DRAFT

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

ENERGY DIVISION

ID #8529
RESOLUTION E-4246
June 4, 2009

R E S O L U T I O N

RESOLUTION E-4246. Pacific Gas and Electric Company (PG&E), San Diego Gas and Electric Company (SDG&E), and Southern California Edison Company (SCE) request approval of their method for calculating the Market Index Formula. Their request is approved in part and denied in part.

By PG&E Advice Letter (AL) 3180-E, SDG&E AL 1952-E, and SCE AL 2193-E filed on December 17, 2007.

SUMMARY

This Resolution defines how the new qualifying facility (QF) energy pricing will be implemented for the new short run avoided cost (SRAC) calculation. The new calculation involves a Market Index Formula (MIF) that is indexed to gas and energy forward prices. The time of delivery (TOD) will influence the entire MIF and thus energy price. *Natural Gas Week*, *Natural Gas Intelligence*, and *Platts Gas Daily* will be the sources for natural gas forward prices. *Platts-ICE Forward Curve-Electricity (North America), Kiodex, and either Tullet Liberty or Tullet Prebon* will be the three sources for energy forward data in the MIF. The variable operations and maintenance (O&M) costs will be updated monthly and future O&M costs will be used to calculate future energy prices.

BACKGROUND

The Commission adopted a market index formula to calculate short run avoided cost for use in qualifying facility (QF) contracts.

Decision (D.) 07-09-040, hereafter referred to as "the Decision," adopted specific policies and pricing mechanisms applicable to the purchase of energy and capacity from Qualifying Facilities (QFs) by the Pacific Gas and Electric

Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) (collectively, the Utilities). Among other things, the Decision adopted a new methodology for calculating short run avoided cost (SRAC) using the Market Index Formula (MIF). The Decision ordered a workshop and required the PG&E, SCE, and SDG&E to file a joint advice letter (AL) that described in detail how to implement the energy pricing, including exact data sets, within 30 days of the workshop. Energy Division (ED) held the workshop on November 14-15, 2007. The Utilities were also required to file individual advice letters within 60 days of the workshop with their proposed standard offer QF contracts.

Three applications for rehearing of D.07-09-040 were filed on October 25, 2007. One was filed jointly by the Utilities, The Utility Reform Network (TURN), and the Division of Ratepayer Advocates (DRA). A joint application for rehearing was also filed by the Cogeneration Association of California and the Energy Producers and Users Coalition (CAC/EPUC). Finally, an application for rehearing was filed by the California Cogeneration Council (CCC). The Commission addressed all three applications for rehearing of D.07-09-040 in D.08-07-048. Among other things, D.08-07-048 addressed the calculation of TOD factors in the MIF.

During the technical workshop held on November 14-15, 2007, parties reached agreement on various issues. Among other things, parties agreed on how certain components of the SRAC formula should be determined. Energy Division, however, subsequently determined that there were discrepancies between the agreements reached during the workshop and the requirements of D.07-09-040. On February 6, 2008, Energy Division sent an email to the parties listing the discrepancies and advised parties to file a petition to modify D.07-09-040.[1]

In compliance with the Decision, PG&E, SCE, and SDG&E filed a joint advice letter (Joint Advice Letter), numbered PG&E AL 3180-E, SDG&E AL 1952-E, and SCE AL 2193-E, on December 17, 2007. The Utilities requested adoption of a proposed MIF and addressed the basic formula, how gas prices are determined,

1. D.08-09-024 p. 2

time of delivery pricing and periods, calculation of market heat rates, and data sources.

D.01-01-007 spells out the adjustment mechanism to QF prices due to line losses by using CAISO-supplied generator meter multiplier (GMM) data. With the adoption of Locational Marginal Pricing under MRTU, CAISO will no longer furnish GMM data to the market participants. In response, on January 16, 2008 PG&E filed a petition to modify D.01-01-007.

On March 3, 2008, the Independent Energy Producers Association (IEP) and CAC/EPUC filed a joint petition requesting that the Decision be modified to adopt the agreements reached during the workshop. This joint petition for modification was granted in part in D.08-09-024, issued on September 18, 2008. Specifically, D.08-09-024 granted the request to update intrastate transportation rates on a monthly basis and clarified the sources of data to be used in calculating the MIF.

On October 3, 2008, the Independent Energy Producers Association (IEP), the Cogeneration Association of California (CAC), the Energy Producers and users Coalition (EPUC) and the California Cogeneration Council (CCC) (collectively, QF Parties) filed a joint petition to modify Decision (D.) 08-07-048. D.09-04-032 addressing the joint petition for modification was adopted on April 16, 2009. D.09-04-032 spells out the precise terms under which the Utilities may file for retroactive true-up of the SRAC energy payments using the MIF.

The MIF resulted from the Commission's efforts in D.07-09-040 to improve on the accuracy of the short-run avoided cost (SRAC) payment calculations by replacing the Modified Transition Formula adopted in D.01-03-067 with the MIF. Among other things, the MIF differs from the Modified Transition Formula in one important respect by incorporating a market heat rate component into the incremental heat rate term (IER). The IER term in the MIF is now defined as the average of an administrative heat rate (AHR) component and a market heat rate.

The Decision specifies the AHR for each utility as follows:

PG&E = 9,794 Btu/kWh
SCE = 9,705 Btu/kWh
SDG&E = 9,603 Btu/kWh

As ordered by D.08-11-062, the AHR terms adopted in the Decision for PG&E, SCE, and SDG&E are currently under reconsideration by the Commission.

The MIF calculates the SRAC for any one month by taking an average gas price at the burner-tip; this includes both the cost of gas at one of several transmission points at the California state border where gas is imported into California and the cost to transport the gas from the border points to the Utilities. The price of the gas is then multiplied by an energy rate to arrive at the cost to convert the gas into electricity. These costs are taken for both on-peak and off-peak and a weighted average is taken. The operations and maintenance cost for running the generator is then added, resulting in SRAC.

The Utilities proposed to exclude the operations and maintenance adder from the TOD product.

In their advice letters, PG&E, SDG&E, and SCE requested that the Commission approve their method of calculating the MIF. The Utilities propose to pay the QFs the same amount for O&M costs regardless of when the energy is produced during the day. The Utilities define the MIF as:

$$Pn = \left[IER * \frac{(GPn + GTn)}{10{,}000} \right] * TOD \quad factor + O\,\&\,M$$

where:

Pn = Calculated SRAC energy price, ¢/kWh
IER = Incremental Energy Rate = 0.5 x AHR + 0.5 x MHR, Btu/kWh
MHR = Market Heat Rate, Btu/kWh
AHR = Administrative Heat Rate, Btu/kWh
GPn = Gas price, $/MMBtu
GTn = Intrastate transportation costs, $/MMBtu
10,000 = Unit conversion factor = [$1/100 ¢] x [1,000,000 Btu / MMBtu]
TOD Factor = Appropriate Time of Delivery Factor
O&M = Variable operations and maintenance cost adder, ¢/kWh

The Utilities request the use of distinct publications for gas prices.

The Decision adopts the use of a burner-tip gas price, defined as the sum of border gas price and the intrastate transportation cost. The Utilities propose to use an average of the bidweek index prices for the gas price, GPn. The three

Utilities request the use of *Natural Gas Week* and *Natural Gas Intelligence* as two sources of forward gas prices for use in the MIF, but disagree on the third publication. SCE and SDG&E request the additional use of *BTU Daily Gas Wire*. PG&E prefers *Platts Gas Daily* as its third publication. The Utilities justify their selection by claiming that they are requesting the publications that are currently used in the SRAC calculation. The Decision states that SCE and SDG&E will use the gas prices at Topock, Arizona and PG&E will use a simple average of the gas prices at Malin, Oregon and Topock.

SCE and PG&E propose the use of proxies in calculating future burner-tip gas prices.

The Utilities propose the following approach to calculating the transportation component of the gas forward price:

The Utilities propose to use the sum of the Henry Hub price and the basis differential for California for the forward gas price calculation used in the MHR since the California border price is not available. The Clearport SoCal basis differential is the mathematical difference in the average gas prices between Henry Hub in Louisiana and Southern California.

SCE: SCE claims that a component of the intrastate transportation rate is not available as a forecasted value. SCE proposes substituting the market value of future Southern California border gas represented by:

NYMEX Henry Hub price + Clearport SoCal basis differential

for G-CPA in the SCE intrastate transportation rate, GTn, formula. SCE claims that there has been almost perfect correspondence between G-CPA and the Southern California border bidweek price over the last 5 years.

PG&E: Backbone transport rates, part of PG&E's proposed GTn calculation, will come from Gas Accord IV through 2010. PG&E does not propose a source for backbone transportation rates beyond 2010 because none are available today. PG&E recommends that the future G-SUR value be "based on the G-SUR franchise fee factor and a G-SUR WACOG proxy…based on the forward average

California border price".[2] PG&E claims that the G-SUR WACOG and its proxy corresponded nearly 100%. PG&E defines its forward average gas price at the burner-tip as:

NYMEX Henry Hub price + average (Clearport SoCal basis differential and Malin) + GTn

SDG&E: Follows the formula laid out in the Decision:

NYMEX Henry Hub price + Clearport SoCal basis differential + GTn

The Utilities request distinct methods for calculating their intrastate transportation rates.

The Utilities propose that "[a]ny change in these costs under tariffed rates will be reflected immediately in the next subsequent SRAC posting."[3] The Utilities request intrastate transportation rates, GTn, according to the following methods of calculation:

> SCE: …using the tariffed transportation rates for Southern California Gas Company as follows: (GT-F5) + (ITCS) + (G-MSUR)
>
> > [The Southern California Gas Company tariff defines these terms as]:
> >
> > GT-F5 = Firm Intrastate Transmission Service, for electric generation, for customers using 3 million therms or more per year...
> >
> > ITCS = Interstate Transition Cost Surcharge...

2. Joint Advice Letter p. 11

3. Id. p. 4

G-MSUR= Transported Gas Municipal Surcharge... = Surcharge % outside the city of Los Angeles x (G-CPA) x Imputed Franchise Fee Factor.

G-CPA = The rate used for purposes of calculating the municipal surcharge as defined in Schedule No. G-MSUR...

SDG&E: …[using the] sum of SDG&E's tariffed transportation rates: EG + GP-SUR.

Where:

EG = "Natural Gas Intrastate Transportation Service for Electric Generating Customers."…"for customers using 3 million therms or more per year."

GP-SUR = …Surcharge % outside the City of San Diego x GPC-S.

GPC-S = …as defined in Schedule GP-SUR...Surcharge % outside the City of San Diego * GPn…

PG&E: GTn is the sum of PG&E's tariffed transportation rates for:

(Backbone Transmission) + (Local Transmission) + G-SUR or [G-AFT] + Rule 21 Shrinkage + [G-EG] + G-SUR…

Where:

Backbone Transmission = Average of the Redwood and Baja path transmission rates…For backbone rates, PG&E uses firm G-AFT Redwood On-System and Baja

> On-System rates at the full contract rate, plus applicable shrinkage for the relevant delivery paths…
>
> Local Transmission = Applicable variable transportation usage charge for electric generator service under the G-EG tariff for non-backbone customers…
>
> G-SUR = Gas Franchise Fee Surcharge, based on the average daily rate expected to be in effect during the SRAC posting month.[4]

SDG&E claims that their formula will provide consistency and more prompt posting of their monthly SRAC price. PG&E asserts that the use of the Redwood and Baja paths is consistent with using the Malin and Topock gas indices. For local transmission, PG&E does not include monthly access charges since PG&E does not consider these charges avoidable costs.

The Utilities request that the O&M adder start at 0.25¢/kWh for 2004, as specified in the Decision, and increase by 2% per annum each January thereafter.

The Decision requires the use of the Market Price Referent (MPR) time of delivery (TOD) factors.

PG&E and SDG&E argue that an energy-only version of its MPR TOD factors mapped from the MPR TOD periods to the QF TOD periods is appropriate. PG&E requests the following TOD factors:

	Summer	**Winter**
On-Peak	1.3011	None
Partial-Peak	1.0807	1.1497
Off-Peak	0.9050	0.9700
Super Off-Peak	0.7614	0.8282

4. Id. pp. 4-6

SCE requests the continued use of their current QF TOD factors. SCE claims that the energy portion of the MPR TOD factors is very similar to its current QF TOD factors.

SDG&E mapped their MPR TOD factors to the QF TOD periods. It requests the following TOD factors:

	Summer	**Winter**
On-Peak	1.4980	1.3439
Semi-Peak	0.9861	1.1612
Off-Peak	0.8727	0.9875
Super Off-Peak	0.5739	0.6935

The Utilities request that the Market Heat Rate (MHR) be calculated from the mean of daily 12-month forward MHRs.

The formula for calculating a heat rate is:

$$HR = \frac{energy \quad forward \quad - O\&M \quad forward}{burnertip \quad gas \quad forward}$$ [5]

The Utilities propose calculating each month's MHR by taking forward gas and energy prices for each day in the month. Only days that have a year of forward gas and forward energy prices (peak and off-peak) available will be used in the calculation. A heat rate will be calculated for each of the 12 forward months for each day. The mean of the 12 monthly forward prices will be calculated to give the forward price for each day. The mean of the daily prices will be used to calculate the MHR for the month. The Utilities request the energy price be the average on-peak and off-peak price weighted according to the number of on and off-peak hours in the month. In order to calculate each month's MHR, the Utilities propose to use O&M and burner-tip gas values for the forward month.

5. Adapted from Table 3 of D.07-09-040

The Utilities propose to use different publications to obtain energy forward prices for the MHR.

The Utilities request the use of the following energy forward prices to be used to determine the MHR:

SCE: Kiodex, Platt's Megawatt Daily, and Tullet Liberty

SDG&E: Platt's Megawatt Daily and Tullet Prebon

PG&E: Intercontinental Exchange (ICE) forward settlement prices and Platt's Megawatt Daily

For months when only quarterly values are available, the Utilities propose to use the quarterly value.

The Utilities propose that they post the monthly MIF value within two business days of receiving the required information. The Utilities plan to submit the data and underlying calculations to the CPUC.

NOTICE

Notice of this request was made by publication in the Commission's Daily Calendar on December 24, 2007. PG&E, SDG&E, and SCE state that a copy of the request was mailed and distributed in accordance with Section IV of General Order 96-B.

PROTESTS

PG&E, SDG&E, and SCE's request was timely protested by IEP on January 7, 2008 and by CCC, and CAC/EPUC on January 14th. Aglet Consumer Alliance (Aglet) filed a response on January 14th. **PG&E, SDG&E, and SCE responded to the filings of CCC, Aglet, CAC/EPUC, and IEP on January 22, 2008.**

The QF parties primarily address the structure of the MIF, intrastate transportation costs, TOD facts, electricity forward sources, uniformity of the O&M adder, access to data sources, and consistency of data sources in their protests. The following is a more detailed summary of the major issues raised.

The Utilities' responses to the protests primarily cover the application of the O&M factor, sources of forward prices, robustness of the Clearport SoCal basis, gas transportation rates, TOD factors, number of sources that are necessary, uniformity of the O&M adder, and access to proprietary data.

1. CCC asserts that the TOD factor should be applied as a product to the entire SRAC formula.

The use of the TOD factor was the one point of contention in the basic formula for the MIF. CCC argued that TOD factor should be a product with all of the rest of the variables and the basic formula should be:

$$Pn = \left(\left[IER * \frac{(GPn + GTn)}{10{,}000} \right] + O\,\&\,M \right) * TOD \quad factor$$

CCC justified this difference based on the Decision in three ways. First, the Decision presents the formula for the SRAC energy price as:

$$Pn = \left[IER * \frac{(GPn + GTn)}{10{,}000} \right] + O\,\&\,M$$ [6]

without including a TOD factor. Second, the Decision states:

> For PG&E, SCE, and SDG&E: Same as SCE's current SRAC formula as adopted in D.01-03-067, with the exception that the heat rate component…will be calculated as the average of a market derived heat rate and the existing, administratively determined heat rate for each respective utility pursuant to prior commission decisions.[7]

6. D.07-09-040 p. 67

7. D.07-09-040 Table 1

CCC points out that all of the current Utility SRAC formulas include the TOD factor as a product with the rest of the SRAC formula. Third, "the MPR [TOD] factors are applied to the full MPR price."[8]

1a. PG&E and SCE claim that O&M costs should not be time differentiated.

PG&E replies that the Decision adopted TOD/TOU factors to be "consistent with adopted TOU factors for the Market Price Referent (MPR)" but the Decision did not specify precisely how the MIF formula must reflect the requisite TOU factors. PG&E asserts that the MPR does not consider O&M to be time differentiated.[9] PG&E further states that the history of QF energy pricing has typically implemented the O&M as non-time varying.

PG&E contends that the MPR uses an annual average variable O&M that is escalated annually. PG&E and SCE claim that, in 1994-1995, O&M was not time differentiated. Baseload generators would not be affected by time differentiating the O&M. O&M that varies over time provides an incentive for generators to reduce output during time periods with a low TOD factor. SCE claims that the Decision is silent on the application of TOD factors.

2. IEP and CCC declare that the O&M adder should be escalated on a monthly, rather than annual, basis.

IEP declares that the O&M adder should be escalated monthly to avoid double counting and reflect the actual increase in costs. CCC proposes using the current month's annual O&M adder to calculate the MHR and can accept IEP's proposal as well.

2a. The Utilities argue that the O&M costs should be escalated once a year and match the forward energy price.

PG&E asserts that forward prices include forward O&M costs to avoid compensating the QFs above the SRAC. The Utilities contend that O&M costs

8. CCC Protest p. 7

9. PG&E reply comments to CCC protest p. 8

should be escalated once a year citing the Decision's use of the language: "the O&M shall be escalated by 2% per year, consistent with Advice Letter 1687-E."[10] SDG&E claims that AL 1687-E calls for escalating O&M annually. PG&E and SDG&E point out that CCC's proposal to increase O&M by 1/12 of 2% each month would lead to a greater than 2% escalation due to compounding. Due to the small magnitude of the variable O&M adder relative to the other terms in the MIF, the method of escalation will have little actual effect on the SRAC.

3. CCC and IEP propose alternate TOD factors for SCE and PG&E; CCC supports SDG&E's proposed TOD factors.

CCC points out that SCE's proposal to continue to use the same QF TOD factors is contrary to the Decision's adoption of the MPR TOD factors. CCC and IEP propose the use of the energy-only portion of the TOD factors SCE presented in its "Supplement to its Proposal for Benchmarking and Evaluating Time-of-Delivery Profiles" in R.04-04-026.

CCC argues that there is no reason for PG&E to normalize its TOD factors on a monthly basis. PG&E has refused to provide the QF parties (CCC, CAC/EPUC, and IEP) the derivation of its proposed TOD factors. IEP and CCC contend that they should be able to verify that the factors are derived correctly. IEP claims that PG&E's refusal to provide the underlying data is in violation of 18 C.F.R. 292.302. CCC and IEP propose to use TOD factors for PG&E and SCE that are derived using SCE's Benchmarking methodology presented in R.04-04-26. For SCE, CCC proposes:

	Summer	**Winter**
On-Peak	1.853	Not Applicable (NA)
Semi-Peak	1.230	1.173
Off-Peak	0.824	0.934
Super Off-Peak	NA	0.626

10. D.07-09-040 p. 70

and for PG&E:

	Summer	**Winter**
On-Peak	1.663	NA
Semi-Peak	1.405	0.995
Off-Peak	1.023	0.792
Super Off-Peak	0.697	0.590

IEP argues that their proposed TOD factors are more representative of the actual value of the energy.

CCC and IEP find SDG&E's proposed TOD factors to be fully compliant with D.07-09-040.

3a. SCE and PG&E provide further explanation for their formulation of TOD factors.

PG&E asserts that it is standard practice to use proprietary data to formulate TOD factors. PG&E claims that the only concern raised by the QF parties about their TOD factors is their basis of proprietary data. The Decision calls for TOD factors that correspond to the MPR. These factors are based upon proprietary data. PG&E maintains that ED can verify its integrity.

PG&E declares that QF TODs should be normalized each month because the SRAC is calculated monthly unlike the MPR, which is calculated on an annual basis. SCE asserts that the QF TOD factors are more appropriate than the MPR TOD factors because they are normalized to one each month.

SCE claims that it no longer has the data necessary to calculate the energy-only MPR TOD factors for 2004. The TOD factors proposed by CCC and IEP are not exact energy-only TOD factors, but an approximation instead. SCE claims that their QF TOD factors and the energy-only MPR TOD factors are on average within 4.7% of each other.

4. CCC and IEP assert that PG&E does not use the appropriate backbone rate in PG&E's proposed intrastate transportation rate for gas.

PG&E proposes to incorporate a backbone rate into its intrastate transportation cost, GTn. CCC argues that a marginal supply transported over a short period is more reflective of a market-based approach and avoided cost. CCC claims that the rate proposed by PG&E requires an annual commitment. The rate is also sold out for the Baja path for several years. D.01-03-067 ordered the use of the PG&E as-available off-system rate, G-AAOFF, for backbone transportation as part of the QF burner-tip gas price calculation.[11]

IEP claims that PG&E does not properly translate the reservation charge into a volumetric charge because PG&E uses a 100% load factor. IEP shares CCC perspective that an as-available rate is a preferable approach.

4a. PG&E claims that its use of a firm gas transportation rate provides a more accurate avoided cost.

PG&E asserts that the proxy for intrastate transportation, GTn, made up of the difference between Citygate and the California border, proposed by CCC, is unreliable as it varies significantly from tariffed rates on a monthly basis. PG&E states that the proxy matches the tariffed rates on an annual basis. Tariffed rates are more stable and transparent according to PG&E.

PG&E claims that QFs will likely use firm rates due to their duration and cumulative magnitude. In response to IEP's concerns about the calculation of the reservation charge, PG&E states that, historically, PG&E has been required to calculate its gas transport rate primarily from monthly demand charges.

5. The QF parties do not agree on which sources of energy forward prices should be used.

The energy forward prices are used to calculate the MHR. Aglet proposes the use of ICE, claiming it is more accurate since it is based on actual trades.

CCC and CAC/EPUC supports the use of the Platts/ICE Forward Curve since *Platts Megawatt Daily* stopped including 12-month forward price data on

11. D.01-03-067 p. 35

November 27, 2007. Platts announced that it would start incorporating ICE data into Platts forward curves on October 30, 2007.

CCC cites widespread agreement at the workshop to use Platts data. CCC proposes the use of two publications and is open to three. CCC's second choice for a vendor is Kiodex and Tullet Prebon is their third. CCC calls for the need for the Utilities to specify exact data sets to be drawn from the publications.

CAC/EPUC supports the use of at least three data sources. They argue that a third source would help mitigate the impact of an outlier. CAC/EPUC proposed that forward price sources should:

- Provide monthly prices for North of Path 15 (NP15) and South of Path 15 (SP15) on and off-peak for every trading day
- Have an understood methodology and known data sources
- Possess a data format that is easy to use without error

CAC/EPUC reviewed 8 publishers or sources including: *Platts-ICE Forward Curve-Electricity (North America)* (Platts-ICE), Energy Management Institute (EMI), Amerex Energy, TFS Energy, Tullet Prebon, Tullet Liberty, ICE, and Kiodex. CAC/EPUC discovered that Platts-ICE provided no more than three monthly forward prices before switching to quarterly values. CAC/EPUC found that ICE provided a variable mix of monthly and quarterly values that varied between NP15 and SP15 as well as on and off-peak. CAC/EPUC asserts that Tullet Prebon was not providing off-peak prices at the time of the filing. CAC/EPUC claims that only Tullet Liberty and Kiodex consistently provide the desired values. CAC/EPUC requests that the quarterly values be shaped into monthly values using the monthly data sources in order to obtain a more representative monthly value. All the sources are available in an Excel compatible format, with the exception of EMI, according to CAC/EPUC.

CAC/EPUC found that Kiodex, Tullet Liberty, and Platts-ICE provided the most insight into their methodology. CAC/EPUC claims that Kiodex bases their forward prices primarily on over-the-counter trading while Tullet Liberty relies on executed transactions and bid/offer spreads. Platts bases its predictions on ICE transactional data and information from market participants, traders, and brokers according to CAC/EPUC. SCE found the peak prices from these publications to be highly correlated and the off-peak prices were not. CAC/EPUC found significant variation of the average price over time.

5a. The Utilities provided explanations to support their use of distinct energy forward price publications.

PG&E claims that Platts-ICE and ICE are robust sources of data for the energy forward prices. PG&E asserts that the ICE data will only augment, not dominate, Platts inputs and that Platts's methodology will remain unchanged.

SCE wants to use Kiodex, Tullet-Liberty, and Platts-ICE for its SP 15 forward prices. SCE indicated that CAC/EPUC was correct in assuming that Tullet Liberty, not Tullet Prebon, and Platts-ICE, not *Platts Megawatt Daily*, were the intended publications. As such, SCE maintains that CCC and CAC/EPUC support SCE's selection of sources.

SDG&E identifies the specific values it proposes to use for its forward electricity prices:

- Platts-ICE: SP-15 On-peak and Off-peak
- Tullet-Prebon: South Path Heavy and Light in Tullet Liberty West Power Prices

SDG&E declares that these publications have CCC and CAC/EPUCs' support. SDG&E requests that future modifications to the sources be allowed.

5b. SDG&E and PG&E assert that two data sources for forward energy prices are sufficient.

Forward energy prices are used to calculate the MHR. D.07-09-040 allowed for the use of one or two data sources: *Platts Megawatt Daily* and/or ICE. SDG&E claims that the large magnitude of data collected during the month will mitigate the impact of any outliers. SDG&E finds ICE data to be cumbersome and that it may overlap with *Platts Megawatt Daily*.

PG&E maintains that additional data sources may not improve robustness due to shared data sources amongst publications and the difficulty of comparing vendors' proprietary methods. PG&E argues that an additional data source would significantly complicate the calculation.

5c. PG&E and SDG&E propose using quarterly values for every future month for which they are the only values available.

The MHR is calculated using forward gas and energy prices. The sources of these prices sometimes provide a quarterly rather than monthly value for future prices. Quarterly values are simpler to use and the approach is less prone to error. SDG&E suggests that the difference in the outcome between monthly and quarterly values will not be great. PG&E suggests that CAC/EPUCs' proposal to shape the quarterly forward energy prices could bias the quarterly data to the monthly data sources reducing the independence and advantage of additional data sources.

6. CCC and Aglet propose that the QF parties have access to the gas and energy forward prices at no cost.

CCC requests that, upon request and with a confidentiality agreement, the QF parties receive access to the forward gas and energy prices at the Utilities' offices. Aglet argues that the MIF should be based only on publicly available data. Aglet proposes the use of ICE for the gas forward prices in order to cut down the cost of verifying the MIF. Aglet further asserts that the Utilities provide no justification that the subscription services provide better data.

CAC/EPUC requests that the Energy Division audit the avoided cost values each month. CAC/EPUC argues that the thousands of dollars spent on getting the best publications are more than offset by the value of getting a more accurate avoided cost for the hundreds of millions of dollars of payments.

Multiple parties proposed methods of addressing concerns over the cost of forward gas and energy price subscriptions.

6a. Utilities object to sharing proprietary vendor data.

SCE argues that vendor licensing limits who can use the data and for what purpose. SCE further contends that sharing the data with the QF parties is equivalent to asking the Utilities to fund their subscriptions as vendors have a right to be compensated for their service.

SDG&E argues that there is no support in D.07-09-040 for CCC's request to allow QFs access to proprietary vendor data. SDG&E claims that its licensing agreements prohibit sharing vendor data to QF parties without written authorization. If such authorization is granted, SDG&E is willing to share the data. SDG&E proposes that parties can use publicly available data and/or

current subscriptions to verify the approximate value of the MIF and ask Energy Division (ED) to verify any large discrepancies.

PG&E declares that it can only share vendor proprietary data with the vendor's permission. The vendor is not subject to the Commission's jurisdiction. PG&E doubts that vendors would allow their proprietary data to be shared even with a nondisclosure agreement. Vendors have allowed proprietary data to be shared with the Commission in the past. As such, PG&E reasons that parties can rely on ED to verify the SRAC.

6b. The Utilities oppose the use of exclusively public data for the forward prices.

D.07-09-040 does not require publicly available data and proposes a proprietary source. SDG&E and PG&E argue that it should be allowed to continue using the same proprietary gas publications that they have used for over a decade. SCE maintains CAC/EPUCs' argument that billions of dollars will be allocated based on the MIF calculation so spending thousands to get the best sources available is necessary. As with the other Utilities, SCE contends that ED can verify the SRAC calculations for the parties.

7. IEP, CAC/EPUC, Aglet, and CCC request that the Utilities use the same publications for their energy and gas forward prices.

CCC asserts that all the publications provide the necessary data. Allowing different data sets will cost the QF parties significantly more to verify the monthly postings. Under the process proposed above, common sources would allow the QF parties to verify the monthly prices at any of the Utility offices. Aglet contends that different publications may lead to different energy payments.

7a. Utilities explain the reasons for distinct gas forward data sources.

D.07-09-040 does not require the Utilities to use the same sources or change their gas forward sources. SDG&E requests that the Utilities be allowed to use distinct sources.

SDG&E and PG&E want to continue using their previous gas forward price sources. SDG&E claims that consensus was reached at the workshop on this issue.

8. CAC/EPUC raises concerns about the timing and applicability of the implementation.

CAC/EPUC requests that the new standard offer contracts and SRAC pricing become available simultaneously. They further request that QFs with contracts that expired prior to D.07-09-040 be allowed to reinstate the non-price terms of the contract.

8a. The Utilities request that CAC/EPUCs' proposal to postpone implementation of the MIF and allow QFs to reinstate expired contracts be disregarded.

PG&E and SCE contend that these issues raised by CAC/EPUC are outside the scope of this AL. SCE claims that the current SRAC is above avoided cost so postponing the MIF implementation would put an additional burden on ratepayers. SDG&E points out that it does not have any QF contracts for firm capacity that expire in 2008.

9. Aglet argues against use of NYMEX and argues for use of ICE in gas forward prices.

Aglet's primary concern is the choice of data sources. Aglet argues against the use of the NYMEX Clearport basis for calculating the gas forward prices. Aglet claims that the use of the NYMEX Clearport basis will increase costs for ratepayers because it is not consistently available. Aglet requests that ICE be used as the sole source of gas forward prices.

9a. SDG&E and SCE claim that the Clearport SoCal basis is reliable.

SDG&E asserts that the Clearport basis is necessary for calculating the gas forward prices used in the MHR. SDG&E was not able to find significant problems with the NYMEX Clearport data and found non-zero values on the date identified by Aglet, January 11, 2008. Because only days with both gas and electric forwards would be used, a zero value would cause SDG&E not to use the

data from that day. SCE found that Aglet used the SoCal Index Swap for its analysis instead of the SoCal Basis Swap identified in the AL.

DISCUSSION

The TOD factor will be applied as product to the entire MIF.

The MIF provided in the Decision did not explicitly show the TOD factor, but the Decision was unambiguous in its intent to apply the TOD factor in the calculation of the SRAC payment. As a result, there has been disagreement between the Utilities and CCC as to how the TOD factors should be applied to the MIF formula. The Utilities propose to apply the TOD to all parts of the MIF except for the O&M adder. PG&E contends that the MPR uses an annual average variable O&M that is escalated annually. PG&E and SDG&E claim that, in 1994-1995, O&M was not time differentiated. Baseload generators would not be affected by time differentiating the O&M. O&M that varies over time provides an incentive for generators to reduce output during time periods with a low TOD factor. SDG&E claims that the Decision is silent on the application of TOD factors.

CCC argues that the TOD factor should be applied to the entire MIF. The Decision presents the formula for the SRAC energy price without including a TOD factor then later indicates that TOD factors should be applied. The Decision states that the current SCE formula should be used with the updated heat rate. CCC points out that all of the current Utility SRAC formulas include the TOD factor as a product with the SRAC formula. "[T]he MPR [TOD] factors are applied to the full MPR price."[12]

Many Qualifying Facilities have a significantly higher capacity factor during peak periods. During this period, the QFs are incentivized to perform at their peak level and leave their scheduled maintenance for off-peak times. We agree with CCC that the Decision includes the O&M adder in the MIF and indicates that the TOD factors should be applied to the MIF. In addition, we applied TOD

12. CCC Protest p. 7

factors to the entire SRAC formula in D.96-12-028[13] and this approach was left unchanged by D.01-03-067 and it seems reasonable to do so again. We thus choose to apply the TOD factors to the entire MIF including the O&M costs according to the following formula:

$$Pn = \left(\left[IER * \frac{(GPn + GTn)}{10{,}000} \right] + O\ \&\ M \right) * TOD \quad factor$$

The QF TOD factors will remain unchanged until modified in the next long-term procurement plans.

There were multiple applications for rehearing of D.07-09-040 filed at the CPUC. Decision 08-07-048 addressed the joint application for rehearing of D.07-09-040 filed by TURN, DRA, and the Utilities; the joint application for rehearing of CAC/EPUC; and the application for rehearing of CCC. D.08-07-048 addressed the changes that had been made to the TOD factors in the Decision. Specifically, this decision states that:

> The Joint Parties claim that we cannot justify the adopted changes to the TOU/TOD factors based on the insufficient record developed in the underlying proceeding, and as such rehearing must be granted or the Decision must be modified. We address these allegations by modifying D.07-09-040 to eliminate changes to the TOU/TOD factors, and instead defer such changes to the utilities' next long-term procurement plans.[14]

Thus, the discussion of changes to the TOD factors for the Utilities is now moot. The current QF TOD factors will remain in effect until they are updated in the 2010 Utility long-term procurement plans.

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13. Attachments 1-3 to D.96-12-028

14. D.08-07-048, p. 3

We adopt *Natural Gas Week*, *Natural Gas Intelligence*, and *Platts Gas Daily* as the three sources for natural gas forward data.

A central issue in the AL is which sources of gas forward data will be used to calculate the MHR. All the Utilities request the use of Natural Gas Week and Natural Gas Intelligence as sources of gas forward prices. All three Utilities call for the use of three publications. The QF parties and Aglet request consistency of gas data sources to mitigate the cost of subscriptions, minimize the effort of verifying monthly SRAC pricing, provide a consistent basis for gas prices, and allow QFs to visit any Utility office to verify all the Utilities SRAC prices (if an arrangement to view the proprietary data can be made). CCC argues that all four of the proposed publications (Natural Gas Week, Natural Gas Intelligence, BTU Daily Gas Wire, and Platts Gas Daily) provide the data necessary for the Utilities. We have subscribed to *Platts Gas Daily* for years due to its robustness as a source of gas data. This same publication was proposed for use by PG&E who has also used it for years. We agree with the QFs and Aglet that it is helpful and reasonable for the Utilities to use the same gas publications. We therefore choose to use *Natural Gas Week*, *Natural Gas Intelligence*, and *Platts Gas Daily* as the sources for natural gas data. The gas prices used in calculating the MIF will be the mean of the gas prices in each of the three publications.

The Decision states that: "for SCE and SDG&E, SRAC shall be based on the Topock border price, while SRAC for PG&E shall be based on a 50/50 weighting of published border prices at Malin and Topock."[15] For SCE and SDG&E, the gas price will be calculated using the price at Topock and for PG&E the mean of the Topock and Malin prices. All of the gas prices, GPn, will be derived from the mean of the bidweek border natural gas prices from Natural Gas Week, Natural Gas Intelligence, and Platts Gas Daily.

We adopt *Platts-ICE Forward Curve-Electricity (North America), Kiodex, and either Tullet Liberty or Tullet Prebon* as the three sources for energy forward data.

15. D.07-09-040 p. 72

The energy forward prices are used to calculate the MHR. New limitations on the sources of forward energy prices were imposed by the decision on the joint petition for modification filed by IEP and CAC/EPUC. D.08-09-024 states that:

> The forward market prices will be based on a weighted average price[16] of the forward market prices for North of Path 15 (NP15) or South of Path 15 (SP15) as reported in a minimum of three (3) publications. The publications shall be selected from a list of publications approved by the Energy Division. Any publication included on Energy Division's list must be found reliable and appropriate for use in the MIF. Energy Division shall have the discretion to update the list as necessary. We recognize that Energy Division will need some time to determine which publications to include in its list. Therefore, the [Utilities] shall use *Platts-ICE Forward Curve-Electricity (North America)* for forward market prices until Energy Division establishes its approved list of publications.
>
> Once Energy Division has established its list of publications, each IOU may select from the list the three publications it will use for forward market price data, provided: (1) the [Utility] demonstrates that use of the selected publications is necessary in order to best reflect its avoided costs; and (2) at least one of the selected publications must be either *Platts-ICE Forward Curve-Electricity (North America)* or ICE. The [Utilities] shall select its publications through the filing of a Tier 2 Advice Letter.[17]

In order to promote data uniformity and to facilitate data verification by the QF parties, we will require all three utilities to use the same data sources for forward

16. The monthly weighted average forward power price is determined by weighting the monthly average on-peak and off-peak power prices based on the actual on-peak and off-peak hours in the applicable month.

17. D08-09-024, pp. 16-17

electricity. The Utilities will thus use *Platts-ICE Forward Curve-Electricity (North America)* as one of the sources, plus two additional sources from a list below approved by the Energy Division.

The Energy Division selected the following sources for the forward energy prices based on the fact this list comprises the widest acceptance among the parties:

> *Platts-ICE Forward Curve-Electricity (North America),*
> *Kiodex, and*
> *either Tullet Liberty or Tullet Prebon*[18]

The energy prices used in calculating the MIF will be the mean of the energy prices in each of the publications selected.

D.08-09-024 further states that: "the [Utilities] should not be allowed to use different publications without first demonstrating that such use is necessary to better reflect its avoided cost."[19] Thus, if a Utility requests to use different publications from the other Utilities, this request should be included and justified in its Tier 2 AL. The Utility will have the burden of proof to demonstrate that a revised selection of data sources will enhance the accuracy of SRAC calculation in accordance with the Public Utility Regulatory Policies Act (PURPA).

The energy forward prices will be a weighted average of on and off peak prices. D.08-09-024 changed the weighting to accommodate actual on and off peak hours. This decision states: "monthly weighted average forward power price is determined by weighting the monthly average on-peak and off-peak power prices based on the actual on-peak and off-peak hours in the applicable month."[20]

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18. As pointed out by CAC and EPUC, Tullet Prebon prices are in fact the forward prices provided by Tullet Liberty.

19. D.08-09-024 p. 8

20. D.08-09-024 p. 16

We accept SCE and SDG&E's proposed intrastate natural gas transportation rate calculations and modify PG&E's formulation.

The Decision orders that a burner-tip gas price, the sum of GPn and GTn, be used in the MIF. Thus, the avoided cost of intrastate transportation must be calculated. The SCE and SDG&E intrastate transportation cost formulations were not protested and SDG&E's formulation was agreed upon by parties during the workshop held in November 2007. For SCE, the intrastate transportation rate is: (GT-F5) + (ITCS) + (G-MSUR). For SDG&E, the intrastate transportation rate is: (EG) + (GP-SUR).

There is a disagreement as to whether a firm or as-available backbone transportation rate is appropriate to calculate PG&E's intrastate gas transportation costs, GTn. PG&E asserts that the proxy made up of the difference between Citygate and the California border, proposed by CCC, is unreliable. Tariffed rates are more stable and transparent according to PG&E. PG&E claims that QFs will likely use firm rates due to their duration and cumulative magnitude.

CCC argues that a marginal supply transported over a short period is more reflective of a market-based approach and avoided cost. CCC claims that the rate proposed by PG&E requires an annual commitment. The rate is also sold out for the Baja path for several years. D.01-03-067 ordered the use of the PG&E as-available off-system rate, G-AAOFF, for backbone transportation as part of the QF burner-tip gas price calculation[21]. IEP claims that PG&E does not properly translate the reservation charge into a volumetric charge because PG&E uses a 100% load factor.

We agree with CCC and IEP that as-available backbone transportation rates more accurately reflect PG&E's avoided cost. Since avoided cost represents the cost of producing a marginal unit of energy, an as-available rate is a better proxy for backbone transportation costs. Firm capacity on the Baja path is not available until 2011. D.01-03-067 requires the use of the PG&E as-available off-system rate

21. D.01-03-067 p. 35

for backbone transportation as part of the QF burner-tip gas price calculation. We concur with IEP that a 100% load factor included in PG&E's proposed full contract rate is unrealistic.

We adopt PG&E's overall formula for its intrastate transportation rate, GTn: (Backbone Transmission) + Rule 21 Shrinkage + (G-EG) + (G-SUR). We adopt the Schedule G-EG and G-SUR rates and the Rule 21 Shrinkage as specified above. For Backbone Transmission, we adopt the Schedule G-AAOFF rate. We accept PG&E's proposal to take the mean of Redwood and Baja path transmission rates to match the equal usage of Malin and Topock border prices.

None of the QF parties raised issues with the Utilities proposed method of forecasting burner-tip gas forward prices. The only issue was raised by Aglet expressing concern over the robustness of the NYMEX Clearport basis values. SCE, SDG&E, and CAC/EPUC found that the specific concerns raised by Aglet were mistaken and thus unfounded.

We agree with the use of the Clearport SoCal basis differential referenced by the Utilities to calculate the MHR if the Clearport SoCal basis differential for Topock is specified. For PG&E, the forward backbone transport rates will come from the G-AAOFF rate schedule for the appropriate year, if available, or the current year, if the following year's rate is needed and not available. With the exception of specifying the Topock Clearport SoCal basis differential and the use of G-AAOFF for PG&E's backbone transportation rate, we adopt the Utilities approaches, as described above, for calculating future burner-tip gas prices.

The methodology for updating intrastate transportation rates was changed by the decision on the joint petition for modification filed by IEP and CAC/EPUC. D.08-09-024 states that: "We will allow SDG&E and the other utilities monthly to update the intrastate transportation rate to the most recent value in their gas tariffs, as necessary.[22]"

The MHR is calculated from forward energy and gas prices and variable O&M.

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22. D.08-09-024 p. 16

Table 3 in the Decision shows how the MHR is calculated by the following equations using forward price components. The MHR will be calculated for each trading day for which both gas and energy forward prices are available. The monthly MHR will be calculated according to the following formulas:

$$HR_n = \frac{EF_n - O\&M_n}{GF_n + GI_n},$$ [23]

where:

EF = Energy forward price in $/kWh
GFn = Gas forward price in $/MMBtu
GIn = Forward gas intrastate transportation cost in $/MMBtu
O&Mn = Forward operations and maintenance $/kWh
n = month for which calculation is being performed

Stated another way, the previous equation is equivalent to:

MHR = ([SP15 or NP15] forward – O&M forward) / Burner-tip Gas Forward

The average daily heat rate is calculated as the mean of the 12-month forward heat rates:

$$DHR = \sum_{n=1}^{12} \frac{HR_n}{12}$$ [24]

The monthly MHR will be the mean of the average daily heat rates according to the following equation:

$$MHR = \sum_{i=1}^{m} \frac{DHR_i}{m}$$

23. Adapted from Table 3 of D.07-09-040

24. Adapted from Table 3 of D.07-09-040

where m is the number of trading days in the month for which forward gas and energy prices are available in the publications subscribed to by the Utility.

Variable O&M costs will be updated monthly and future O&M costs will correspond to future energy prices.

The MIF incorporates the O&M costs in two separate ways: a current O&M adder and the O&M costs that are subtracted from the future energy prices. The Utilities and QF parties differed on which O&M value should be used for the MHR calculation. Parties' consideration of the alternatives led to different potential ways of updating the O&M costs.

The Utilities propose updating the O&M costs once a year in January arguing that this approach was most consistent with the language in the Decision. The Utilities argue that forward O&M costs be used to match forward energy prices for uniformity.

IEP declares that the O&M adder should be escalated monthly to avoid double counting and reflect the actual increase in costs. CCC proposes using the current month's annual O&M adder to calculate the MHR and can accept IEP's proposal as well.

We agree with IEP that monthly escalation is more representative of avoided cost. The O&M costs will be updated monthly such that the compounded annual increase will be 2%. This approach is consistent with the Decision and will allow the O&M costs incorporated into the MIF to more accurately reflect the actual costs. A monthly increase in the O&M costs will avoid the unrealistic representation of a significant rise in costs only once a year. We recognize and correct for the miscalculation incorporated in the methodology described by CCC that PG&E and SDG&E pointed out leading to an increase of more than 2% per year.

The monthly increase in O&M costs will be at the effective monthly rate of 0.1652%. When compounded monthly, the effective monthly rate will cause an increase of 2% annually. The O&M costs for a given month and year will be:

$$O\&M = (0.25¢/\text{kWh}) * 1.02^{(year-2004)} * 1.001652^{month}$$

where the month is represented numerically.[25]

We agree with the Utilities that the MHR should incorporate the appropriate month's O&M costs in order to more accurately represent avoided cost. Thus, the MHR will incorporate the variable O&M forward costs for the same month.[26] The SRAC energy price will include the O&M adder for the matching month.[27]

The quarterly forward gas and energy prices will be substituted for a monthly value, as necessary.

Another issue that arose is that some publications provide monthly forward energy prices while others only provide quarterly values for some periods while the MHR is calculated on a monthly basis. In its protest, CAC/EPUC proposed shaping the quarterly forward energy prices in order to obtain more representative monthly values.

PG&E and SDG&E argue against the monthly shaping of quarterly values. PG&E argues that the shaping may reduce the value of the quarterly data publication(s). We agree with PG&E that CAC/EPUCs' proposal to shape the quarterly energy forward prices into monthly values could bias the quarterly values to the monthly sources. This bias would detract from the benefit of multiple sources of energy forward prices. Thus, for each month for which only a quarterly value is available, the quarterly energy forward price will be used in the MHR calculation.

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25. For example, the O&M adder for March 2009 would be (0.25¢/kWh X (1.02) ^ (2009-2004)) X (1.001652) ^ 3 = 27.739¢/kWh

26. For instance, the MHR component of the SRAC for March, 2009 will incorporate the O&M forward for March, 2009.

27. For example, the SRAC energy price for February, 2009 will use the O&M adder for February, 2009.

The mandate to use three publications for the natural gas prices and at least three publications for the energy prices means that most of the data will be proprietary, as there are very few publicly available sources. We concur with CAC/EPUC and the Utilities assertion that the cost to the QFs of subscribing to the energy and natural gas data publications is more than offset by the value of having more accurate avoided cost calculations given the potential magnitude of payments using the MIF.

We have mitigated expense to the QFs of the subscriptions by requiring the Utilities to use the same publications for gas and electricity prices and provide strong arguments for an improved avoided cost calculation in order to obtain permission for any differences between the energy price sources. We encourage the QFs to explore legal options that would allow them to obtain confidential energy price data. As the Utilities assert, ED should be able to verify the SRAC calculations if the QFs have concerns over the Utilities' calculations for a particular month.

Utilities will honor agreements made between a QF party and a publication vendor to allow access to proprietary data in their offices.

Some concerns are raised in the protests about an interested party's ability to verify the monthly SRAC given that the sources selected have a significant cost for subscribing to them. CCC and Aglet argue that any interested party should be able to verify the SRAC at no cost.

We agree in principle with CCC's proposal to allow parties access to proprietary data should the QF still find it necessary to verify the Utility SRAC calculations and the cost of subscriptions is a hardship. We want to support transparency in our regulation. We share the Utilities' perspective that it would likely be difficult for a QF party to arrange with a vendor to view its proprietary data at the Utility office. However, should such an agreement be reached, the Utility must honor the arrangement by allowing the QF access to the proprietary data within the restrictions placed upon the Utility by the vendor as agreed to at the November 2007 workshop. In other words, the Utility must share the proprietary data contained in the subscription publications as long as it does not violate their confidentiality agreement with the vendor.

We asked the Utilities to file a joint AL to address the implementation details for the MIF. The AL was filed on December 17, 2007. In their protest, CAC/EPUC

requests that the new standard offer contracts and SRAC pricing become available simultaneously and that QFs with contracts that expired prior to D.07-09-040 be allowed to reinstate the non-price terms of the contract are not MIF implementation details. We agree with the Utilities that these requests by CAC/EPUC are outside of the scope of this resolution. These issues were also raised in the motion filed by CAC/CPUC on March 3, 2008. Our response to CAC/EPUC's motion is the appropriate setting to address these issues. We will not confuse matters by addressing the issues raised by CAC/EPUC in multiple decisions.

COMMENTS

Public Utilities Code section 311(g)(1) provides that this resolution must be served on all parties and subject to at least 30 days public review and comment prior to a vote of the Commission. Comments shall be filed no later than 20 days following the mailing of this draft resolution. Reply comments shall be filed no more than 5 business days later.

FINDINGS

1. In compliance with D.07-09-040, Advice Letters (AL) PG&E AL 3180-E, SDG&E AL 1952-E, and SCE AL 2193-E were timely filed by the Utilities on December 17, 2007 to request approval of their method of calculating SRAC by using the MIF and the data sets they proposed.
2. On January 14, 2008, protests to the advice letters were filed by the Cogeneration Association of California and the Energy Producers and Users Coalition (CAC-EPUC), Aglet Consumer Alliance (Aglet), the California Cogeneration Council (CCC) and the Independent Energy Producers Association (IEP).
3. PG&E, SDG&E, and SCE responded to the filings of CCC, Aglet, CAC/EPUC, and IEP on January 22, 2008.
4. The TOD factor should be applied as product to the entire MIF.
5. The QF TOD factors should remain unchanged until modified in the next long-term procurement plans.
6. Reliance on more publications can lead to a more accurate SRAC.
7. The cost of proprietary data to QFs is far outweighed by the value of the resulting improved accuracy of the SRAC calculations.

8. There are options available for QFs to have confidence in Utility SRAC calculations without subscribing to all the publications used by their respective Utilities to obtain the SRAC values.
9. Utilities should honor agreements made between a QF party and a publication vendor to allow access to proprietary data in their offices as applicable.
10. *Natural Gas Week*, *Natural Gas Intelligence*, and *Platts Gas Daily* should be adopted as the three sources for natural gas forward data.
11. *Platts-ICE Forward Curve-Electricity (North America), Kiodex, and either Tullet Liberty or Tullet Prebon* should be adopted as the three sources for energy forward data.
12. The quarterly forward gas and energy prices should be substituted for a monthly value, as necessary.
13. Shaping quarterly energy forward prices using monthly data sources may bias the quarterly publication and therefore reduce the accuracy of the resulting SRAC calculation.
14. SCE and SDG&E's proposed intrastate natural gas transportation rate calculations should be adopted and PG&E's formulation should be modified.
15. The MHR is calculated from forward energy and gas prices and variable O&M.
16. Avoided cost is more accurately calculated using forward O&M costs to calculate a future MHR.
17. It is not realistic to represent variable O&M costs as increasing only once annually.
18. O&M costs should be updated monthly and future O&M costs should correspond to future energy prices.
19. O&M costs vary seasonally with variations in climate and capacity factor.
20. A firm full contract rate does not accurately represent PG&E's avoided cost for intrastate transportation.
21. Posting the QF pricing within two business days of receiving the necessary input data was agreed to at the November 2007 workshop.
22. The MIF adopted in this resolution, using the terms as previously described, should be:

$$Pn = \left(\left[IER * \frac{(GPn + GTn)}{10{,}000} \right] + O\ \&\ M \right) * TOD \quad factor$$

23. By D.09-04-034 adopted on April 16, 2009, the MIF adopted in this Resolution will become effective on the first day of the month after the effective date of this resolution.

THEREFORE IT IS ORDERED THAT:

1. The request by the Pacific Gas and Electric Company (PG&E), San Diego Gas and Electric Company (SDG&E), and Southern California Edison Company (SCE) to adopt their implementation of the Market Index Formula (MIF) is approved in part and denied in part as described above using the MIF adopted herewith:

$$Pn = \left(\left[IER * \frac{(GPn + GTn)}{10{,}000} \right] + O\,\&\,M \right) * TOD \quad factor$$

where:

Pn = Calculated SRAC energy price, ¢/kWh
IER = Incremental Energy Rate = 0.5 x AHR + 0.5 x MHR, Btu/kWh
MHR = Market Heat Rate, Btu/kWh
AHR = Administrative Heat Rate, Btu/kWh
GPn = Gas price, $/MMBtu
GTn = Intrastate transportation costs, $/MMBtu
10,000 = Unit conversion factor = [$1/100 ¢] x [1,000,000 Btu / MMBtu]
TOD Factor = Appropriate Time of Delivery Factor
O&M = Variable operations and maintenance cost adder, ¢/kWh

2. The Qualifying Facility (QF) TOD factors will remain unchanged until modified in the next long-term procurement plans.
3. The Utilities shall us *Natural Gas Week*, *Natural Gas Intelligence*, and *Platts Gas Daily* as the three sources for natural gas forward data in the MIF.
4. The Utilities shall use *Platts-ICE Forward Curve-Electricity (North America), Kiodex, and either Tullet Liberty or Tullet Prebon* as the three sources for energy forward data in the MIF.
5. The MHR shall be calculated from forward energy and gas prices and variable O&M.
6. The quarterly forward gas and energy prices shall be substituted for a monthly value, as necessary.
7. Utilities shall honor agreements made between a QF party and a publication vendor to allow access to proprietary data in their offices as applicable.
8. The Utilities shall file their QF pricing with Energy Division as a spreadsheet each month within two business days of receiving the necessary input data.

9. The Utilities shall post their QF pricing on their website in a spreadsheet format each month within two business days of receiving the necessary input data as agreed at the November 2007 workshop.
10. The MIF adopted in this Resolution will become effective on the first day of the month after the effective date of this resolution.
11. This Resolution is effective today.

I certify that the foregoing resolution was duly introduced, passed and adopted at a conference of the Public Utilities Commission of the State of California held on June 4, 2009; the following Commissioners voting favorably thereon:

_____
PAUL CLANON
Executive Director