

Decision 82 11 013 NOV 2 - 1983

**ORIGINAL**

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Jerry L. Perez,  
Complainant,

vs.

Pacific Gas & Electric,  
Defendant.

(ECP)  
Case 83-06-06  
(Filed June 13, 1983)

Jerry L. Perez, for himself, complainant.  
Robert S. West, for defendant.

O P I N I O N

Introduction

This matter arose as a result of Pacific Gas and Electric Company's (PG&E) discovery in November 1982 that the electric meter at the home then occupied by complainant Jerry L. Perez and his family was mounted upside down. According to undisputed testimony of PG&E's revenue protection representative, Roy H. Metzler, Jr., when the meter is thus mounted, it runs backwards. As a result, the meter subtracts the quantity of electricity being used while it is upside down rather than adding it. Thus, assuming relatively constant usage, each day such improper meter mounting exists gives the customer two days of unmetered (and, therefore, free) electricity.

PG&E presented Perez with a bill for \$500.45 for unmetered electricity. The bill covered the 22-month period beginning January 19, 1981 (February billing) and ending

November 18, 1982. According to Metzler, it was calculated by assuming that the meter only registered about 66% of actual use during that time.

Perez filed a complaint with the Commission. The complaint does not dispute PG&E's contention that meter tampering took place and that Perez has an obligation to pay for the unmetered electricity received at his house. However, he does question, under Public Utilities (PU) Code Section 734, the reasonableness of the amount of electricity which PG&E estimates was unmetered. He also questions the reasonableness of the terms for payment which PG&E offered him.

A hearing was held in Fresno on September 1, 1983 under the Expedited Complaint Procedure pursuant to Rule 13.2 of the Rules of Practice and Procedure and PU Code Section 1702.1. The matter was submitted the same day.

Perez's Showing

In support of his contention Perez presented evidence that showed the house in question is owned by his father-in-law, Don Ellis. Ellis, Ellis's wife and son and sometimes other relatives occupied the house until June 1981 when Perez, his wife, and two children moved in and the Ellises moved out. The house is not heated by electricity. (Perez had two electric heaters, but they were not used during the period in question.) The house has a gas stove and gas hot water heater. The electric appliances include usual kitchen appliances, a swamp cooler, and an electric clothes dryer which broke down in about December 1982. Until then the dryer was used by the Perez family as well as their relatives.

Further, Perez, his wife Kim, and his mother each testified that Perez's sister-in-law and her three children moved into the house in late December 1981 or early January 1982 and remained there until May 1, 1982. They also testified that R-19 ceiling insulation was installed along with exterior door weather stripping and a water heater wrap on May 5, 1982, and that another Perez sister-in-law and her three children stayed at the house for two or three weeks between July and August 1982. Kim Perez explained that this is the "family home" for her siblings and relatives and whenever any member of her rather large family is having a problem, they come to the house to stay.

In addition, Perez testified that he has made three monthly "protest payments" to PG&E in June, July, and August 1983 for \$50, \$30, and \$35 respectively. He stated that PG&E has been crediting the amount to his utility bill even though he specified in a letter to Metzler (Exhibit 4) that the money was to be set aside by PG&E for payment on the unmetered energy charge after the Public Utilities Commission (PUC) had settled the matter.

PG&E's Showing

PG&E presented the testimony of Metzler. Metzler testified that he received a computer printout produced in the regular course of business by PG&E to indicate meter reader observations. This printout stated that the meter reader had observed the Perez's meter to be upside down when the reader went to read it on November 18, 1982. Metzler himself went to the home on November 22, 1982 but was unable to get into the backyard because a gate was locked. He was then escorted

through the house to the backyard by a woman who said she was a babysitter. He photographed the meter (Exhibit 5) and then removed it and replaced it with a locked meter.

Metzler brought two meters to the hearing. He said one was the one he had removed from the Perez home. The meters have four metal prongs on the back similar to an electrical plug. He explained that the prongs on the Perez's meter had been pulled out of their sockets and reinserted upside down when he observed the meter. He stated that company records indicated the meter had been installed new in 1954. He also stated that a soldered seal on a wire indicated that PG&E had removed the meter on at least one occasion.

There were some small visible scratches on the surface of the prongs of the Perez's meter. The prongs are made of plated copper. A very slight amount of copper was visible on the prongs.

Metzler explained that the second meter he had with him was made by the same manufacturer who made (many years later) the Perez's meter. He stated that he had selected it from among PG&E's new meter stock and then inserted it into a receptacle. Then he began a test by extracting it from the receptacle, turning it over, and reinserting then extracting it again and reinserting it in its proper position. This whole sequence he described as one test cycle. He stated that he had to do 175 test cycles before enough coating was scraped off for any copper to be visible. He then continued the procedure 125 more times, for a total of 300. The resulting scrape marks showed a great deal of copper and were decidedly more pronounced than the faint scrape marks on the Perez's meter prongs.

Metzler testified that based on his experience investigating more than 2,000 cases of possible "energy diversion" since he began to do so in July 1981 and based specifically on observing wear on the prongs of meters where the customers told him how many times their meter was turned over, he concluded that the wear on the prongs of the Perez's meter indicated it had been turned over at least 50 and perhaps 200 times.

Metzler made an assumption that the Perez's meter was being turned over an average of five days per month. This assumption was based on two factors. One was that the meter reader observed it that way on November 18 and that Metzler observed it in the same position the fifth day from then, on the 22nd; the other is his review of the electrical consumption pattern at the Perez home.

This five-day per month assumption meant that 10 days use or 33% was not recorded by the meter, and so only about 66% of the electricity actually used was being registered. Assuming five days of diversion per month, Metzler looked at the energy usage pattern for the prior 22 months. He concluded that that period could reasonably be assumed to represent only 66% of actual usage, so he calculated the cost of the unmetered 33% during those months and came up with the additional charge of \$500.45.

The calculations are shown on the computer printout with a run date of January 10, 1983, which is a part of Exhibit 5.

Discussion

The Law

PU Code Section 532 requires each public utility to charge its customers according to the rates on file with the PUC. Further, it prohibits the utility from extending any privilege to one customer which is not extended to all others. Thus, if the utility discovers that it has--inadvertently or otherwise--extended the "privilege" of free electricity to a customer, that utility is obligated to collect the value of that free electricity, as set forth in the utility's tariffs, from the customer.

Section 453(a) also prohibits the utility from granting anyone an advantage as to charges or service. On the other hand, this section also prohibits the utility from subjecting the customer to any prejudice or disadvantage. It would clearly be prejudicial to charge the Perezes for more electricity than they used.

PG&E's only tariff rule to address meter error is Rule 17. Subsection (B)2 of that rule reads:

"(B) Adjustment of Bills for Meter E"

\* \* \*

"2. If, in the case of domestic or residential service, the meter, upon test as herein provided, is found not to register, or to register less than 75% of the actual consumption, an average bill, or a bill for the electricity consumed but not covered by the bills previously rendered for a period not to exceed three months, may be rendered to the customer by the Company, subject to review by the Public Utilities Commission."

This rule restricts such a billing to "a period not to exceed three months". Thus, PG&E apparently found this tariff restriction inapplicable when it attempted to collect for 22 months of undercollection. We believe that PG&E was not bound by the three-month restriction of Rule 17(B)2 in dealing with the matter before us. This is so because it is apparent that Rule 17(B) is aimed at defective equipment, not at errors caused by the fraudulent acts of customers or other persons having access to the meters. In this case, there is no question that a fraudulent act occurred.

However, even if Rule 17(B) is only applied to situations where no tampering has occurred, it ignores the clear requirement of both PU Code Sections 453(a) and 532 which prohibit the utility from granting any customer an advantage or a privilege not extended to all similarly situated customers. Obviously, if the utility can demonstrate that the customer's meter under-registered for more than three months it is both absurd and illegal to reward that customer with free electricity since it will ultimately be paid for by the utility's other customers. Thus, we believe Rule 17(B)2 is unclear in this respect and we will direct PG&E to amend it at once, and to file a new tariff rule addressing backbilling in cases of fraudulent or unauthorized use.

Though the record does not unequivocally indicate what person actually turned the Perez's meter over, it is clear that the meter (which was located in a fenced backyard, which was accessible only from the house and which contained two dogs) was inverted. Whether it was the customer's own hand that inverted the meter is not the central issue. What is significant here is that the meter was in a location under the sole control of Perez. Under such circumstances, PU Code Sections 453(a) and

532 required PG&E to hold Perez accountable for whatever tampering occurred. In fact, Perez agrees with this conclusion in his complaint where he states:

"...because this is our home and we live here and that even against my inner feelings of protest, ...I should pay for the actual usage."

The only remaining issue then is the reasonableness of PG&E's estimate.

We recognize that estimates of amounts of unmeasured electricity resulting from meter tampering are necessarily imprecise because there is no way to know precisely when the meter was inverted or for how long.

Occasionally a person wishing to obtain unmetered electricity will be so unsophisticated as to leave the meter upside down so many days that one month's reading will actually be less than the month before (see for example Decision 88936 dated June 13, 1978). Those who are somewhat more clever in their dishonest conduct will simply turn the meter over on occasion. In order to make an estimate of such occasional inversion PG&E personnel assume that a pattern of unmetered usage exists. In this case one inspector saw the meter inverted on day one (through a telescopic viewer from across a fence) and another, Metzler, saw it inverted on day five. Metzler assumed that the meter was also inverted for the three days between. This assumption was then checked against two other factors according to Metzler. One was the amount of wear on the meter prongs and the other was the history of usage at the Perez home. Wear on the prongs is a very subjective measure. It necessarily depends on at least two factors--the amount of plating over the



copper and the tightness of the fit of the prongs in the socket. By itself this test would be of dubious value, but when used by an expert as Metzler was shown to be to indicate a probable range of numbers of times the meter was inserted and extracted from the socket, it has some probative value.

This historical usage pattern also only presents an imprecise measure. In some instances historical usage will have been so regular that the change will be dramatically obvious. However, if historical usage has fluctuated, then the amount of unmetered usage becomes more difficult to discern.

Metzler testified that there were at least 50 and possibly 200 cycles of inversion of the meter. When he compared this evidence with the historical usage pattern he concluded that five days per month of unmetered electricity had been consumed by the Perez household for 22 months. If Metzler's minimum estimate of 50 inversion cycles is correct, and if his conclusion that the diversion took place for 22 months is also correct, then it must follow that the meter was not always inverted for five-day periods but usually for shorter periods, two or three times each month.

As we describe below, we think the usage pattern indicates that the meter was not inverted each month for five days but randomly inverted for shorter periods. However, we also think that the five-day average number of inversion days is the most reasonable estimate possible.

During the eight months which were billed since a new locked meter was installed at the Perez home only two monthly readings were taken by PG&E. The other six months were either not read or estimated.

If these less-than-precise figures are added with the readings from August 1978 forward, a fairly accurate five-year usage profile can be obtained. (See Exhibit 1.) When this data are arranged by month and all usage factors are assumed to be static, it appears that 8 of the 22 months in question show usage significantly below average. They are February, March, April, June, and November 1981 and June, July, and November 1982. In addition, though they show less significant deviation from the average, the readings for May and August 1981 and May 1982 also reasonably appear to portray less usage than should be expected.

In fact, if all the disputed months are deleted and monthly averages are calculated for the remaining months each of the 11 months listed above is at least 110 kilowatt-hours (kWh) below average. Of the remainder of the disputed months four show below average electrical consumption, the largest amount being 53 kWh. The other seven show above average consumption ranging from .02 kWh above average to 408 kWh above average.

We believe these calculations present a more accurate picture of which months may reasonably be assumed to have been months when meter inversion occurred at the Perez home than the assumption that the same pattern existed every month from the period reflected by the February 1981 bill until the discovery of the inverted meter in November 1982. We further believe that the only evidence available--the observations of the two PG&E meter readers--reasonably supports the magnitude of the under-registration which PG&E claims occurred during these months, and we will accept PG&E's calculations as the most accurate estimates available.

With respect to the Perez's testimony regarding factors which may have affected the usage pattern, we point out that so far, based only on a static usage assumption, we have not included the months of January through April of 1982 in the months which appear to be underregistrations. Kim Perez testified that her sister and sister's four children stayed at the Perez home for the months of January through April of 1982. Both Jerry and Kim Perez testified that the household used extra electricity during this time. Daily use of the electric dryer was one example. This is certainly reflected in the 1,000 kWh usage in April. That is more than 400 kWh above the monthly average. However, the combined January-February reading shows only about 65 kWh above average per month and the March reading was only about 8 kWh above average. We think it is reasonable to assume that these months would have reflected elevated usage levels similar to that recorded in April had the meter been properly registering throughout the month. Therefore, we are compelled to assume that January, February, and March 1982 were also months when the meter was inverted.

The Perez's testimony about another sister and children visiting for two weeks in either July or August 1982 does not affect our determination. We found July to be a month when inversion probably occurred based solely on monthly averages. We think August's reading was high enough to reflect some extra usage if it did occur that month.

We do not believe that the ceiling insulation and weather stripping installed in May 1982 can reasonably be expected to have had any effect on electrical usage in the summer months. Further, the water heater, which was wrapped with insulation at the same time, is gas.

We reiterate that this home is owned by Kim Perez's father, Don Ellis, and was occupied by him and various members of his family until June 1981 when the Perez family moved in. There was also uncontradicted testimony that Jerry Perez never notified PG&E that he was occupying the home. The service was only changed to Perez's name commencing with the bill of February 16, 1983, after this matter came to light.

At the hearing and in his complaint, Perez expressed his conviction that any billing problems occurring after he moved into the home in June 1981 were his responsibility even though the service was not in his name. This leaves the bills sent in February, March, April, and May 1981 in question. From the testimony it is clear that even prior to the occupancy of the home by the Perez family it was regarded as a family retreat to a large group of Don Ellis' family members including the Perez family. Therefore, since many of the same people made use of the house both before and after the Perezes moved in it appears that energy diversion was probably occurring in the four months prior to the Perezes moving in.

However, while we believe it is appropriate to charge Perez for electricity diverted during his tenancy, that occurring before can only be the responsibility of Mr. Ellis. Perhaps Perez will wish to pay the \$41.26 which appears to be owing for those months; however, no legal obligation rests with Perez for the billing periods ending in February, March, April, and May 1981.

Conclusion

Unmetered electricity was used by the Perez household during 1981 and 1982. It was unmetered because someone tampered with the meter. Because of the cause of the underregistration and considering all the factors presented to us in this hearing, we believe that the monthly average of five days of inversion was the best estimate PG&E could make. There is no totally accurate way to measure such fraudulent acts except for PG&E to send an employee to watch the meter 24 hours a day, every day. This would be impossible. Thus we accept PG&E's estimate of the monthly underregistration. We are persuaded, however, that such underregistration did not occur for all of the 22 months claimed by PG&E. Rather, it occurred during 10 months of Jerry Perez's occupancy. Therefore, by adding together PG&E's assessments for each of those months (Exhibit 5) we conclude that \$217.51 worth of electricity was diverted at this residence during Perez's occupancy in 1981 and 1982. Since, according to Kim Perez, the family is receiving Aid to Families with Dependent Children, we believe four equal monthly payments commencing with the effective date of this order would be an appropriate means of restitution.

Findings of Fact

1. The electric meter at the home presently occupied by Jerry Perez was inverted at certain random times during 1981 and 1982.
2. Inversion of the electric meter caused it to run backwards, thus deducting from, rather than adding to, the measurement of electricity being used.

3. PG&E presented Jerry Perez with a bill for \$500.45 to cover its claimed underregistration of electricity diversion of five days per month for 22 months commencing with the bill rendered in February 1981 and ending with the November 1982 bill.

4. Perez filed a complaint claiming the amount of billing was excessive and the terms for payment were unfair.

5. While disclaiming knowledge of it, Perez agrees that he is liable for any electrical diversion which occurred during his occupancy of the residence.

6. Jerry Perez did not move into the residence until June 1981 and did not have service put into his name until February 1983.

7. Prior to June 1981 the residence was occupied by Mrs. Perez's father, Don Ellis, and his family. Ellis still owns the house.

8. The electric meter is located in the fenced backyard of the residence. There is no ready access to it except from the house. Two dogs occupy the yard.

9. The meter was observed in an inverted position on two days, November 18 and November 22, 1982, by PG&E personnel.

10. Based on the two observations and the pattern of energy use PG&E estimated that the meter was inverted an average of five days per month.

11. A meter inverted for five days will fail to show 10 days of electric consumption. Thus only about 66% of actual usage will be registered. By multiplying registered usage by 150%, actual consumption can be derived.

12. Based on wear on the prongs of the meter and on the pattern of electrical use over a five-year period PG&E estimated that the meter had been regularly inverted five days a month for 22 months.

13. PG&E's tariff Rule 17(B)2 is the only rule addressing underregistration of electric meters. It only permits PG&E to collect for residential meter underregistrations for up to three months even if the underregistration was longer.

14. Perez, on his own initiative, made three monthly "protest payments" to PG&E totaling \$115. PG&E applied this money to Perez's bills.

Conclusions of Law

1. Unmetered electricity was consumed at the residence presently occupied by Jerry Perez during 1981 and 1982.

2. PG&E has an obligation under PU Code Sections 532 and 453(a) to collect undercollections from Jerry Perez for diversion of electricity caused by inverting the electric meter during his occupancy of the residence.

3. PG&E cannot collect from Perez for any diversion which occurred prior to his occupancy.

4. PG&E's method of determining the average number of days diversion occurred in a month is reasonable.

5. PG&E's determination of the number of months diversion occurred is not supported by reasonable assumptions based on bills rendered prior to and after the alleged diversions occurred.

6. Diversion during Perez's occupancy occurred for the billing periods ending in June, August, and November 1981 and January, February, March, May, June, July, and November 1982.

7. The total underregistration computed for the 10 months during which Perez occupied the residence results in \$217.51 worth of electricity which was received by Perez but not paid for.

8. Strict application of the three-month limitation in PG&E's Rule 17(B)2 would violate PU Code Sections 453(a) and 532 in that these sections prohibit the utility from granting any customer an advantage or privilege. Allowing a customer to have any electricity which he or she may have received by fraudulent means beyond the three-month backbilling limitation of this rule is clearly granting an advantage or privilege.

9. As presently drafted, Tariff Rule 17(B)2 applies only to meter malfunctions, not to meter tampering. Therefore, since no tariff rule applies to the present situation, it is governed by PU Code Sections 453(a) and 532.

10. PG&E should be required to file a tariff rule addressing backbilling in cases involving fraudulent or unauthorized use of electricity.

11. PG&E's application of Perez's "protest payments" to his regular bill was proper and does not prejudice Perez.

O R D E R

IT IS ORDERED that:

1. The complaint of Jerry Perez (Perez) is granted to the extent that Pacific Gas and Electric Company (PG&E) is prohibited from collecting additional electrical charges rendered to him for electricity diversion for the billing periods ending in February, March, April, May, July, September, October, and December 1981 and April, August, September, and October 1982.

2. PG&E shall collect from Perez \$217.51, the amount he owes for unmetered electricity received at his home in billing periods ending in June, August, and November 1981 and January, February, March, May, June, July, and November 1982.

3. Payment shall be in four approximately equal monthly installments commencing with the effective date of this order.



4. PG&E's tariff Rule 17(B)2 is hereby declared void to the extent that it violates PU Code Sections 453(a) and 532, in limiting the utility's ability, in situations involving fraud, to collect for underregistering meters beyond three months.

5. PG&E shall file an amended Rule 17(B)2, conforming to this decision, within 60 days.

6. PG&E shall file a tariff rule addressing the issue of backbilling in cases of fraudulent or unauthorized use of electricity.

7. The Executive Director shall serve copies of this decision upon all electrical utilities under this Commission's jurisdiction so that they will be aware of our action with respect to PG&E's Rule 17(B)2.

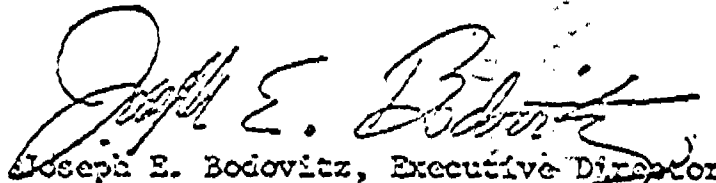
This order becomes effective 30 days from today.

Dated NOV 2 1983, at San Francisco, California.

LEONARD M. GRIMES, JR.  
President  
VICTOR CALVO  
PRISCILLA C. GREW  
WILLIAM T. BAGLEY  
Commissioners

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

I CERTIFY THAT THIS DECISION  
WAS APPROVED BY THE ABOVE  
COMMISSIONERS TODAY.

  
Joseph E. Bodovitz, Executive Director

Metzler testified that based on his experience investigating more than 2,000 cases of possible "energy diversion" since he began to do so in July 1981 and based specifically on observing wear on the prongs of meters where the customers told him how many times their meter was turned over, he concluded that the wear on the prongs of the Perez's meter indicated it had been turned over at least 50 and perhaps 200 times.

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This five-day per month assumption meant that 10 days use or 33% was not recorded by the meter, and so only about 66% of the electricity actually used was being registered. Assuming five days of diversion per month, Metzler looked at the energy usage pattern for the prior 22 months. He concluded that that period could reasonably be assumed to represent only 66% of actual usage, so he calculated the cost of the unmetered 33% during those months and came up with the additional charge of \$500.45.

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