

Decision 90 09 043 SEP 12 1990

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of Southern California Gas Company for authority to revise its rates effective October 1, 1989, in its Annual Cost Allocation Proceeding.

Application 89-04-021
(Filed April 12, 1989)

ORIGINAL

Application 89-05-006
(Filed May 4, 1989)

And related matters.

Application 89-06-025
(Filed June 16, 1989)

Application 89-06-033
(Filed June 16, 1989)

O P I N I O N

This decision adopts the incremental heat rate for calculating the cogenerators' gas limitation amount for Southern California Gas Company (SoCal) and San Diego Gas and Electric Company (SDG&E) in Phase II of their annual cost allocation proceedings (ACAP).

I. Procedural Background

In Decision (D.) 90-01-015, we resolved most ACAP issues for SoCal and SDG&E, but deferred two issues which are considered in Phase II of this proceeding. One issue is whether cogenerators that do not meet efficiency standards should be entitled to gas rates offered to utility electric generators (UEG). The other is whether the cogenerator gas limitation should be calculated on the basis of incremental energy rates (IER) or incremental heat rates (IHR).

On June 16, 1989, Southern California Edison Company (SCE) filed two applications seeking modifications to Resolution G-2738. SCE asks that the Resolution be modified to require SoCal to update its cogenerator gas limitation based on the most recent values for the IER. Because this issue is essentially the same one to be considered in Phase II of SoCal and SDG&E's ACAP, the matters were consolidated.

These matters were set for hearing in April, 1990. On the first day of hearing, SDG&E moved to defer hearings on the subject of efficiency standards for cogenerators in order that the parties might attempt to settle the matter. The assigned administrative law judge granted the motion and scheduled hearings to consider that issue at a later date.

Two days of hearings were held on the subject of whether the IER or the IHR is appropriate to use in calculating the CGA. The matter was submitted on May 30, 1990. SoCal, SDG&E, Pacific Gas and Electric Company (PG&E), California Cogeneration Council (CCC), Cogenerators of Southern California (CSC), Southern California Edison Company (SCE), Kelco Division of Merck & Co., Inc. (Kelco), and the Division of Ratepayer Advocates (DRA) filed briefs.

II. The IER, the IHR and the Cogeneration Gas Allowance

The issue in this proceeding concerns the application and interpretation of Public Utilities Code (Code) Section 454.4. That section states:

The Commission shall establish rates for gas which is utilized in cogeneration technology projects not higher than the rates established for gas utilized as fuel by an electric plant in the generation of electricity, except that this rate shall apply only to that quantity of gas which an electric corporation serving the area where a cogeneration technology project is located, or an equivalent area, would require

in the generation of an equivalent amount of electricity based on the corporation's average annual incremental heat rate and reasonable transmission losses or that quantity of gas actually consumed by the cogeneration technology project in the sequential production of electricity and steam, heat, or useful work, whichever is the lower quantity.

Simply stated, Section 454.4 requires that utilities offer cogenerators the same gas rates offered to utility electric generation (UEG) customers. This "parity" rate is offered to cogenerators only for the amount of gas the UEG would have required to generate the amount of electricity produced by the cogenerator. We refer to this gas quantity as the cogeneration gas allowance (CGA).

We first adopted a UEG-parity rate and the CGA in D.92792 with the objective of encouraging the efficient use of gas by cogenerators:

The intent of this order is to ensure that cogeneration facilities which are more thermally efficient than the utility pay no more for gas than the utility does for gas used to produce electricity.

We also found that the UEG-parity rate followed policies already put into place for payment by utilities to cogenerators for electricity purchases:

Setting the gas rate for cogeneration of electricity equal to that for utility generating plants is rational and consistent with avoided cost principles since the cogenerator's gas rate is at the same level the electric utility would have paid if it had consumed the gas. To the extent that the cogenerator displaces electric utility energy consumption, the avoided cost concept suggests that the cogenerator should get the benefits of that gas at the electric utility rate.

D.92792 was issued in March, 1981. In 1983, the California Legislature passed Section 454.4, codifying the policy first established in D.92792.

The principle of the CGA is not new. The appropriate method for determining the CGA, however, is yet unsettled. The utilities have developed two methods of calculating the CGA -- the IHR and the IER. The IHR is the actual incremental heat rate from UEG facilities using gas or oil. It is, more generally speaking, a measure of the efficiency of UEG plants using natural gas. The Commission adopted the IHR in D.92792 when gas or oil was almost always the marginal fuel.

The IER is a measure of the efficiency of electric resources on the margin. It measures the cost of all system resources, including power purchases and resources that do not use natural gas. The IER has historically been used to determine avoided cost payments to Qualifying Facilities (QF). In Resolution G-2738, however, we approved Pacific Gas and Electric's (PG&E) request to use the IER in calculating the CGA. Resolution G-2738, issued in October 1987, states:

The Incremental Energy Rate is an appropriate measure of a utility's electric generation efficiency from which to determine the natural gas allowance to cogenerators when resources other than gas or oil are used at the margin.

Whether the IER or IHR is used affects the relative liability of cogenerators and UEG customers for the gas utility's revenue requirement. If the IER is applied, UEG customers assume less liability for gas utility revenue requirement, relative to cogenerators, than if the IHR is applied. The opposite is true when the IHR is used to calculate the CGA. Predictably, cogeneration customers support the use of the IHR. The UEGs and the combined utilities support the use of the IER.

III. Positions of the Parties

A. SoCal

SoCal advocates the use of the IHR, which it has used consistently. SoCal believes the IHR complies with the spirit and letter of Section 454.4, while the IER does not. It argues that the intent of the Commission in D.92792 and the Legislation in passing 454.4 is clear: to insure that cogeneration facilities would have access to the same quality of gas service at the same price as would electric utilities generating an equivalent quantity of electricity from natural gas. Specifically, SoCal cites Section 454.4 which states that the cogeneration gas rate shall apply "to that quantity of gas which an electrical corporation would require in the generation of an equivalent amount of electricity based upon the corporation's average annual incremental heat rate." SoCal points out the statute does not direct the utilities to use the cost of generation from sources other than natural gas, as would be necessary under the IER methodology.

In support of its view that Section 454.4 intends that the utilities use the IHR, SoCal comments that the Code Section was enacted after the issuance of D.92792 and before the Commission approved the use of the IER for calculating the CGA.

SoCal also argues that the IER is not, as some parties suggest, a concept which is interchangeable with the IHR and is not a thermal heat rate. Rather, according to SoCal, the IER is a mathematical expression which is the cost avoided by the utility from purchasing electricity from a QF expressed in dollars per million Btus.

SoCal states the IER calculation includes costs of electrical generation and electricity from other sources. Section 454.4, according to SoCal, refers clearly to "the quantity of gas which an electrical corporation would require in the generation of an equivalent amount of electricity."

SoCal also argues against the use of the IER on equity grounds. First, applying the IER may cause cogenerators' gas bills to rise as much as 10%. Second, using the IER, higher gas prices are passed on disproportionately to cogenerators, in contrast to using the IHR, under which gas cost increases and decreases are passed along equally to cogenerators and UEGs. Finally, SoCal explains that some cogenerators served by SoCal sell electricity to municipalities which are not subject to Commission regulation in the development of the IER. Cogenerators selling electricity to municipalities would continue having the IHR applied to calculate the CGA. SoCal argues that if it were required to calculate the CGA using the IER, cogenerators selling power to the investor-owned utilities would unjustifiably pay more for gas than those selling power to the municipalities.

Finally, SoCal comments that proponents are arguing that circumstances have changed because gas is no longer the marginal fuel in all cases and therefore policy should change. According to SoCal, the IER may be good policy, but it is not consistent with Section 454.4.

B. SDG&E

SDG&E generally comments that the Commission has already determined that the IER is the appropriate method for estimating the CGA. The Commission, according to SDG&E, has consistently ruled that the cogeneration gas rate should apply only to the extent that the cogenerator causes the electric utility to avoid burning natural gas.

SDG&E argues that the term "average incremental heat rate" was a term of art used in both D.92792 and Section 454.4 to measure system efficiency at the margin. The term has changed but the concept has not. According to SDG&E, proponents of the IHR ask the Commission to reverse its rule that the CGA should be based on the avoided energy cost based on units at the margin.

SDG&E is also critical of SoCal's calculation of the IHR which, according to SDG&E, does not consider incremental units at all.

C. PG&E

PG&E supports the application of the IER, which the Commission approved for PG&E in Resolution G-2738. PG&E supports its view by asserting that the primary intent of the CGA is to put cogenerators on an equal footing with the utility by ensuring that the amount of gas qualifying for the parity rate is equivalent to "the amount of fuel a utility would have consumed to make up the next increment of power." PG&E argues that the IHR is no longer an appropriate measure of production efficiency because gas and oil are no longer exclusively at the margin.

In support of its position, PG&E cites D.83-12-068, in which the Commission stated,

In this proceeding, IERs were referred to as Incremental Heat Rates. However, we now use terminology adopted in Decision No. 83-09-054, and refer to IHRs as IERs.

Using the IHR, according to PG&E, leads to an assumption that the utility must use more fuel to produce a unit of electricity than it actually does whenever either gas or oil is not the marginal fuel.

D. SCE

SCE argues that SoCal's calculation for the CGA is contrary to Section 454.4 because it is not an "average annual incremental heat rate" but an average heat rate. The IHR and the IER, according to SCE, are essentially the same concept and have been used interchangeably by the Commission. SoCal is using the average heat rate (AHR), according to SCE, because it has never asked SCE for IHR values, only AHR values. SoCal admits, according to SCE, that it does not know how to calculate an IHR.

SCE makes comments similar to PG&E's regarding the history of the CGA.

B. CSC, Kelco, CCC

The cogenerators' analyses of the appropriate method for determining the CGA are similar to SoCal's. They argue that the IER and the IHR are not interchangeable terms, which the Commission recognized in D.83-12-068 where it stated the IER "is not a heat rate at all." CCC adds that the Commission and the Legislature knew the distinctions between IER and IHR when Section 454.4 was passed and the plain language of the statute requires the use of an IHR.

CCC and Kelco add that Resolution G-2738, which adopted the IER for PG&E, was based on the results of an informal workshop and was not subject to hearings or an evidentiary record. The resolution, according to CCC and Kelco, does not appear to have considered the legal questions of compliance with Section 454.4 and is in no way binding on the Commission.

CSC states no party to the proceeding has proposed a method for calculating the IHR. SoCal uses an average heat rate (AHR). SCE and SDG&E advocate an IER. However, according to Kelco and CSC, SoCal's method provides a much more accurate and reasonable estimate of "that quantity of gas which the electric corporation...would require in the generation of an equivalent amount of electricity," as required by statute. CSC believes it is reasonable because it is a measure of thermal efficiency rather than a costing methodology, accounts for all the electricity produced by cogenerators in setting the CGA, and does not reflect non-gas-fired resource efficiencies in calculating the CGA. The IER is not as reliable as SoCal's method, according to the cogenerators, because it is based on a forecast rather than actual data and fails to include the effects of cogenerated energy sold to electric utilities under fixed price contracts.

CSC adds that the IER is clearly contrary to Section 454.4 because using it could result in cogenerators' getting no parity rate when no gas is displaced at the margin by cogeneration.

According to CSC, the Legislature intended that cogenerators are entitled to purchase gas at the parity rate, so long as the QFs use the gas at least as efficiently as the gas-fired electric generating units of the utility -- regardless of whether the units are on the margin or are baseload plants.

Kelco comments that using the IER in developing the CGA would, in certain circumstances, produce a situation in which an electric utility would pay less for gas consumed in its power plants than a more efficient cogenerator.

F. DRA

DRA supports adoption of the IER. It argues that the IER is an incremental measurement of efficiency, as required by Section 454.4. Although the IER is not a heat rate, it appropriately represents system efficiency. Like other parties, DRA states that SoCal's methodology is not an incremental measure, but an average measure. In sum, DRA believes the IER embodies the concept of the incremental heat rate stated in Section 454.4.

IV. Discussion

The threshold issue in this decision is how Section 454.4 limits the utilities' calculations of the CGA, or more specifically, whether the use of either or both the IER and IHR is consistent with the Code. When that issue is resolved, we may consider the matter of whether either method is superior from a policy standpoint.

First, we clarify some confusion over the use of the terms IHR and IER. Commission decisions indicate that the two terms have been used interchangeably by parties to our proceedings. Our decisions, however, make clear that the Commission has distinguished the two. D.83-09-054 found "the incremental energy rate has been referred to by some parties as the derived or incremental heat rate which is incorrect." Similarly, D.83-12-068,

PG&E's general rate case for test year 1984, stated "In this proceeding, IERs were referred to as Incremental Heat Rates (IHRs). However, we now use terminology adopted in D.83-09-054, and refer to IHRs and IERs. This modification is made to reduce confusion about the relationship between the systemwide IER, which is not a heat rate at all, and the heat rates of individual utility plants."

These statements make clear that the Commission has distinguished IERs from IHRs. Although either the IER or the IHR may arguably be used in deriving the CGA, the two methods are not necessarily interchangeable and have not been used by the Commission interchangeably. We therefore proceed to determine the requirements of Section 454.4.

Section 454.4 requires the CGA to be calculated using the "average annual incremental heat rate." All of the parties acknowledge that the IER is not a heat rate. It is a measure of systemwide efficiency that measures incremental costs notwithstanding the generation source. Parties supporting the use of the IER argue that the IER is consistent with the intent of Section 454.4. We agree that the IER may in fact fulfill the objectives of the statute. However, before analyzing the underlying intent of the code section, we must consider the plain language of the statute. The plain language of Section 454.4 refers to an incremental heat rate and does not mention an incremental energy rate. The IHR is a heat rate and is therefore the methodology required by the Section 454.4 for calculating the CGA.

Under our interpretation of Section 454.4, SoCal's preferred methodology, the IHR, is the lawful methodology. SoCal, however, does not currently use the incremental heat rate. SoCal's calculation of the CGA is based on average, not incremental, heat rates. We recognize that it may be easier to calculate an average value than an incremental value. Section 454.4 nevertheless requires the CGA be calculated using incremental values. We will

direct SoCal to revise its calculations and develop a true average annual incremental heat rate.

Although we interpret the Code to require the use of an IHR, we are not convinced that the IHR best fulfills our objective. That objective is to encourage efficient resource use in the state by providing cogenerators a gas rate comparable to the rate offered to UEGs when cogenerator productivity is superior to that of UEGs. From a policy standpoint, the IER is a better measure of the savings attributable to cogenerators than the IHR when oil and gas are not burned on the margin.

At the time we adopted the IHR, gas and oil were marginal fuel sources. In that context, the use of an IHR was logical. In fact, when oil and gas are on the margin, the IHR and the IER will produce the same results. It is clear, however, that the Commission intended to promote efficient resource use, whether or not gas and oil were on the margin. According to D.92972, the incentive gas rate was to be available to cogenerators "to the extent that the cogenerator displaces electric utility gas consumption". If the cogenerator does not displace the marginal resource, it should not qualify for a discounted gas rate. With this in mind, the IER makes more sense than the IHR for calculating the CGA except when the marginal fuel is gas. The IER would permit a discounted gas rate to cogenerators to the extent their production is less expensive than other system resources.

We agree with the cogenerators that current calculations of the IER may not perfectly represent systemwide efficiency because, for example, they do not include the effects of all cogenerators on the system. We believe, however, that the IER, even with its flaws, is conceptually superior to the IHR for purposes of calculating the CGA.

To conclude, we affirm our view expressed in Resolution G-2787 that "The IER is an appropriate measure of a utility's electric generation efficiency from which to determine the natural

gas allowance to cogenerators when resources other than gas or oil are used at the margin."

In order to assure that the state's resources are used efficiently, we will seek a legislative change to Section 454.4 so that it requires the use of the IER in calculating the CGA. However, until and unless such a change is made, the IHR is the appropriate method for determining the CGA.

Findings of Fact

1. D.90-01-015 deferred resolution of the issue of whether the IER or IHR should be used to calculate the CGA.
2. The Commission, in D.92792, provided that cogenerators should be provided a "UEG-parity rate," which is gas rate equal to that of UEGs where their thermal efficiency is better than that of UEGs.
3. Section 454.4 codified the UEG-parity rate and the method for calculating the volumes to which it would apply.
4. The IHR is an incremental heat rate of individual utility plants and measures the efficiency of their gas or oil use.
5. The IER is an estimated measure of the incremental systemwide efficiency of electric resources, notwithstanding their fuel or energy source. The IER is not a heat rate.
6. The IER and IHR are distinguishable and have been distinguished by the Commission in D.83-09-54 and D.83-12-068.
7. SoCal's calculation of the CGA uses an average heat rate, not an incremental heat rate.
8. The IER is a better measure of the value of cogenerators' productivity than the IHR where gas or oil are not on the margin.
9. Where gas or oil are not the marginal resources, the IER is more appropriate than the IHR for calculating the CGA.

Conclusions of Law

1. Section 454.4 requires the CGA to be calculated using an incremental heat rate.

2. SoCal should be directed to revise its calculation of the CGA by using an incremental heat rate, rather than an average heat rate.

O R D E R

IT IS ORDERED that:

1. Southern California Gas Company shall file by advice letter, within 30 days of the effective date of this decision, tariff changes which reflect application of an average annual incremental heat rate for determining the cogeneration gas allowance as set forth in this decision. It shall serve the advice letter and proposed tariff changes on all parties to this proceeding.

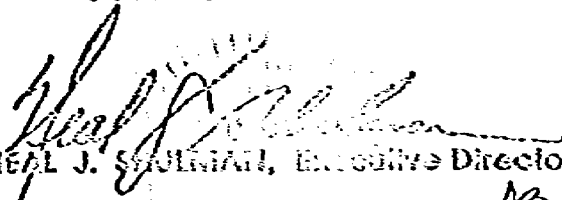
2. Application 89-06-025, filed by Southern California Edison Company, is denied.

3. Application 89-06-033, filed by Southern California Edison Company, is denied.

This order becomes effective 30 days from today.

Dated SEP 12 1990, at San Francisco, California.

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


NEAL J. STULMICK, Executive Director

G. MITCHELL WILK
President
FREDERICK R. DUDA
STANLEY W. HULETT
PATRICIA M. ECKERT
Commissioners

Commissioner John B. Ohanian,
being necessarily absent, did
not participate.