ORIGINAL

Decision No. 91721 APR 29 1980

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of PACIFIC GAS AND ELECTRIC COMPANY for authority to increase its electric rates and charges effective April 1, 1980 in accordance with the Energy Cost Adjustment Clause as modified by Interim Decision No. 91277. (Electric)	Application No. 59463 (Filed February 20, 1980)

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Michel Peter Florio, Attorney at Law, for Toward Utility Rate Normalization, and William B. Hancock, for himself, protestants.
Graham & James, by Boris H. Lakusta, David J. Marchant, and Thomas J. MacBride, Jr., Attorneys at Law, for Western Mobilehome Association and California Hotel and Motel Association; William L. Reed, Jeffrey Lee Guttero, and Steven A. Edwards, Attorneys at Law, for San Diego Gas & Electric Company; Richard L. Jensen, for Southern California Edison Company; Harry K. Winters, for University of California; Downey, Brand, Seymour, & Rohwer, by Philip A. Stohr, Attorney at Law, for General Motors Corporation, Otis M. Smith, General Counsel, and Julius Jay Hollis, Attorney at Law; Chickering and Gregory, by C. Hayden Ames and Edward P. Nelsen, Attorneys at Law, for Stanford University; and Robert Laughead, for City and County of San Francisco; interested parties.
Thomas F. Grant, Attorney at Law, and Ray Charvez, for the Commission staff.

O P I N I O N

Summary

Pacific Gas and Electric Company (PG&E) initially sought authority to increase its electric revenues by an estimated $808 million annually ($523 million semiannually) as a dollar-for-dollar offset of energy-related expenses for the forecast period beginning April 1, 1980. In lieu of the sought relief, PG&E is authorized an energy-related cost offset increase in its electric revenues of approximately $774 million annually ($489 million semiannually). This reduction of some $34 million reflects a lower authorized price for the interdepartmental purchase of natural gas to generate steam electric power.

All of PG&E's customer classes (residential, commercial, and industrial) receive the same uniform increase of 1.339¢/kWh. For the residential class, however, a new three-tier conservation oriented rate spread has been established. Under this basis for electric charges the residential customer who holds his usage to the basic lifeline quantity of 240 kWh per month will experience an increase of $1.61 (16.4 percent) in monthly billings; domestic customers whose monthly usage is double the basic lifeline quantity (480 kWh) would incur an increase in monthly billings of about $3.82 (16.6 percent); and domestic customers using in excess of 1,000 kWh will experience a monthly increase of $21.24 (41 percent) or more.

The establishment of a third residential rate tier means less of the authorized increase is placed on the customers who use energy efficiently and practice conservation. Those who experience the greatest increase are customers who use large quantities of electricity either because they have not taken

measures to reduce consumption or they have yet to receive a price signal of sufficient magnitude to cause an awareness of the rewards for keeping their monthly usage as close as possible or within the lower priced usage tiers. We have adopted a residential rate spread intended to place less increase on the lifeline or essential usage quantities and more on those who are large consumers. Compared to the like rate spread proposed by PG&E, which we followed in the last Energy Cost Adjustment Clause (ECAC) rate increase, establishment of this new residential rate tier for large users shifts about $48.6 million away from the lifeline quantity that would have otherwise been placed on small and prudent energy users.

It is quite possible that the large users of energy for domestic purposes are consuming considerable amounts of electricity during PG&E's peak demand periods and, accordingly, their usage contributes to the need for new high cost generating capacity. In both the short and long run, the extent to which rate designs can reward conservation and reduce peak demand on PG&E's system benefit all customers; expensive capital outlay for new generating capacity can be reduced or deferred with rate savings for all.

It is anticipated that as PG&E's current substantial undercollections of energy-related costs are materially reduced over the effective period of the rates authorized herein, an appropriate downward adjustment in rates will ensue. In this connection the utility's next energy cost adjustment in rates is scheduled for an August 1, 1980 revision date.

Introduction

PG&E requests authority to increase, effective April 1, 1980, the ECAC billing factors set forth in its electric tariff as modified by interim Decision No. 91277, dated January 29, 1980 in OII No. 56. The rate proposal would increase PG&E's electric revenues by 28.9 percent or by an estimated $808 million annually. The sought relief is designed to (1) directly offset the utility's

estimated fuel-related expenses, as calculated under established ECAC tariff procedures, for a 12-month forecast period beginning with April 1, 1980, and (2) amortize over the first six months of the forecast period the $285 million in undercollected fuel-related expenses which have accrued in the utility's ECAC balancing account as of April 1, 1980.

This matter was assigned to Commissioner Grimes and referred to Administrative Law Judge Gagnon for hearing. Duly noticed public hearings were held in San Francisco on April 7, 8, and 9, 1980. On the latter date the proceeding was submitted subject to the receipt of late-filed staff Exhibit No. 6 which was filed April 11, 1980. Direct evidence relative to the sought ECAC tariff adjustment was introduced by both PG&E and the Commission staff. Participation by two protestants and several interested parties through cross-examination and closing argument was designed to establish their position relative to the sought relief.

ECAC Billing Factors

PG&E's ECAC billing factors were last adjusted to reflect increased energy costs incurred during a 12-month record period ending September 30, 1979 by Decision No. 91335, dated February 13, 1980 in Application No. 59248. By Decision No. 91277, supra, the established ECAC procedures were revised significantly in an effort to provide more timely relief for the utilities (or ratepayers) and to avoid cash-flow constraints associated with large undercollections of escalating energy costs. The revised ECAC procedures, as implemented by PG&E, include the following pertinent changes:

(1) ECAC filings are permitted to be made three times per year, covering periods of no more than four months between revision dates, in lieu of semi-annual filings.

(2) Each utility is allowed to file its ECAC application based on estimated balancing account balances, and a forecasted resource mix and sales estimate.

(3) Fuel prices and balancing account balances are to be estimated as of a given revision date; forecasted resource mix should be the mix that is the basis of the company's procurement strategy. The price estimates are to be examined on the record. The resource mix will be adopted as filed in order to avoid the Commission's prejudging the prudency of the utility's fuel procurement strategy.

(4) Issues relating to reasonableness of ECAC recovery of particular expenses are to be deferred to at least the following ECAC filing.

(5) For purposes of interim Decision No. 91277, supra, each utility is permitted to select a specific amortization period.

(6) PG&E's present revision date is April 1, 1980.

(7) PG&E's ECAC application was filed at least 40 days prior to its tariff revision date.

The ECAC billing factors which PG&E now proposes to increase are comprised of two rate components. An offset rate component is first established to recover the estimated costs for fuel and purchased energy as of the April 1, 1980 revision date for a 12-month forecast period. Since the offset rate is predicated upon a 12-month forecast of the estimated level of fuel-related expenses which may not coincide with the energy-related costs actually incurred during the forecast period when the offset rate was in effect, the utility may experience either an over- or undercollection of energy-related expenses as reflected in the ECAC balancing account.

PG&E's ECAC Adjustment

For the 12-month period ending March 31, 1981 PG&E estimates that hydroelectric production will increase from about 4 percent above normal in the prior 12-month record period ending September 30, 1979 to about 16 percent above normal in the current

forecast period. It is also expected that power available for purchase and customer sales will increase. The net result is an anticipated decrease in steam electric fuel use of 10.6 percent. However, PG&E explains that this reduction in steam electric fuel use will be more than offset by an expected increase of 38.5 percent in gas and oil prices.

It is noted that, since the last 12-month ECAC record period ending September 30, 1979, the price of fuel oil increased several times to a point where the utility estimates that as of April 1, 1980 the inventory cost of residual fuel oil will be $3.95 per million Btu. The price of natural gas to PG&E's steam electric plants is estimated at $4.21 per million Btu, for an overall increase in the cost of steam electric power of 23.8 percent since September 30, 1979. PG&E's estimated price for natural gas is predicated upon the Schedule No. G-55 gas rate proposed by PG&E in Applications Nos. 59249 and 59406. However, both the utility and the staff recommend that should the Commission authorize a different G-55 gas rate in the aforementioned proceeding prior to its reaching a decision in this proceeding, the G-55 rate finally adopted by the Commission should be used.[1/] Finally, the utility maintains that with the related increase in purchased power the overall estimated net increase in the current cost of fuel and purchased energy amounts to approximately 29.3 percent.

PG&E states that during the 6 months between the end of the record period of September 30, 1979 and March 31, 1980 the undercollected balance in its ECAC balancing account increased by approximately $208 million. As of the April 1, 1980 revision date

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1/ See the results of the Staff Audit hereinafter discussed.

it was estimated that the undercollected balance would amount to approximately $285 million. Responsive to the Commission's views expressed in Decision No. 91277, supra, PG&E has determined to amortize the estimated undercollection of $285 million over the first 6 months of the forecast period, commencing with April 1, 1980, so as to avoid the cash-flow burdens associated with large amounts of undercollected fuel-related expenses.

By Decision No. 91269, dated January 29, 1980 in OII No. 56 the Commission ordered interest rates applicable to ECAC balancing accounts revised to conform with the published Federal Reserve Board three-months prime commercial paper rates, effective January 1, 1980. PG&E states that the use of a 6-month amortization period, in lieu of a 12-month amortization period, to clear out the undercollections in its ECAC balancing account will result in 1980 savings in interest costs to the ratepayers of about $8 million at current interest rates. In the event fuel-related expenses stabilize during the April 1, 1980 forecast period, PG&E explains that its proposed ECAC billing factors (balancing rate components) designed to amortize the undercollections in the balancing account over a 6-month period would be reduced substantially so that the annual revenue increase contemplated for the 12-month forecast period would amount to about $523 million ($808 minus $285 million).[2/] Thereafter, it is expected that the ECAC rate stability anticipated under the procedures we established in Decision No. 91277, supra, will be achieved.

2/ See Staff Audit Section (Footnote 4) herein for impact of new Schedule No. G-55 gas price which results in an estimated reduction of $34,120,000 in PG&E's initial revenue increase from $808.5 million to approximately $774.3 million, thereby further reducing the 6-month adjustment of $523 million to about $489 million.

PG&E's ECAC Rate Proposal

Of the total sought increase in annual ECAC revenues of some $808.5 million, PG&E indicates that its proposed upward adjustments in the fuel offset and balancing rate components account for $321.7 million and $486.8 million, respectively. In order to generate the requested energy-related cost offset revenue requirements, PG&E seeks authority to increase its current ECAC billing factors as follows:

Class of Service	Proposed Increase(1) (¢/kWh)
Residential:	
Lifeline	1.185
Nonlifeline	1.638
Nonresidential	1.398

(1) Adjusted for franchise taxes and uncollectibles.

PG&E proposed to increase its total adjusted ECAC billing factors for each major class of customer by a uniform 1.398¢/kWh. The suggested increase of 1.185 ¢/kWh recommended for the lifeline domestic customer is designed to retain the differential of 38 percent between the lifeline and nonlifeline residential total average rates established by Decision No. 91335, supra. The higher increase of 1.638 ¢/kWh proposed for the nonlifeline domestic service reflects the full burden of the suggested lower increase for lifeline service, thereby allocating to the total residential class its proportionate share of the sought uniform increase of 1.398 ¢/kWh. The impact of the sought increase upon PG&E's several classes of service follows:

TABLE 1

Class of Service	Proposed Increase in Annual Revenues (April 1, 1980 - March 31, 1981) ($ 000's)	
Residential:		
Lifeline	$123,738	30.0%
Nonlifeline	152,547	29.9
Residential Subtotal	276,285	29.9
Small Light and Power	65,133	23.7
Medium Light and Power	194,923	28.2
Large Light and Power	200,082	31.9
Public Authority	6,221	24.1
Agricultural	55,850	28.3
Street Lighting	5,033	11.8
Railway	3,341	34.7
Interdepartmental	1,594	28.9
Total Jurisdictional	808,462	28.9

PG&E's Revised Offset Rate

In order to further enhance the value of expedited ECAC filings we found in Decision No. 91277, supra, that:

> "...it is reasonable to allow each utility to file its application on estimated fuel prices, estimated balancing account balance, and on forecasted resource mix and sales estimate. For this purpose the prices and balance should be estimated as of the revision date; the forecasted resource mix should be the mix that is the basis of the company's procurement strategy. . . . The resource mix will be adopted as filed in order to avoid this Commission's prejudging the prudency of the utility's fuel procurement strategy." (Emphasis supplied.)

PG&E's estimated net current cost for fuel and purchased energy for the 12-month forecast period beginning April 1, 1980, as

computed in the utility's Exhibit No. 2, amounts to $1,710,953,000 based on 57,822 millions of kWh sales and an offset rate of 2.959 ¢/kWh. Under present offset rates, effective February 13, 1980, total ECAC revenues of $1,392,340,000 are generated. PG&E now seeks, therefore, a fuel-related cost offset revenue increase of $318,604,000 ($1,710,953,000 minus $1,392,340,000) which, in turn, relates to a uniform offset rate increase of 0.551 ¢/kWh applicable to system sales.

TURN's Position

The representative for Toward Utility Rate Normalization (TURN) cross-examined PG&E's witness in considerable detail relative to the utility's forecasted resource mix as well as the company's procurement strategy. In light of its cross-examination, TURN recommends that PG&E's forecast of fuel oil use be reduced by approximately 2 million barrels or by some $50 million.

In its efforts to reconcile PG&E's projected resource mix and procurement strategy for the forecast period TURN developed certain differences which it contends are discrepancies in the utility's anticipated fuel consumption and inventory, on the one hand, with its estimated energy (gas, oil, purchased power) purchases, on the other hand. It is clear, however, that certain, if not all, of the alleged discrepancies are first due to efforts to convert gas and fuel oil purchases and usages thereof to a common unit of measurement (Btu per barrel). Secondly, the utility states certain of its estimated fuel inventory computations appear subject to prior fractional "rounding-off" procedures. To the extent that PG&E's cost of fuel and purchased energy estimated for the forecast period differs from the actual cost eventually incurred, such differential would, of course, be reflected in the ECAC balancing account as either an over- or undercollection for subsequent resolution in the ensuing ECAC proceeding. Additionally, as previously noted, in

Decision No. 91277, supra, we ordered that issues relating to the reasonableness of ECAC recovery shall be deferred to at least the following filing. Finally, PG&E's resource mix and procurement strategy for the forecast period have not been shown to be based on unreasonable estimating procedures, given the factual information at hand.

Position of GM

General Motors Corporation (GM) did not oppose the energy-related cost offset revenue increase sought by PG&E. It did, however, take a position relative to the ultimate rate design for allocating the sought relief which is hereinafter discussed.

PG&E's Revised Balancing Rate

The balancing rate components proposed by PG&E are computed so as to amortize the April 1, 1980 estimated undercollected balance of $285,159,000 through one-half of the sales estimated for the 12-month forecast period. For purposes of calculating the balancing rates the disallowances previously adopted by the Commission in Decision No. 91335, supra, (Page 7, Table 2) were first deducted, with interest, by PG&E from the balance in its ECAC balancing account as of September 30, 1979. Exhibit No. 2 indicated that the resulting adjusted balance in the ECAC balancing account amounted to $291,753,000. An additional estimated adjustment of $6,594,000 in energy-fuel cost losses due to excess sales over purchases to the California Department of Water Resources (DWR) was also excluded for the 6 months between September 1, 1979 and March 31, 1980, thereby leaving a net adjusted undercollected balance of $285,159,000.

The April 1, 1980 undercollection of $285,159,000 relates to an overall balancing rate component of 0.986 ¢/kWh, based on a semiannual sales estimate of 28,911 millions of kWh sales. Under the current level of balancing rates, effective February 13, 1980, total ECAC revenues of $44,199,000 are generated. This leaves a net balancing rate revenue increase of $240,960,000 to be recovered

during the first 6 months of the forecast period. To accomplish this objective PG&E proposes a uniform balancing rate increase of 0.833 ¢/kWh applicable to system sales.

TURN's Position

TURN recommends that the April 1, 1980 estimated undercollections remaining in PG&E's ECAC balancing account be amortized over a 12-month period, in lieu of the 6-month period proposed by PG&E. This would, of course, result in a lower level of ECAC billing factors for at least the first 6 months of the forecast period. It would also require the utility's ratepayers to absorb interest charges on the remaining undercollected balance in the ECAC balance account, at an annual rate of 13 percent or higher. TURN is of the opinion that ratepayers would be economically better off having PG&E finance a portion of their otherwise applicable utility bills. For obvious reasons we disagree. As for rate stability, it should be clear that the very purpose of the suggested 6-month amortization period is to achieve rate stability once the utility's ECAC balancing account is balanced and thereafter maintained in as near a zero balance condition as possible under the new ECAC filing procedures just recently established by Decision No. 91277, supra. If we now acquiesce in TURN's 12-month amortization proposal the primary objectives of our recent Decision No. 91277, supra, would be frustrated or largely negated at our first opportunity to actually achieve such goals. This particular suggestion by TURN should not be accepted.

Staff Audit

The Commission's Utilities Division staff introduced Exhibit No. 4 which contains the results of the staff investigation into PG&E's sought ECAC adjustment, including the staff's recommendations relative thereto. While a detailed audit of PG&E's balancing account entries was not made, the underlying work papers supporting the utility's sought ECAC relief were examined.

In Decision No. 91269, supra, the Commission found that an interest rate of 7 percent on the ECAC balancing account did not fairly compensate the utility and that the short-term commercial rate published in the Federal Reserve Statistical Release, G-13, was reasonable. The decision ordered respondent utilities to begin applying that interest rate to their ECAC balancing accounts beginning January 1, 1980. Currently, the utilities are earning about 13 percent on their ECAC balancing accounts.[3/] Since PG&E's balancing account was undercollected by about $290 million in March of 1980, the interest expense charged to the ratepayers is a significant amount. The staff believes it to be in the best interests of both the utility and its ratepayers that an effort be made to reduce the undercollections in PG&E's ECAC balancing account as rapidly as possible. We agree.

The staff notes that approximately 60 percent of the sought ECAC increase is required to amortize the existing undercollected balance in PG&E's balancing account over PG&E's proposed 6-month amortization period commencing with April 1, 1980. If a 12-month amortization period were to be used the sought ECAC increase could be reduced by nearly $290 million. However, this would force the utility to carry a large undercollected balance for a longer period of time which would adversely affect the utility's cash flow and permit escalating interest charges at a rate of 13 percent or more to the ultimate disadvantage to the ratepayer. In effect, the staff explains, PG&E's customers would be borrowing money from the utility, much like a financial institution, at a high rate of

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3/ It is anticipated that the short-term commercial rate will, in the near future, rise substantially above the rate of 13 percent referred to in Exhibit No. 4.

interest in order to reduce the impact of the sought rate increase for a temporary 6-month period. On the other hand, if the 6-month amortization period is employed as recommended by both PG&E and the staff, the ECAC balancing rate will be recomputed in the next proceeding on a much lower balancing account balance including significant savings in interest charges. The staff and PG&E both anticipate a substantial reduction in the utility's ECAC billing factors to occur by at least the end of the 6-month amortization period, barring unforeseen large offsetting increases in energy-related fuel costs in the interim.

Pursuant to Decision No. 91277, supra, PG&E's estimated fuel prices and ECAC balancing account balance were determined as of the April 1, 1980 revision date. PG&E's estimated cost of natural gas for its steam generation department is $4.2136 per million Btu which assertedly is the Schedule No. G-55 level of rate proposed in PG&E's Applications Nos. 59249 and 59406. The staff notes that PG&E's current G-55 tariff rate is $3.387 per million Btu. Staff's Exhibit No. 42 in Application No. 59406 recommends that PG&E's present G-55 rate be increased to $3.600 per million Btu. The staff now recommends in this proceeding that its proposed G-55 rate be employed unless the Commission authorizes a different G-55 rate prior to the issuance of a decision in Application No. 59463. The question as to what G-55 level of rate to be employed in this proceeding was previously addressed, under like circumstances, in Decision No. 91335, supra, wherein we stated:

> "PG&E's electric department purchases gas for boiler fuel from the utility's gas department at the G-55 gas rate level. Should an increase in the G-55 gas rate be subsequently authorized, pursuant to Application No. 59249, PG&E states that the resulting interdepartmental increase in fuel costs should be reflected in the energy-related expenses

of the utility's Electric Department. Failure to do so would, of course, effectively nullify any authority granted PG&E to increase it G-55 gas rates were it not for the resulting undercollection being reflected in the utility's ECAC balancing account. In view of the overall impact of the potential increase in PG&E's G-55 gas rates, it was agreed that no corresponding adjustment in electric rates could be considered in this ECAC proceeding. Should undercollections actually occur, they will accumulate in the ECAC balancing account for resolution in PG&E's next ECAC proceeding."

A decision draft in Applications Nos. 59249 and 59406 is now before the Commission for approval. A decision in this matter will be reached prior to or at the same time a decision is issued in this proceeding. Under the circumstances the G-55 natural gas rate schedule established in that proceeding will be used here as suggested by the staff.[4/]

General Staff Comments

Pursuant to its investigation and report the staff offered the following general observations:

1. "PG&E has been unable to construct new power plants for several years. Its load has grown relentlessly and the utility is currently forced to utilize every generator on its system to the maximum just to meet the load. This requires use of old semiretired plants and generators designed primarily for peaking, on a full-time basis. These plants are inherently less efficient than newer base load plants and the utility's overall efficiency is reduced. A utility's efficiency is measured in terms of heat rate, the number of Btu's of heat energy required to generate a kilowatt-hour of electricity. System average heat rate is also influenced by the mix of

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4/ By Decision No. 91720 issued April 29, 1980 in PG&E's Applications Nos. 59249 and 59406 a Schedule No. G-55 rate of .40366 ¢/therm ($4.0366 per million Btu) was established.

available resources. Thus, in periods of above average hydro resources the system average heat rate would be expected to go down. (A reduction in heat rate corresponds to an increase in efficiency.)"

2. "The increased load on PG&E's system together with no new generating resources makes it very difficult for PG&E to take units out of service in order to perform preventive maintenance. Under these conditions, it might be expected that forced outages would increase. The staff has requested that PG&E furnish an exhibit in this case reviewing recent unscheduled outages on its generating plants. Although the staff is taking no position on unscheduled outages at this time, the burden of proof is on the utility to show that these outages were not caused by imprudent maintenance practices on its part. The staff intends to review heat rate and forced outage rates in future ECAC proceedings and may recommend adjustment if it appears that increases in these indexes result from imprudent practices on the part of the utility."

Unscheduled Outages

During the last ECAC proceeding (Decision No. 91335, supra) TURN endeavored to obtain the basis for certain unscheduled outages that occurred at several of PG&E's power plants during the 12-month record period ending September 30, 1979. TURN sought to develop the net cost of any replacement power required with respect to each outage and whether the outages were the direct result of unreasonable and/or imprudent actions on the part of PG&E. If it were shown that any of the outages were the direct result of unreasonable and/or imprudent actions by PG&E, and the cost of replacement power involved was higher than would otherwise be incurred, TURN would move for the exclusion of the resulting higher energy-related fuel costs from PG&E's proposed ECAC offset rate adjustment. The staff supported TURN's position in this matter.

In order not to unduly delay submission of the subject ECAC proceeding, TURN, PG&E, and the staff all agreed that:

1. PG&E and the staff would initiate a coordinated study as to the underlying causes for the outages that occurred at the following power plant sites of PG&E during the 12-month period ending September 30, 1979:

	Plant Site	Outages
a.	Humboldt Bay Nuclear Unit	Record Period
b.	Contra Costa Unit No. 1	4-21-79 - 7-18-79
c.	Potrero Unit No. 3	Various
d.	Moss Landing Unit No. 2	11-8-78 - 5-31-79
e.	Moss Landing Unit No. 4	9-18-78 - 2-9-79
f.	Morro Bay Unit No. 1	7-20-79 - 9-30-79

2. PG&E and staff shall inform TURN of the results of their joint investigation:
   a. To the extent that the parties all agree that the cause of the outages was not due to any unreasonable/imprudent act by PG&E, no further action is necessary or required.
   b. PG&E and staff will determine the net cost of any replacement power required for each respective outage.
3. Any sought exclusion of energy-related fuel cost deemed appropriate in the circumstances will be considered in the ensuing PG&E ECAC proceeding.

At the ECAC proceeding now before us it became apparent that neither TURN nor the staff were prepared to present their case relative to the various areas of concern expressed by TURN concerning the specified unscheduled outages.[5/] It was agreed, therefore, that this

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5/ PG&E's testimony and related exhibit pertaining to the unscheduled outages in question were withdrawn from the record without prejudice by mutual consent of all parties for the reasons stated above.

matter should be deferred to a future PG&E ECAC proceeding when all parties involved are fully prepared to proceed.

Rate Design

The Commission's current ECAC rate design policy as enunciated in PG&E's recent general rate Decision No. 91107, as subsequently modified by Decision No. 91316, issued January 29, 1980 in Application No. 58545, stated:

> "Future ECAC Proceedings
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> In line with its position advanced in Decision No. 90869, supra, the Commission now wishes to establish as future policy that electric rate restructuring between classes of service be accomplished only in general rate proceedings. Absent a convincing showing that such a result would be inequitable, we plan to process subsequent increases or decreases in the ECAC billing factor according to the standards set forth herein. Hereafter, PG&E ECAC rates should be set so that the nonlifeline residential total average rate is 35 to 50 percent above the lifeline total average rate. The lifeline and nonlifeline residential ECAC rates should be calculated in relation to a single ECAC rate for nonresidential customers, so as to assign an equal cents per kWh increase, on the average, to each customer class (including the residential class as a whole). This approach will maintain current differentials in the rate per kWh for each customer class. The nonlifeline residential rate will remain the highest rate on the system."

Pursuant to the aforementioned Commission policy, in PG&E's last ECAC Decision No. 91335, supra, we applied a uniform ECAC increase to both the residential and nonresidential classes of service. We also reallocated the increase for the residential class so that the domestic nonlifeline total average rate was 38.0 percent above the like average lifeline rate. This percentage relationship between the lifeline and nonlifeline rates is within the 35 to 50 percent range established as Commission policy in Decision No. 91107, supra.

PG&E's Rate Design

PG&E now recommends a rate design to recover its sought energy-related cost offset annual revenue increase of $808.5 million which would allocate a uniform increase to both the residential and nonresidential classes of service. PG&E also proposes to set the domestic nonlifeline total average rate at 38 percent above the total average lifeline rate. The rate design adjustments advanced by PG&E would increase the company's ECAC billing factors as follows:

	Residential (See Note)		
	Lifeline	Nonlifeline (¢/kWh)	Nonresidential
Present	1.681	3.040	2.724
Increase	1.185	1.638	1.398
Proposed Rates	2.866	4.678	4.122

Note: (a) Adjusted for franchise taxes and uncollectibles.

(b) Reflects a Schedule No. G-55 gas rate of $4.21360 per million Btu hereinafter not used.

Staff Rate Designs

The staff and the PG&E both recommend the retention of the same basic rate design as originally established in the last ECAC Decision No. 91335, supra, and have relied on the same general position expressed in that decision which states:

> "Without first analyzing the effects of present rate design on customer usage patterns, the staff submits that the impact of any new rate design cannot be predicted and, in fact, may run the risk of producing results opposite to those originally desired. In the most recent SDG&E ECAC Decision No. 91106, dated December 19, 1979, in Application No. 59108 the Commission ordered the utility to conduct a study that would measure elasticities of demand for lifeline and nonlifeline sales. The staff recommends that the electric rate design adopted in PG&E's recent general rate Decision No. 91107, issued December 19, 1979 in

Application No. 58545 be continued and that PG&E be required to conduct a study that would determine relative elasticities of demand between lifeline and nonlifeline sales. When the results of this study are available further revisions in PG&E's electric rate design may then be considered as deemed appropriate in the circumstances.

"The development of elasticity of demand data, as proposed by the staff, would be of great assistance in any future rate design evaluation or analysis. We will direct PG&E to undertake such a study for the domestic class, selecting a random sample of such customers and comparing seasonally adjusted, lifeline and nonlifeline, usage before and after the rates authorized herein. Details of the study should be worked out between PG&E and our staff; the results should be filed with subsequent ECAC applications (updated to reflect the impact of periodic rate modifications). The ensuing order will direct the routine development and presentation of this and other customer usage data in subsequent proceedings, and illustrates our determination to make maximum use of rate design as a tool to promote conservation. It is, for example, conceivable that we might find it necessary to establish an ECAC billing factor and/or a base domestic tailblock rate at some usage point that provides a still higher unit price to the domestic user who consumes at levels far in excess of essential household needs; such customers may be abusive users who should pay accordingly as their high use likely contributes to peak-period generation demands. Given escalating energy rates and the need to encourage conservation, development of this and similar data on a routine basis is essential for enlightened utility management and the presentation of constructive rate design proposals."

Until the aforementioned elasticity of demand study for PG&E's residential class of service is completed, the staff sees no reason to change the present general rate design as initially proposed and adopted in Decision No. 91335, supra. Accordingly, the staff recommends adoption of the following adjusted ECAC billing factors for PG&E:

	Residential (See Note) Lifeline	Residential (See Note) Nonlifeline (¢/kWh)	Nonresidential
Present	1.681	3.040	2.724
Increase	1.135	1.569	1.339
Proposed Rates	2.816	4.609	4.063

Note: (a) Adjusted for franchise taxes and uncollectibles.

(b) Reflects a Schedule No. G-55 gas rate of $4.0366 per million Btu.

The rate design and resulting billing factors proposed by the staff and PG&E are the same when the utility's aforementioned proposal is further adjusted to reflect the current Schedule No. G-55 gas rate of $4.0366 per million Btu. The billing factors proposed by the staff and the utility are premised upon a recommended rate design that would retain the same general differential between the domestic lifeline and nonlifeline rates as recently established by Decisions Nos. 91107 and 91335, supra. To accomplish this objective the domestic nonlifeline rate is set 38.1 percent above the rate for lifeline service. A uniform increase of 1.339 ¢/kWh is applied to all major service categories, including the residential class. However, the revenue deficiency generated by the proposed domestic lifeline rate is compensated for by raising the nonlifeline rate by 1.569 ¢/kWh.

Optional Staff Rate Designs

In Decision No. 91335, supra, we expressed an urgent need for the establishment of a rate spread within the residential class rate structure that would be sufficiently conservation-oriented so as to isolate and/or discourage the excessive or luxury usage of electric energy. Accordingly, the staff has submitted for our consideration three optional three-tier rate spreads for the residential class:

Option 1 first assigns the system average ¢/kWh increase to the second-tier rates. Thereafter, two-thirds of this increase is judgmentally assigned to the lifeline tier. The remainder of the domestic revenue requirement is allocated to the third tier. The staff explains that this results in a rate spread with second-tier rates being 40 percent above lifeline and third-tier rates set at only 15 percent above the second-tier rates. The combined second- and third-tier rates are 51 percent above lifeline which reflects the upper limit of the guidelines set out in Decision No. 91107, supra. While the system average increase is approximately 30 percent, the lifeline rate increase under Option 1 is held to 23 percent.

Option 2 assigns no increase to the domestic lifeline rate. The total average rate for the third tier is arbitrarily set at 10¢/kWh. The remainder of the domestic revenue requirement is made up by the second-tier sales. This results in a rate spread where the second-tier rates are set at 70 percent above lifeline and the third-tier rates are set at 48 percent above the second-tier rates.

Option 3 was developed by the staff at the request of TURN (as an alternative to the rate spread established in Option 1 three-tier rates) and sets the total average second-tier rates at 38 percent above Tier 1 rates (lifeline) and the level of the third-tier average rates at 38 percent above the second-tier rates (in lieu of 15 percent under Option 1). This alternative to the Option 1 three-tier rate spread establishes a more significant price signal to customers (15 percent v. 38 percent) to hold down their usage to levels at which the lower Tier 1 and/or 2 rates are applicable. The Option 3 rate spread is more compatible than the Option 1 three-tier rates with the aforementioned ECAC rate design guidelines of the Commission. It should also be noted that under Option 3 rates the combined second- and third-tier rates are 63 percent (Option 1 - 51 percent) above the Tier 1 lifeline rates which, in turn, reflect a 17 percent

(Option 1 - 23 percent) increase as compared to the system average increase of nearly 30 percent. A larger subsidy of the Tier 1 lifeline rates is, therefore, reflected in the Tier 3 level of rates.

The third-tier rates developed by the staff apply to usage in excess of twice the lifeline allowance. With the information now before us, this was thought to be superior to a rate design utilizing a fixed number of kWhs for the second-tier nonlifeline rates since it will give a larger second tier to persons whose minimum basic requirements are large. Put another way, a variable second tier equal to the lifeline allowance will be proportional to a customer's minimum basic requirements whereas a fixed second tier would represent a much larger percentage of the basic requirements of a customer entitled to the basic allowance than of a customer with electric space heating. The staff estimates that while only 23 percent of domestic sales would fall in the third tier, nearly 40 percent of domestic bills would include some third-tier kWhs. In other words, while the three-tier rate design might affect as many as 40 percent of PG&E's domestic customers, it would probably not affect many of them very much.

A comparative analysis of the several residential rate designs developed by the staff are summarized in the following Table 2. A like comparison of the total average rates resulting under the several alternative ECAC rate proposals for PG&E with the like total average rates resulting under the ECAC rate designs of several other California utilities is summarized in the following Table 3.

TABLE 2

Pacific Gas and Electric Company
ENERGY COST ADJUSTMENT CLAUSE
Comparison of Domestic Rate Designs

Class	Present Avg. Rates ¢/kWh	Increase ¢/kWh	Proposed Rates ¢/kWh	Percent Increase	Revenue Increase M$	Proposed ECAC Rates ¢/kWh
Company and Staff Proposed						
Lifeline	3.955¢	1.135¢	5.090¢	28.7%	$118,517	2.816¢
Tier 2	5.458	1.569	7.027	28.7	146,121	4.609
Total					264,638	
Option 1						
Lifeline	3.955	.893	4.848	22.6	93,247	2.574
Tier 2	5.458	1.339	6.797	24.5	64,674	4.379
Tier 3	5.458	2.378	7.836	43.6	108,806	5.418
Total					266,727	
Option 2						
Lifeline	3.955	0.0	3.955	0.0	0.0	1.681
Tier 2	5.458	1.272	6.730	23.3	61,438	4.312
Tier 3	5.458	4.530	9.988	83.0	203,080	7.570
Total					264,518	
Option 3						
Lifeline	3.955	.669	4.624	16.9	69,857	2.350
Tier 2	5.458	.924	6.382	16.9	44,629	3.964
Tier 3	5.458	3.349	8.807	61.4	150,136	6.389
Total					264,622	

TABLE 3

Pacific Gas and Electric Company
ENERGY COST ADJUSTMENT CLAUSE
Comparison of Total Average Rates

Class	SPPC ¢/kWh	SDG&E ¢/kWh	SCE ¢/kWh	PG&E Present ¢/kWh	PG&E Company and Staff Proposed ¢/kWh	PG&E Option 1 ¢/kWh	PG&E Option 2 ¢/kWh	PG&E Option 3 ¢/kWh
Domestic								
Lifeline	3.723¢	6.267¢	4.730¢	3.955¢	5.090¢	4.849¢	3.955¢	4.624¢
Second Tier	5.865	8.690	7.095	5.458	7.027	6.797	6.730	6.382
Third Tier						7.836	9.988	8.807
Total	5.155	7.264	5.730	4.660	5.999	5.999	5.999	5.999
Small Light and Power	5.315	8.270	N/A	5.905	7.244	7.244	7.244	7.244
Medium Light and Power	4.343	7.219	6.044	4.981	6.320	6.320	6.320	6.320
Large Light and Power	4.185	6.834	5.348	4.302	5.641	5.641	5.641	5.641
Agricultural	6.115	7.882	6.115	4.845	6.184	6.184	6.184	6.184
Total Average System Rate (TASR)	5.027	7.551	5.730	4.780	6.119	6.119	6.119	6.119
% Lifeline Below TASR	25.9%	17.0%	17.5%	17.3%	16.8%	20.8%	35.4%	24.4%
% Second Tier Above Lifeline	57.5%	38.7%	50.0%	38.0%	38.1%	40.2%	70.2%	38.0%
% Third Tier Above Second Tier	-	-	-	-	-	15.3%	48.4%	38.0%
% Combined Second and Third Tiers Above Lifeline	57.5%	38.7%	50.0%	38.0%	38.1%	50.5%	109.8%	63.3%

Adopted Rate Design

The staff recommends adoption of PG&E's rate proposal subject to appropriate modifications to reflect the change in the price of natural gas (Schedule No. G-55 rate of $4.0366 per million Btu) previously discussed herein. As an interested party, GM reaffirmed its established general position against the establishment of a level of rates below the cost of performing a given class of service, thereby requiring such service to, in effect, be subsidized by other classes of service. TURN strongly urges the adoption of a three-tier rate spread for the residential rate design as a basis for establishing meaningful conservation price signals while at the same time affording some degree of price insulation at the minimum lifeline level of electric usage.

In Decision No. 91335, supra, we made the following observation:

> "In light of the contemplated elasticity of demand study to be conducted by PG&E pursuant to the ensuing order, we may find it necessary in future ECAC proceedings to further adjust the relationship between residential lifeline and nonlifeline sales in order to advance and accelerate our energy conservation objectives." (Emphasis supplied.)

We are now convinced that unless conservation movement is vigorously stimulated within the residential class, the contemplated elasticity studies ultimately required will not be productive or otherwise determinative. The rather complacent attitude holding that customer demand within the residential class is basically inelastic and, therefore, little can be done with respect to conservation constitutes a "blind alley" that should be discarded in favor of a more positive course of action. Accordingly, we shall first adopt the third optional three-tier rate spread for the residential rate design currently in effect. In doing so, it is understood that further adjustments and refinements may be called for in the light of the

studies initiated by PG&E pursuant to Ordering Paragraph 2 of Decision No. 91335, supra. In the interim, PG&E will be authorized to increase its present ECAC billing factors for its residential service class in accordance with the third optional three-tier rate spread developed by the staff, subject to the monthly kWh quantities of usage as follows:

TABLE 4

Adopted PG&E Residential ECAC Billing Factors
For 12-Month Forecast Period Beginning With April 1, 1980

Rate Block	End Usage	ECAC Billing Factors (¢/kWh) Present	Increase	Adopted
Tier 1	Lifeline Allowance	1.681	.699	2.350
Tier 2	Nonlifeline - Second Additional Lifeline Allowance	3.040	.924	3.964
Tier 3	Nonlifeline - Usage Exceeding Twice Lifeline	3.040	3.349	6.389

In order to further stimulate an appropriate conservation price signal at the time when the three-tier ECAC billing factors for domestic service set forth in Table 4 above are published and become effective, we shall direct PG&E to place in its related monthly billings an insert clearly explaining the new domestic three-tier rate spread. The insert should emphasize the savings possible when electric usage is held down to quantities for which the lower Tier 1 or 2 rates apply. A comparative analysis of the overall effect of the several ECAC rate spreads developed in this proceeding upon domestic billings is set forth in attached Appendix A.

The uniform energy cost offset increase of 1.339 ¢/kWh proposed by PG&E/staff for the company's nonresidential ECAC billing factor has also been shown to be justified. Accordingly, PG&E will be authorized to increase its present nonresidential ECAC billing factor from 2.724¢/kWh to 4.063¢/kWh.

Findings of Fact

1. PG&E's ECAC billing factors were last adjusted to reflect increased energy-related costs incurred over a 12-month recorded period ending September 30, 1979, by Decision No. 91335, supra.

2. Pursuant to Decision No. 91277, supra, PG&E's resource mix can be adopted for purposes of this ECAC proceeding and issues relating to reasonableness of ECAC recovery of particular expenses are deferred to at least the next ECAC filing.

3. PG&E's estimated increase in energy-related expenses for the 12-month forecast period beginning April 1, 1980 amounts to $318,604,000, excluding the usual adjustments for franchise tax requirements and uncollectibles. This relates to a uniform offset rate increase of 0.551 ¢/kWh applicable to estimated system sales.

4. PG&E estimates that its ECAC balancing account undercollected-balance will increase by $240,960,000 as of the April 1, 1980 forecast period. To recover this amount a uniform balancing rate increase of 0.833 ¢/kWh, excluding franchise tax and uncollectibles, is required.

5. Pursuant to Decision No. 91269, dated January 29, 1980, in OII No. 56, PG&E was ordered to assess interest rates applicable to its ECAC balancing account balances to conform with the Federal Reserve Board's short-term prime commercial rate. PG&E estimates that the use of a 6-month amortization period, in lieu of a 12-month period, to clear out the undercollections in its ECAC balancing account will result in 1980 savings in interest costs to the ratepayers of over $8 million dollars.

6. PG&E employed an interdepartmental tariff Schedule No. G-55 natural gas rate of $4.21360 per million Btu as a basis for determining the cost of steam electric power generation for the April 1, 1980 forecast period. By the Commission's decision, issued today in Applications Nos. 59249 and 59406, a Schedule No. G-55 rate of $4.0366 per million Btu was established.

7. With the adoption of a G-55 gas rate of $4.0366 per million Btu as the basis for computing the estimated cost of steam electric power, PG&E's proposed increase in its existing ECAC billing factors is reduced to a uniform increase of 1.339 ¢/kWh (in lieu of 1.398 ¢/kWh) for all classes, except the residential lifeline and nonlifeline rates which would be increased by 1.135 ¢/kWh (in lieu of 1.185 ¢/kWh) and 1.569 ¢/kWh (in lieu of 1.638 ¢/kWh), respectively.

8. The impact of the new G-55 gas price results in an estimated reduction of $34,120,000 in PG&E's initial sought annual ECAC revenue increase from $808.5 million to approximately $774.3 million, thereby reducing the 6-month contemplated adjustment to about $489 million.

9. PG&E and the staff both recommend the retention of the same basic rate design as originally established in the last PG&E ECAC Decision No. 91335, supra. On this basis, PG&E's adjusted ECAC billing factors for the April 1, 1980 forecast period would be as follows:

Class of Service	Present (¢/kWh)	Staff Proposal
Residential:		
Lifeline	1.681	2.816
Nonlifeline	3.040	4.609
All Other Classes	2.724	4.063

10. Adoption of PG&E/Staff rate design proposal results in the utility's nonlifeline residential total average rate being set at 38.1 percent above the domestic lifeline total average rate. This is consistent with the ECAC rate design guidelines established by Decisions Nos. 91107 and 91316, supra, and as initially implemented in PG&E's last ECAC Decision No. 91335, supra.

11. As previously noted in Decision No. 91335, supra, we now find it necessary to further adjust the rate spread between residential lifeline and nonlifeline sales in order to advance and accelerate energy conservation.

12. Unless some conservation movement is now vigorously stimulated within the residential class, the contemplated elasticity of demand studies to be conducted by PG&E pursuant to the Commission's

Order in Decision No. 91335, supra, might well prove to be nonproductive or otherwise nondeterminative. Accordingly, we shall adopt the Option 3 three-tier residential rate spread developed by the staff, subject to the monthly kWh quantities of electricity indicated below:

Rate Block	ECAC Billing Factors (¢/kWh) Present	Increase	Adopted
Tier 1 (Lifeline)	1.681	.669	2.350
Tier 2 (Nonlifeline)	3.040	.924	3.964
Tier 3 (Nonlifeline-Exceeding Twice Lifeline Usage)	3.040	3.349	6.389

13. The staff's proposal to increase PG&E's current ECAC billing factor of 2.724 ¢/kWh, applicable to all nonresidential classes, by an overall uniform increase of 1.339 ¢/kWh to 4.063 ¢/kWh has been shown to be justified and should be adopted.

14. A comparison of PG&E's total average rates (Table 3) indicates that under the adopted Option 3 three-tier domestic rates, the second-tier (nonlifeline) rate is 38 percent above the first-tier (lifeline) rate; also the third-tier (nonlifeline) rate is 38 percent above the second-tier (nonlifeline) rate. This rate differential is within the Commission's present guidelines for ECAC rate design.

15. Under the adopted Option 3 three-tier domestic ECAC rates the total average rate resulting under the combined second- and third-tier (nonlifeline) rates is 63.3 percent above the first-tier (lifeline) rates. While this rate differential was not necessarily contemplated when the 50 percent maximum rate differential was established in the present ECAC rate design guidelines, the rate spread is deemed essential if large domestic power users are to receive a meaningful conservation price signal to shift their monthly consumption downward to quantities for which lower Tier 1 or 2 rates are applicable.

16. The adoption of a three-tier rate spread within PG&E's ECAC rate design that establishes a conservation price signal to larger residential users of power sufficient to cause such customers to reduce their usage causes a reduction in the utility's peak capacity demand and long run capital outlay and will result in savings to the ultimate benefit of both the utility and its customers.

17. The increases in PG&E's billing factors for the forecast period beginning with April 1, 1980 adopted herein were developed through the implementation of projected estimates shown to be justified and reasonable under the circumstance. To the extent that energy-related expense estimates may result in actual over- and/or undercollection, such balances will accrue in PG&E's ECAC balancing account for resolution at the subsequent ECAC proceeding.

18. The rate increases authorized herein are consistent with the President's Wage and Price Guidelines.

19. In order to educate consumers and stimulate the conservation anticipated under the three-tier residential ECAC rates to be authorized herein, PG&E should be directed to place in its related monthly billings an appropriate insert clearly explaining the new domestic three-tier rate spread. The insert should emphasize the savings available when large usage of electricity is reduced to quantities for which lower Tier 1 and/or Tier 2 rates apply.

Conclusions of Law

1. PG&E should be authorized to establish the revised ECAC billing factors set forth in the following order; such rates have been determined to be fair, just, and reasonable for the 12-month forecast period beginning with April 1, 1980. To the extent subsequent review of balancing account entries result in changes to the ECAC balancing rates, any overcollection will be credited to the balancing account.

2. PG&E's next ECAC revision date established pursuant to Decision No. 91277, supra, shall be not earlier than August 1, 1980, and should be filed based on interim procedures last adopted in OII 56.

3. The following order should be effective on the date of signature because PG&E is now incurring the increased energy-related expense the revised rates are designed to recover.

O R D E R

IT IS ORDERED that:

1. Pacific Gas and Electric Company (PG&E) is authorized to establish and file with this Commission within five days after the effective date of this order, in conformity with the provisions of General Order No. 96-A, revised tariff schedules of ECAC billing factors, as follows:

Residential:	
Tier 1 (Lifeline)	2.350 ¢/kWh
Tier 2 (Nonlifeline)	3.964 ¢/kWh
Tier 3 (Nonlifeline-Exceeding Twice Lifeline Usage)	6.389 ¢/kWh
All Other Schedules	4.063 ¢/kWh

2. PG&E shall expeditiously complete the ongoing elasticity of demand and related studies relative to its domestic customers directed by Ordering Paragraph 2 of Decision No. 91335, dated February 13, 1980, in Application No. 59248.

3. Concurrently with the effective date of the ECAC rates authorized herein, PG&E shall place in the related monthly billings to its domestic customers an appropriate insert clearly explaining the newly established three-tier domestic rates, emphasizing the potential savings available when large domestic users of electric power lower their consumption to quantities for which lower Tier 1 and/or Tier 2 rates are applicable.

4. PG&E's ongoing coordinated study with the Commission's staff, and representative for TURN, relative to the unscheduled outages as specified in the Opinion hereof, will be deferred to a future proceeding when all parties involved are fully prepared to proceed.

5. The ECAC balancing account balance subject to this proceeding, as in the prior proceeding, is subject to further review with respect to the reasonableness of recorded expenditures.

The effective date of this order is the date hereof.

Dated APR 29 1980, at San Francisco, California.

President

Commissioners

Commissioner Vernon L. Sturgeon, being necessarily absent, did not participate in the disposition of this proceeding.

A.59463

APPENDIX A

Pacific Gas and Electric Company

MONTHLY BILLS

Schedule D-1 (with 240 kWh Lifeline Allowance)

Line No.	Usage in kWh	Two Tier				Three Tier								
		Present	Co. and Staff Proposed			Option 1			Option 2			Option 3		
		Bill	Bill	Incr.	Incr.	Bill	Incr.	Incr.	Bill	Incr.	Incr.	Bill	Incr.	Incr.
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)
1	240	$ 9.84	$ 12.56	$ 2.72	27.64%	$ 11.98	$ 2.14	21.75%	$ 9.84	$ -	-%	$ 11.45	$ 1.61	16.36%
2	300	13.12	16.79	3.67	27.97	16.07	2.95	22.48	13.89	.77	5.87	15.28	2.16	16.46
3	400	18.59	23.83	5.24	28.19	22.88	4.29	23.08	20.63	2.04	10.97	21.68	3.09	16.62
4	480	22.97	29.46	6.49	28.25	28.33	5.36	23.33	26.02	3.05	13.28	26.79	3.82	16.63
5	500[a/]	24.06	30.87	6.81	28.30	29.89	5.83	24.23	28.02	3.96	16.46	28.56	4.50	18.70
6	600	29.53	37.90	8.37	28.34	37.74	8.21	27.80	38.02	8.49	28.75	37.37	7.84	26.55
7	700	35.00	44.94	9.94	28.40	45.59	10.59	30.26	48.02	13.02	37.20	46.19	11.19	31.97
8	800	40.47	51.98	11.51	28.44	53.44	12.97	32.05	58.02	17.55	43.37	55.01	14.54	35.93
9	900	45.94	59.02	13.08	28.47	61.29	15.35	33.41	68.02	22.08	48.06	63.83	17.89	38.94
10	1,000	51.41	66.06	14.65	28.50	69.13	17.72	34.47	78.02	26.61	51.76	72.65	21.24	41.31
11	1,100	56.88	73.10	16.22	28.52	76.98	20.10	35.34	88.02	31.14	54.75	81.47	24.59	43.23
12	1,200	62.35	80.14	17.70	28.53	84.83	22.48	36.05	98.02	35.67	57.21	90.29	27.94	44.81
13	1,500	78.76	101.26	22.50	28.57	108.37	29.61	37.60	128.02	49.26	62.54	116.75	37.99	48.24
14	1,750	89.70	118.85	29.15	32.50	127.99	38.29	42.69	153.02	63.32	70.59	138.79	49.09	54.73
15	2,000	106.11	136.45	30.34	28.59	147.61	41.50	39.11	178.02	71.91	67.77	160.84	54.73	51.58
16	2,500	133.46	171.65	38.19	28.62	186.85	53.39	40.00	228.02	94.56	70.85	204.94	71.48	53.56

a/ Average usage