34
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35
TOTAL	41149	215893	3103427	41149	215893	3103427	0	0	0	0	257044	257044	0	0	41149	36

Resolution E-3041
 Attachment B
 Page 7

Cost for Qualitying Amount
Page 2 of 2.

REVENUE ANALYSIS FOR NUCLEAR POWER PLANT DECOMMISSIONING
CURRENT DOLLARS

EXTERNAL SINKING FUND										
YEAR	DEBT	DC	NESSPEND	NEED	NEEDSUM	NESSPEND	NEED	NEEDSUM	RES	RESESC
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	27499	28998	0	0	0	0	0	0	0	0
2	0	30775	0	0	0	0	0	0	0	0
3	0	33104	0	0	0	0	0	0	0	0
4	0	35556	0	0	0	0	0	0	0	0
5	0	38319	0	0	0	0	0	0	0	0
6	0	41399	0	0	0	0	0	0	0	0
7	0	44902	0	0	0	0	0	0	0	0
8	0	48679	0	0	0	0	0	0	0	0
9	0	52569	0	0	0	0	0	0	0	0
10	0	56930	0	0	0	0	0	0	0	0
11	0	61603	0	0	0	0	0	0	0	0
12	0	66597	0	0	0	0	0	0	0	0
13	0	71929	0	0	0	0	0	0	0	0
14	0	77517	0	0	0	0	0	0	0	0
15	0	83575	0	0	0	0	0	0	0	0
16	0	89800	0	0	0	0	0	0	0	0
17	0	96460	0	0	0	0	0	0	0	0
18	0	103523	0	0	0	0	0	0	0	0
19	0	111001	0	0	0	0	0	0	0	0
20	0	119022	0	0	0	0	0	0	0	0
21	0	127623	0	0	0	0	0	0	0	0
22	0	136849	0	0	0	0	0	0	0	0
23	0	146743	0	0	0	0	0	0	0	0
24	0	157354	0	0	0	0	0	0	0	0
25	0	168735	0	0	0	0	0	0	0	0
26	0	180942	0	0	0	0	0	0	0	0
27	0	194034	0	0	0	0	0	0	0	0
28	0	208076	0	0	0	0	0	0	0	0
29	0	223136	0	0	0	0	0	0	0	0
TOTAL	27499	2835633	0	0	0	0	0	0	0	0
30	10872	239290	95316	89080	89080	95316	89080	89080	0	0
31	7466	154384	69550	60747	149827	69550	60747	149827	0	0
32	7417	50765	74090	60472	210299	74090	60472	210299	0	0
33	1724	18078	18078	13807	224106	13807	13807	224106	0	0
34	0	0	0	0	0	0	0	0	0	0
TOTAL	54998	3338369	257044	224106	673313	257044	224106	673313	0	0

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REVENUE ANALYSIS FOR MORTGAGE MATURITIES COMMISSIONING
 NON-QUALIFYING SECTION
 THOUSANDS OF CURRENT DOLLARS

FEDERAL SINKING FUND
 ON COST RECOVERY BASIS
 ON INTEREST RATE ON FUND

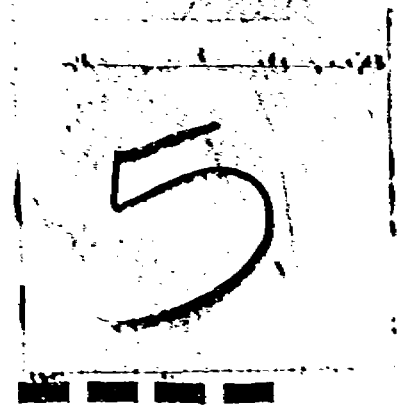
YEAR	TOTAL AMORTY	TOTAL INTEREST	TOTAL BALANCE	AMORTY FOR FUND	INT. ON FUND BAL.	FUND BALANCE	AMORTY FOR TAX	INT. ON TAX BAL.	TAX BALANCE	INC. TAX ON FUND INT.	REVENUE COST	COST PAID BY FUND	INC. TAX ON TOT. AMORTY	INCOME TAX	REVENUE DEPT.	YEAR
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(18)
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2	5144	0	5144	5144	0	5144	0	0	0	0	0	0	0	0	0	2
3	10289	360	13793	10289	360	13793	0	0	0	0	0	0	6340	4340	4884	3
4	10289	1106	27100	10289	1106	27100	0	0	0	0	0	0	6956	6956	17245	4
5	10289	1903	39390	10289	1903	39390	0	0	0	0	0	0	6956	6956	17245	5
6	5144	2737	47200	5144	2737	47200	0	0	0	0	0	0	3478	3478	8622	6
7	0	3310	50590	0	3310	50590	0	0	0	0	0	0	0	0	0	7
8	0	3542	54131	0	3542	54131	0	0	0	0	0	0	0	0	0	8
9	0	3789	57920	0	3789	57920	0	0	0	0	0	0	0	0	0	9
10	0	4054	61975	0	4054	61975	0	0	0	0	0	0	0	0	0	10
11	0	4338	66313	0	4338	66313	0	0	0	0	0	0	0	0	0	11
12	0	4642	70955	0	4642	70955	0	0	0	0	0	0	0	0	0	12
13	0	4967	75921	0	4967	75921	0	0	0	0	0	0	0	0	0	13
14	0	5315	81236	0	5315	81236	0	0	0	0	0	0	0	0	0	14
15	0	5687	86922	0	5687	86922	0	0	0	0	0	0	0	0	0	15
16	0	6085	93007	0	6085	93007	0	0	0	0	0	0	0	0	0	16
17	0	6510	99510	0	6510	99510	0	0	0	0	0	0	0	0	0	17
18	0	6966	106484	0	6966	106484	0	0	0	0	0	0	0	0	0	18
19	0	7454	113938	0	7454	113938	0	0	0	0	0	0	0	0	0	19
20	0	7974	121913	0	7974	121913	0	0	0	0	0	0	0	0	0	20
21	0	8534	130447	0	8534	130447	0	0	0	0	0	0	0	0	0	21
22	0	9131	139579	0	9131	139579	0	0	0	0	0	0	0	0	0	22
23	0	9770	149349	0	9770	149349	0	0	0	0	0	0	0	0	0	23
24	0	10454	159803	0	10454	159803	0	0	0	0	0	0	0	0	0	24
25	0	11186	170990	0	11186	170990	0	0	0	0	0	0	0	0	0	25
26	0	11969	182959	0	11969	182959	0	0	0	0	0	0	0	0	0	26
27	0	12807	195766	0	12807	195766	0	0	0	0	0	0	0	0	0	27
28	0	13704	209470	0	13704	209470	0	0	0	0	0	0	0	0	0	28
29	0	14663	224133	0	14663	224133	0	0	0	0	0	0	0	0	0	29
TOTAL	41155	102970	2857333	41155	102970	2857333	0	0	0	0	0	0	28606	20606	49841	435
	0	15689	144501	0	15689	144501	0	0	0	0	0	0	0	0	0	
	0	10113	85062	0	10113	85062	0	0	0	0	95321	95321	0	(64442)	(64442)	30
	0	5954	14919	0	5954	14919	0	0	0	0	69555	69555	0	(47023)	(47023)	31
	0	1184	0	0	1184	0	0	0	0	0	74097	74097	0	(50093)	(50093)	32
	0	0	0	0	0	0	0	0	0	0	18103	18103	0	(12239)	(12239)	33
AL	41155	215921	3103815	41155	215921	3103815	0	0	0	0	257076	257076	28606	(14541)	(101954)	541

Cost for Non-Qualifying
Amount, Page 3 of 3.

REVENUE ANALYSIS FOR NUCLEAR POWER PLANT DECOMMISSIONING
(CURRENT DOLLARS)

EXTERNAL SINKING FUND										
YEAR	DCST	DC	RESSPEND	NEED	NEEDSUM	RESSPEND	NEED	NEEDSUM	RES	RESESC
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	27503	29002	0	0	0	0	0	0	0	0
	0	37930	0	0	0	0	0	0	0	0
	0	23109	0	0	0	0	0	0	0	0
	0	25572	0	0	0	0	0	0	0	0
	0	38324	0	0	0	0	0	0	0	0
	0	41403	0	0	0	0	0	0	0	0
	0	44908	0	0	0	0	0	0	0	0
	0	48536	0	0	0	0	0	0	0	0
	0	52571	0	0	0	0	0	0	0	0
	0	56928	0	0	0	0	0	0	0	0
	0	61612	0	0	0	0	0	0	0	0
	0	66606	0	0	0	0	0	0	0	0
	0	71928	0	0	0	0	0	0	0	0
	0	77557	0	0	0	0	0	0	0	0
	0	83536	0	0	0	0	0	0	0	0
	0	89811	0	0	0	0	0	0	0	0
	0	96472	0	0	0	0	0	0	0	0
	0	103536	0	0	0	0	0	0	0	0
	0	111015	0	0	0	0	0	0	0	0
	0	119037	0	0	0	0	0	0	0	0
	0	127639	0	0	0	0	0	0	0	0
	0	136848	0	0	0	0	0	0	0	0
	0	146761	0	0	0	0	0	0	0	0
	0	157373	0	0	0	0	0	0	0	0
	0	169756	0	0	0	0	0	0	0	0
	0	180984	0	0	0	0	0	0	0	0
	0	194057	0	0	0	0	0	0	0	0
	0	208100	0	0	0	0	0	0	0	0
	0	223163	0	0	0	0	0	0	0	0
TOTAL	27503	2835992	0	0	0	0	0	0	0	0
30	10973	239318	95321	89085	89085	51702	48120	48120	0	0
31	7467	154409	69555	60752	149836	37726	32952	81271	0	0
32	7419	90986	74097	60485	210322	40190	32607	111078	0	0
33	1724	18103	18103	13811	224133	9819	7491	121570	0	0
34	0	0	0	0	0	0	0	0	0	0
TOTAL	55006	3336808	257076	224133	673375	139438	121570	365239	0	0

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Depreciated (non-qualifying) percent = $100 \times \frac{21,986,984}{21,986,984} = 50\%$
Qualifying percent = $1 - \text{non-qualifying} \% = 50\%$

NETS	12/31/13	12/31/14	12/31/15	12/31/16	12/31/17	12/31/18	12/31/19	12/31/20	12/31/21	12/31/22	12/31/23	12/31/24	12/31/25	12/31/26	12/31/27	12/31/28	12/31/29	12/31/30
NETS	277,031	277,031	277,031	277,031	277,031	277,031	277,031	277,031	277,031	277,031	277,031	277,031	277,031	277,031	277,031	277,031	277,031	277,031
NETS	8,279,427	8,279,427	8,279,427	8,279,427	8,279,427	8,279,427	8,279,427	8,279,427	8,279,427	8,279,427	8,279,427	8,279,427	8,279,427	8,279,427	8,279,427	8,279,427	8,279,427	8,279,427
NETS	542,598	542,598	542,598	542,598	542,598	542,598	542,598	542,598	542,598	542,598	542,598	542,598	542,598	542,598	542,598	542,598	542,598	542,598
NETS	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000
NETS	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000
NETS	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000
NETS	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000	291,000,000

TABLE 1

PACIFIC GAS AND ELECTRIC COMPANY
HUMBOLDT BAY POWER PLANT, UNIT 3
CPUC JURISDICTIONAL REVENUE REQUIREMENTS
(IN 000'S)

	1987	1988	1989	1990	1991
	-----	-----	-----	-----	-----
Qualifying Amount - Note 1	\$ 5,144	\$ 10,287	\$ 10,287	\$ 10,287	\$ 5,144
Non-qualifying Amount	5,144	10,289	10,289	10,289	5,144
Income Taxes	4,340	6,956	6,956	6,956	3,478
	-----	-----	-----	-----	-----
Annual Accrual	14,628	27,532	27,532	27,532	13,766
CPUC Jurisdictional Factor - Note 2	.96927	.96927	.96927	.96927	.96927
Qualifying Amount	4,986	9,971	9,971	9,971	4,986
Non-qualifying Amount	4,986	9,972	9,972	9,972	4,986
Income Taxes	4,207	6,742	6,742	6,742	3,371
	-----	-----	-----	-----	-----
Annuity for CPUC	14,179	26,686	26,686	26,686	13,343
Franchise and Uncollectibles - Note 2					
Qualifying Amount	39	78	78	78	39
Non-Qualifying Amount	72	131	131	131	65
	-----	-----	-----	-----	-----
	111	208	208	208	104
CPUC Revenue Requirements	\$ 14,289	\$ 26,894	\$ 26,894	\$ 26,894	\$ 13,447
	=====	=====	=====	=====	=====
Federal Tax Rate	40.0%	34.0%	34.0%	34.0%	34.0%
State Tax Rate	9.6%	9.6%	9.6%	9.6%	9.6%
Net to Gross Multiplier	1.844	1.676	1.676	1.676	1.676

Note 1: Schedule of IRS Ruling Amounts

Note 2: PGandE and CPUC Staff Proposal
Decision Analysis
PGandE 1987 General Rate Case
Application No. 85-12-50

Humboldt Bay Power Plant, Unit 3
Proposed Tax Qualifying Portion
(000's)

Total Department Unless Otherwise Stated (Note 1)

<u>Line</u>	<u>Type of Assumption</u>	<u>PGandE Assumption (Note (2))</u>
1	Proposed method of decommissioning	Safe storage mothballing/ delayed dismantlement
2	Year in which substantial decommissioning costs will first be incurred	Year 30 or 2015
3	Year in which decommissioning will be substantially complete	Year 33 or 2018
4	Total costs of decommissioning (\$ 1986)	\$28,998
5	Total costs of decommissioning (\$ future nominal)	\$257,044
6	For each year between 2 and 3, above, the annual cost of decommissioning (\$ future nominal)	2015 - \$95,316 2016 - \$69,550 2017 - \$74,080 2018 - \$18,098
7	Methodology used to convert current dollars to future dollars	Escalation rates (see Attachment VII, Attachment 2, pps. 1, 2)
8	After-tax rate of return	7 percent
9	Period over which decommissioning costs will be included in cost of service (Note 3)	Calendar year 1987 through 1991
10	For each year in 9, above, projected amount to be included in cost of service (CPUC jurisdictional portion, Notes 1, 4)	1987 - \$ 5,025 1988 - \$10,049 1989 - \$10,049 1990 - \$10,049 1991 - \$ 5,025
11	Date on which the plant will no longer be included in rate base (Note 5)	1980

Note 1 - CPUC jurisdictional share is estimated to be 96.927 percent of Total Department (see Attachment IX, page 1)

Note 2 - PGandE Assumptions 1 through 10 are based on assumptions and estimates in Application 83-09-49, Exhibit 89, Additional Testimony of Junona J. Klein, updated for the collection period commencing July 1, 1987 and on Decision 85-12-022

Note 3 - Date of inclusion in cost of service: July 1, 1987

Note 4 - Includes franchise fee and uncollectible account expense (see Attachment IX, page 1)

Note 5 - In CPUC Decision No. 91107 (page 33), dated December 19, 1979, this Commission ordered PGandE to exclude Humboldt from PGandE's rate base and record all capital costs associated with the facility in a memorandum account. On June 27, 1983, PGandE retired the plant.

Humboldt Bay Power Plant, Unit 3
Proposed Tax Non-Qualifying Portion
(000's)

Total Department Unless Otherwise Stated (Note 1)

<u>Line</u>	<u>Type of Assumption</u>	<u>PGandE Assumption (Note 2)</u>
1	Proposed method of decommissioning	Safe storage mothballing/ delayed dismantlement
2	Year in which substantial decommissioning costs will first be incurred	Year 30 or 2015
3	Year in which decommissioning will be substantially complete	Year 33 or 2018
4	Total costs of decommissioning (\$ 1986)	\$29,002
5	Total costs of decommissioning (\$ future nominal)	\$257,076
6	For each year between 2 and 3, above, the annual cost of decommissioning (\$ future nominal)	2015 - \$95,321 2016 - \$69,555 2017 - \$74,097 2018 - \$18,103
	Methodology used to convert current dollars to future dollars	Escalation rates (see Attachment VII, Attachment 2, pps. 1, 2)
8	After-tax rate of return	7 percent
9	Period over which decommissioning costs will be included in cost of service (Note 3)	Calendar year 1987 through 1991
10	For each year in 9, above, projected amount to be included in cost of service (CPUC jurisdictional portion, Notes 1, 4)	1987 - \$ 9,264 1988 - \$16,765 1989 - \$16,755 1990 - \$16,765 1991 - \$ 8,422
11	Date on which the plant will no longer be included in rate base (Note 5)	1980

- Note 1 - CPUC jurisdictional share is estimated to be 96.927 percent of Total Department (see Attachment IX, page 1)
- Note 2 - PGandE Assumptions 1 through 10 are based on assumptions and estimates in Application 83-09-49, Exhibit 89, Additional Testimony of Junona J. Klein, updated for the collection period commencing July 1, 1987 and on Decision 85-12-022
- Note 3 - Date of inclusion in cost of service: July 1, 1987
- Note 4 - Includes franchise fee, uncollectibles, and income taxes (see Attachment IX, page 1). Federal income tax rate is assumed to be 40 percent in 1987 and 34 percent from 1988-2018
- Note 5 - In CPUC Decision No. 91107 (page 33), dated December 19, 1979, this Commission ordered PGandE to exclude Humboldt from PGandE's rate base and record all capital costs associated with the facility in a memorandum account. On June 27, 1983, PGandE retired the plant.

The scope of the new Humboldt Bay Power Plant, Unit 3 Decommissioning Cost Study will include the following:

1. Cost estimation for the SAFSTOR decommissioning alternative.
2. Revisions to estimated yearly decommissioning expenditures of previous Humboldt decommissioning study.
3. Classification of expenditures as nuclear or non-nuclear (radioactive or non-radioactive).
4. Breakdown of all costs by labor, material and other.
5. Separate estimates for the post-1976 plant which the Commission found to be imprudent in Decision 85-12-022.

A draft of the new study is to be submitted to PGandE by October 15, 1987, with the final report due December 1, 1987.