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Decision 01-01-007 January 4, 2001

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking into Implementation of Pub. Util. Code § 390.	Rulemaking 99-11-022 (Filed November 18, 1999)

O P I N I O N

(See Appendix A for List of Appearances.)

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O P I N I O N

1. Summary

This decision adopts a Generation Meter Multiplier (GMM) based formula for the transmission line loss factor to be used in calculating qualifying facility (QF) payments while QFs continue to receive payments under Pub. Util. Code § 390(b) [1]. The adopted formula for the transmission loss factor is GMM_{QF}/GMM_{SYS}, to be implemented with the first posting following the effective date of this decision. The remaining issues to be decided in Phase 1 of this proceeding will be considered in a subsequent decision.

2. Procedural History

The purpose of this rulemaking is to implement Section 390 by developing a PX-based short run avoided energy cost for purposes of paying qualifying facilities. Part of this process is the determination of any value of capacity embedded in the PX-based short-run avoided cost (SRAC), pursuant to Section 390(d). The scoping memo set forth the following additional goals:

(1) review potential modifications to the pricing methodology for as-available capacity payments;

(2) determine whether or not current methodologies for adjusting line losses need to be replaced, and if so, by what methodology;

(3) develop criteria for determining whether the market is functioning properly;

(4) identify situations that would lead to reconsideration of the adopted PX-based SRAC; and

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[1] All statutory references are to the Public Utilities Code.

(5) clarify regulatory procedures surrounding the payments.

On February 15 and 16, 2000, Energy Division hosted a workshop on line loss methodologies. Energy Division filed its report on the workshop on April 7, 2000.

Testimony was served on all issues except line loss issues on February 11, 2000. Rebuttal testimony was served on March 6, 2000. Testimony on line loss issues was served on April 28, 2000. Rebuttal testimony on line loss issues was served on May 8, 2000. Nine days of evidentiary hearings were held (April 3-7, April 10-11, and May 11-12). Commissioner Neeper presided at hearing on all nine days. Opening and Reply Briefs were filed by the Office of Ratepayer Advocates (ORA), Southern California Edison Company (SCE), Pacific Gas and Electric Company (PG&E), San Diego Gas & Electric Company (SDG&E), California Cogeneration Council and Watson Cogeneration Company (jointly CCC), Independent Energy Producers Association (IEP), Cogeneration Association of California, Energy Producers and Users Coalition, Coalinga Cogeneration Company, and Midway Sunset Cogeneration Company (jointly CAC), FPL Energy LLC (FPL), Enron Wind Corporation (EWC), Caithness Energy L.L.C. (Caithness), and California Power Exchange (PX). The Automated Power Exchange (APX) filed an Opening Brief. Final oral argument was held on September 18, 2000.

The proposed decision originally addressed all issues established as Phase 1 issues in the scoping memo. On November 21, 2000, the Assigned Commissioner issued a ruling seeking comments from the parties about how to proceed given the Federal Energy Regulatory Commission (FERC) "Order Proposing Remedies for California Wholesale Electric Markets" in Docket No. EL 00-95-000 et al. The parties overwhelmingly support suspension of our

efforts to implement Section 390 given current market conditions. Several parties also support suspension of efforts to review the line loss factors. After reviewing these comments, we limit the scope of this decision modifications to line loss factors.

3. Outstanding Procedural Matters

On June 14, 2000, CCC filed a motion to set aside submission in order to enter into evidence certain responses to data requests related to line losses. There was no comment on the motion. CCC's motion is granted. Appendix A to the June 14 motion will be marked as Exhibit 29 and will be received into evidence as of June 14, 2000.

On June 14, 2000, SCE filed a motion to strike portions of the Opening Briefs of Caithness, EWC, and FPL. EWC responded on June 16, FPL responded on June 29, Caithness responded on June 28. The material SCE seeks to strike is based on the specific record, general facts, or is argument that is appropriately within the scope of briefs. SCE's motion to strike is denied.

On June 21, 2000, CCC filed a motion to strike portions of SCE's Opening Brief. SCE responded on June 26. CCC argues that two alternative proposals offered by SCE on brief are not record-based, are untested by cross-examination, and do not have comparative pricing information provided. SCE counters that its alternative proposals are "logical extension[s]" of proposals by other parties, with basis in the record. We agree with SCE; the motion to strike of CCC is denied.

4. Line Loss Methodology

4.1 Background

The term "line losses" refers to the power losses that occur when electricity is transmitted over power lines. The Public Utilities Regulatory Policy

Act of 1978 (PURPA) established that, to the extent practicable, "the costs or savings resulting from variations in line losses from those that would have existed in the absence of purchases from a qualifying facility, if the purchasing electric utility generated an equivalent amount of energy itself or purchased an equivalent amount of electric energy or capacity" (18 CFR 292.304(e)(4)) should be incorporated into avoided cost payments.

Decision (D.) 82-12-120, D.84-03-092, and D.87-12-066 established the methodology for line losses for QF payments. Different line loss adjustment factors were established for different usage periods, such as peak, mid-peak, off-peak. Line loss factors greater than one indicate that QF production causes a *reduction* in utility system line losses, while line loss factors less than one indicate that QF production causes an *increase* in utility system line losses. For QFs connected to the grid at the transmission level, average transmission loss factors (TLFs) were set at 1.023 for SCE, 1.025 for SDG&E, and 1.000 for PG&E. For QFs connected at the primary distribution level, distribution loss factors (DLFs) were set at 1.026 for SCE, 1.06 for SDG&E, and 1.000 for PG&E.[2]

These loss factors were established on an interim basis, with the expectation that more definitive studies would lead to a more accurate line loss methodology. As the Commission stated, "[o]ur decision reflects the inconclusiveness of the record on line losses and our struggle to develop an appropriate interim solution until the line losses studies required of all three utilities are completed, reviewed, and approved." (D.84-03-092, p. 37.) The

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[2] These DLFs include the effect for both transmission and distribution avoided line losses.

expected review and approval of these studies has never occurred, and all but one of the loss factors have been in place since.

Seeking to revise both the TLFs and the DLFs, SDG&E filed Application 98-06-045 and proposed to replace the existing TLF values with GMMs.[3] GMMs were developed and are used by the California Independent System Operator (ISO) to determine the impact on system line losses caused by generation from a particular generator. GMMs are calculated for each generator bus and each intertie[4] every hour. The GMM's are first forecasted and published seven days in advance. An update "hour-ahead" GMM is also published. The hour-ahead GMM is also known as the ex post GMM. (See Workshop Report, Appendix C: ISO Presentation on GMMs, p. 4.) The ISO and PX use GMMs for system balancing and settlement purposes.

The Commission rejected SDG&E's GMM proposal, noting that:

"SDG&E has not demonstrated that these factors no longer reflect avoided line losses on its system, or that the generator meter multipliers of the Independent System Operator (ISO) are more appropriate to use for short-run avoided cost calculations." (D.99-03-021, p. 1.)

For the same application, SDG&E performed a new study of distribution-level QF line losses. Consequently, the Commission approved SDG&E's request to switch the DLF value to 1.00. Functioning differently from the old DLF, the new DLF of 1.00 is multiplied by the TLF in order to obtain the over-all line loss

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[3] Some documents use the term "generator meter multiplier" while others use "generation meter multiplier."

[4] An intertie is a border point between adjacent transmission grid territories.

adjustment for distribution level QFs. To avoid constraining future regulatory activity, the decision also noted:

> ". . . nothing in this decision precludes any party from bringing up methodological proposals related to line losses, including those considered in this proceeding, in the PU Code Section 390 proceeding opened pursuant to D.99-02-085." (*Ibid.*, p. 19.)

As directed in the rulemaking, Energy Division convened workshops and issued a workshop report addressing issues pertaining to line losses. Prior to the workshop, parties filed comments, addressing the topics set forth in the Scoping Memo. The workshop focused on developing an understanding of the existing treatment for line losses, proposed alternatives, and criteria to be used in choosing a methodology.

One of the goals of the workshop was to understand how the ISO calculates GMMs. An ISO representative presented the ISO methodology and answered questions from workshop participants. Each GMM is equal to one minus the scaled marginal loss factor. The scaled marginal loss factor is equal to the full marginal loss factor multiplied by a scaling factor. To obtain the full marginal loss factor, the ISO models an increment of power from a generator, and calculates the increase (or decrease) in system line losses that would occur if this increment of power were spread over the entire ISO grid proportionately to where the existing load is. The scaling factor (with a typical value of about 0.55) is the ratio of the system losses divided by the sum of the products, for each generator, of its full marginal loss factor times its generation level. Workshop participants discussed the validity of modeling generation as being spread throughout the grid, with no bias toward local consumption, as well as the validity of scaling of marginal loss factors. SDG&E's representative presented a

February 2000 study of the effect on system line losses from the four SDG&E transmission level QFs.

Although the workshop furthered understanding of the GMM methodology, it did not produce a consensus for the treatment of line losses. The workshop report reflected this lack of consensus, cited areas that required further investigation, and made recommendations.

4.2 Parties' Positions

ORA, SCE, SDG&E, and PG&E favor use of GMMs to replace the current TLFs. As alternatives, SDG&E proposes adoption of the TLFs obtained from its recent line losses study or a TLF value of 1.00. PG&E also does not object to keeping its current TLF value of 1.00. These parties claim the following advantages for the GMM methodology:

1. GMMs have been developed and are calculated by the ISO, a neutral, knowledgeable party;

2. GMMs are specific to individual QFs, and consequently more accurate than any single number applied to all QFs;

3. GMMs vary by hour, and thus more accurately reflect the impact on line losses;

4. GMMs have been developed expressly to calculate the impact on system line losses due to power inputs from a given generator;

5. GMMs are being used by the market for purposes of calculating line losses; and

6. GMMs are readily available, and practical.

IEP, EWC, FPL, and Caithness favor maintaining the status quo, citing the lack of a conclusive challenge to the existing methodology and pointing out weaknesses in all of the proposed alternatives. IEP claims that no party has successfully impugned the validity of the existing TLFs. IEP also argues that the proposed GMM method violates Commission Rule 74.3.[5]

Caithness objects to the use of GMMs, arguing that GMMs do not account for long-term resource decisions made in the 1980s that were responsible for determining the utilities' avoided costs today. Caithness raises technical objections to the new SDG&E study, which calculates TLF values of approximately 1.005, significantly lower than the values currently in place. Caithness also argues that the Commission must consider the plight of remotely located alternative resources such as wind, solar, and geothermal who would likely be hit hard financially by the adoption of GMMs.[6] Caithness suggests that this result would be counter to California legislative policy, which is to encourage alternative generation.

CCC raises three main objections to the use of GMMs. First, CCC objects to how the ISO model spreads the incremental generation over the entire grid without giving preference to close-at-hand load, which they maintain would be a more realistic assumption. Second, CCC maintains that as a result of the ISO model's spreading the incremental generation over the grid, certain remotely located generators serving local load will be treated inaccurately and unfairly.

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[5] IEP presented this argument in a motion to strike prepared testimony. The assigned ALJ properly denied IEP's motion in a June 20, 2000 Ruling.

[6] Remotely located units typically entail higher line losses and typically have lower GMMs.

Third, CCC argues that by forming GMMs from scaled marginal loss factors, instead of from full, unscaled marginal loss factors, the GMMs dilute the effect that a given generator has on the system line losses.

CCC developed a two-part proposal--one for QFs in general, and the other for remote QFs serving local loads. CCC's direct testimony derives a general loss factor of $GMM_{qf} + d * (GMM_{qf} - GMM_{sys})$ where: d is the inverse of the scaling factor that the ISO now uses for calculating GMMs, GMM_{qf} is the GMM value for the individual QF, and GMM_{sys} is the system average GMM. For remotely located generators serving local load, CCC derives a loss factor of $d - GMM_{qf} * (d - 1)$.

Although the workshop report concluded that there was a need for more information regarding DLFs, parties declined to elaborate in their testimony and briefs. SCE proposes that the product of its Wholesale Distribution Access Tariff (WDAT)[7] and the appropriate GMM be the DLF. SDG&E proposes no change to its DLF of 1.0, which equals its WDAT. PG&E uses a DLF of 1.00 for its QF payments and proposes no changes, but uses different multipliers in its Wholesale Distribution Tariff.[8] Other parties have been largely silent regarding DLFs, although Caithness believes that WDAT-based DLFs should be stand-alone numbers, and should not be multiplied by any other factors (such as GMMs). (Opening Brief, p. 19.)

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[7] For subtransmission level generators, Edison's WDAT multiplier is 1.0112. For primary distribution level generators, the multiplier is 1.0373. (Workshop Report, Appendix E, last page.)

[8] For primary distribution system generators, PG&E makes an energy loss adjustment of 1.25%, while for secondary distribution system generators, an adjustment of 3.41% is made. These correspond to DLFs of 0.9877 and 0.9670, respectively. (PG&E Wholesale Distribution Tariff, Attachment D.)

4.3 Discussion

We begin our discussion by reviewing whether the existing methodology for addressing line losses for transmission level QFs is acceptable. The evidence indicates that it is not:

1. The recent SDG&E TLF study suggests that the existing TLFs in place for SDG&E are much too high, leading to significant ratepayer losses;[9]

2. D.99-03-021 explains that SDG&E's and SCE's current TLFs were based on a study that "assumed that all of the marginal line losses would be avoided by the operation of the QFs" (p.8), a difficult assumption to justify; and

3. Existing TLFs treat QF line losses in the aggregate, leading to a less fair and efficient outcome.

We conclude that replacing the existing TLFs with a simple factor of 1.000, unless there is a better methodology available, would be preferred to the existing factors. With the advantages noted above, GMMs appear to provide a superior methodology. First we examine the various arguments against GMMs more fully.

Caithness claims that the GMM does not address the long-term perspective. In order to perform the analysis proposed by Caithness, the Commission would need to speculate as to the resource procurement choices that would have been made in the 1980s, were it not for the QFs. This approach

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[9] Both Caithness and FPL argue that we may not rely on the SDG&E study because "criticisms on the study were struck from Caithness' testimony." (Caithness Comments, p. 8. See also FPL Comments, p. 7, note 1.) In fact, a review of the transcript (RT 813) makes clear that the material in Exhibit 19 (Caithness) addressing SDG&E's study was not stricken from the record. In addition, Caithness argues that we cannot rely on the SDG&E study because it has not been subject to cross-examination. (Caithness Comments, p. 8.) On the contrary, Exhibit 70 (SDG&E) specifically addresses the SDG&E study and was subject to cross-examination by counsel for Caithness on May 11, 2000. (See RT 910-921.)

is unnecessary, as the application of line loss factors is for purposes of paying SRAC payments which clearly calls for a short-run perspective. Although we desire to promote renewable resource development, which often occurs in remote locations, there is no requirement under PURPA, or under California law, that alternative resource QFs receive special treatment for line losses.

CCC argues that the way in which the ISO model spreads incremental load over the entire grid without giving extra weight to nearby load is unrealistic. This criticism has merit. However, all models that allocate the incremental, or marginal, impact among various agents require approximating assumptions. A hypothetical raised at hearing demonstrates the problem. In the hypothetical, two generators are remotely located, and serve local load that is unable to consume all of the power from these generators. CCC witness Beach conceded that there a number of valid ways to allocate the system line losses impact in this example. (RT 862:7- 865:17.) There does not appear to be a unique, correct solution. The GMM methodology is one of the reasonable ways to allocate system losses.

A remotely located generator serving local load presents equity concerns regarding application of the GMM methodology. As discussed below, we are not convinced that the alternative approach proposed by CCC, which calls for a different formula to be applied to remote QFs serving local loads, is correct. Furthermore, the CCC proposal raises significant implementation difficulties. However, as discussed below, we will adopt a lower bound for the TLF to mitigate some of these problems.

Regarding scaling of marginal loss factors, it has not been demonstrated that "scaled" GMMs are wrong, or that "un-scaling" the GMMs is the right approach. In the ISO's *Report to the Federal Energy Regulatory Commission: Studies Conducted Pursuant to the October 30, 1997 Order* (December 1, 1999, p. 2), it states

that scaling is necessary to avoid overpayments for line losses.[10] Scaling is an integral part of the GMM methodology.

We will not adopt the model proposed by CCC. CCC's proposed differential line loss treatment for remote QFs and for QFs close to the load center appears tailor-made to maximize QF SRAC payments. Furthermore, the model contains numerous assumptions with which we are not comfortable. Some of these assumptions are:

1. Output from a given QF is treated separately from other generators (CCC Ex. 17, p. A-1);

2. The marginal loss rate for the QF is assumed to be constant (*Id.*);

3. The Total Avoided Costs equation incorporates the very GMM-based energy payments CCC is attempting to replace (*Id.*, pp. A-3, B-1); and

4. CCC uses the same expression for marginal losses (ML_{qf}) for remote QFs as was developed for the standard QF scenario (*Id.*, p. B-1.).

SDG&E is currently contesting the GMM scaling of marginal loss factors before FERC. Despite the limitations it finds with the current GMM methodology, SDG&E supports the FERC-adopted GMM methodology as the best choice to account for line losses for QF payment purposes. We expect that the GMM methodology may be revisited and refined from time to time by the FERC, and we welcome this process. Proposals to modify the GMM methodology itself should be directed to FERC.

We accept that the GMM is the best method available for measuring the impact on system line losses from an individual generator, but this is not exactly what PURPA calls for. PURPA calls for an adjustment to SRAC payments that

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[10] We take official notice of this report.

will reflect the impact on system line losses *as compared to* the impact that would have occurred had the utility procured its power elsewhere.

For the case where the SRAC is PX-based, the treatment of line losses is simple. The PX procures power and uses GMMs to adjust the quantity of scheduled power. Because each generator bidding into the PX market adjusts its bid to account for the GMM the PX will apply to the sale, the PX market price will reflect this collective bidding behavior. Under cross-examination, SDG&E witness Nelson indicated that SDG&E adjusts the quantity of QF power it bids into the PX to reflect each individual QF's GMM. (RT 895-896.) The resulting PX price reflects GMMs of all generators, thus, the clearing price reflects the system average GMM. That is, the PX clearing price reflects the cost of production as well as the cost of line losses. The line loss effect is captured entirely by the GMM when the SRAC is PX-based. The comparison required by PURPA is already captured when GMMs are used in conjunction with PX based payments.

Unlike the PX price, the administratively determined SRAC, reflects only the cost of production. The simple GMM, when applied to the current administratively determined SRAC, fails to compare the individual QF's line losses to the line losses that would have occurred had the utility procured its power elsewhere. Under PURPA, the impact on system line losses due to generation by the individual QF must be directly compared to the system average GMM, which represents the impact on system line losses due to all of the other generation. This principle was demonstrated during cross-examination of SCE witness Mayfield.

> Q: . . . You state, The generator's hourly GMM will be higher relative to the average GMM when the energy it delivers to is [sic] ISO grid decreases average transmission losses and lower than the average when the energy it delivers increases transmission losses. Now, as I understand it, this would mean that when a QFs GMM is

> higher than the ISO average GMM, the QF is providing line loss savings to the utility; is that right?
>
> A: Yes.
>
> Q: And under PURPA, the QF should be compensated for those savings, correct?
>
> A: That's my understanding. (RT 1008:15-27.)

Therefore, if a QF has a GMM of 0.99 when the system average GMM is 0.98, the QF should receive a one percent credit for the line losses that its production helps the utility avoid. In other words, its TLF should be approximately 1.01, the QF's GMM divided by the system average GMM. In equation form, the TLF described by witness Mayfield equals GMM_{QF}/GMM_{SYS}.[11] For simplicity of implementation, the simple average of all GMMs can be used to calculate GMM_{SYS}. Since actual ("ex post") GMMs are already listed on the ISO website, implementing this approach will be simple and will not require any change in ISO procedures.

In comments on the proposed decision, CCC supports adoption of the GMM_{QF}/GMM_{SYS} described above while payments are made under Section 390(b), unless the QF is located remotely and serve local load. CCC supports this formula because, it argues, the formula properly reflects savings (or costs) of line losses compared to the system. CCC argues that this measure would also be appropriate for setting TLFs when QFs receive SRAC payments

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[11] This formula was also proposed in the *Workshop Report* (p. 25). Some parties, Caithness, EWC, and SDG&E, for example, argue that we cannot adopt this formula because it was proposed in the *Workshop Report* but not supported by any party. However, as is clear from the above transcript quotations, the record independently supports this formula.

based on the PX price. CCC continues to support its proposed methodology for remote QFs serving local load.

In comments, SCE and ORA support adoption of GMMs. SDG&E also supports use of GMMs and the TLF but opposes application of the GMM_{QF}/GMM_{SYS} line loss factor while QFs are paid under Section 390(b) because it states this formula would result in TLFs that exceed those currently in place. Caithness, Calpine Corporation (Calpine), EWC, SeaWest WindPower Inc. (SeaWest), FPL, and IEP all continue to oppose adoption of GMMs in comments. Caithness, for example, argues that adoption of GMMs would violate PURPA because they are focused on losses in the ISO control area, not on losses within the purchasing utility system.

Although Caithness argues that adoption of GMMs as the transmission loss factors would violate PURPA, we find SCE's reply comments persuasive. SCE argues that PURPA simply requires us to establish line loss factors in comparison to the cost of power elsewhere, not specifically within the utility system. (See SCE Reply Comments, p. 4.) We will adopt GMMs as the TLFs if QFs are paid a PX-based energy price. Until that time, effective with the first posting following this decision, we adopt a TLF equal to GMM_{QF}/GMM_{SYS}.[12] We do not find SDG&E's arguments against this formula persuasive. PURPA requires that line losses be compared to those that would have existed had the purchasing utility not purchased from QFs. While QFs are paid based on Section 390(b), GMMs alone do not accomplish this comparison. We find that

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[12] On July 28, 2000, SCE filed a petition to modify D.96-12-028, the decision implementing the transition formula set forth in Section 390(b). That petition was transferred by ruling to this docket. Our adoption of this TLF formula for QFs paid under the transition formula disposes of the relief sought in footnote 4 of the petition.

the formula--GMM_{QF}/GMM_{SYS}--accomplishes the comparison required by PURPA. QFs who have elected to switch to a PX-based SRAC, pursuant to D.99-11-025, should have their GMM applied to account for line losses, effective immediately.

We recognize, however, that adoption of the GMM based line loss methodology may impact payments to QFs who are located in remote areas, especially renewable generators. We find that the societal benefits associated with resource diversity and the environmentally-preferred energy production offered by renewable resources merits special treatment for renewable QFs. Therefore, we will adopt a floor for the TLF of 0.95 for QFs relying on renewable resources for their fuel sources. Renewable QFs paid under the Section 390(b) formula will receive a TLF that is the greater of GMM_{QF}/GMM_{SYS} or 0.95. Renewable QFs who have elected to switch to a PX-based price will receive a TLF that is the greater of GMM_{QF} or 0.95.

Regarding DLFs, should we choose to rely on the utilities' WDAT factors, we face two concerns:

1. Disparity among the utilities' WDAT factors for distribution level generators;[13] and
2. Lack of clarity as to whether the WDAT should be multiplied by the TLF to arrive at the correct total loss adjustment factor.[14]

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[13] We take official notice of the Wholesale Distribution Tariffs on file with FERC for SDG&E, SCE, and PG&E. According to the tariffs, the following WDAT factors apply for each utility: SDG&E--1.000; SCE--1.0112 and 1.037; and PG&E--0.9877 and 0.9670.

[14] SCE proposes to multiply its WDAT values times the GMM of the appropriate bus. Caithness argues that the WDAT values should not be multiplied by any other factor.

The record provides no information as to why the factors vary so significantly between utilities or whether non-QF generators connected at the distribution level are compensated based on the GMM multiplied by the WDAT, or only on the WDAT.

Currently, the total loss factor for distribution-level QFs on PG&E's system is 1.000; PG&E's TLF is also 1.000. On SDG&E's system, the DLF is currently 1.000, and it is multiplied by the TLF to establish the total loss factor for payments to distribution-level QFs. SDG&E's DLF is the only DLF that has been updated based on a recent study and equals the WDAT. (See D.99-03-021.) SCE proposes to multiply its WDAT by the TLF to arrive at the DLF. We adopt the WDAT of SDG&E and SCE as the DLF, to be multiplied by the TLF, to arrive at the total loss factor for distribution-level QFs. This change should be effective the first posting after the effective date of this decision. Because we cannot explain the difference in the WDAT of PG&E, we retain the existing DLF of 1.000 for PG&E, to be multiplied by the TLF, to arrive at a total loss factor.

5. Implementation Issues

In R.99-11-022 we indicated that the price we adopt in this decision will serve as the basis for the true-up for one-time switcher adopted in D.99-11-025. Because we have not yet adopted a PX-based price, the true-up remains in place. The Assigned Commissioner specifically solicited input on how to resolve the true-up issue should we not adopt a PX-based price. We agree with the comments by CCC that "[e]stablishing a 'final' PX-based SRAC methodology today when major changes [to the market structure] may be forthcoming, simply does not make sense." (CCC December 11, 2000 Comments, pp. 2-3.)

6. Sierra Pacific and Pacificorp

In R.99-11-022 we named Sierra Pacific Power Company (Sierra) and Pacificorp respondents to this rulemaking. Sierra appeared at the prehearing conference; Pacificorp did not appear. Neither company sponsored testimony or prepared briefs on these matters. In the scoping memo, the Assigned Commissioner stated that all respondent utilities would be subject to our decision implementing Section 390. Sierra and Pacificorp should make payments to QFs receiving SRAC payments consistent with this order.

Comments on Proposed Decision

The proposed decision of the Assigned Commissioner in this matter was mailed to the parties in accordance with Section 311(d) of the Public Utilities Code and Rule 77.1 of the Rules of Practice and Procedure. Comments were filed by ORA, SCE, PG&E, SDG&E, CCC, IEP, CAC, FPL, EWC, Caithness, PX, The Utility Reform Network (TURN), SeaWest, and Calpine. Reply comments were filed by ORA, SCE, PG&E, SDG&E, CCC, IEP, CAC, FPL, EWC, Caithness, PX, and Calpine. Changes have been made throughout the order as a result of comments.

Findings of Fact

1. PURPA obligates utilities to purchase QF power.
2. There are a number of valid ways to allocate system line losses.
3. CCC's bifurcated line losses methodology maximizes QF SRAC payments.
4. The GMM methodology may be revised from time to time by FERC.
5. The PX clearing price reflects the system average GMM.
6. For a QF paid under the Section 390(b) transition formula, the GMM must be adjusted by the system average GMM.
7. Adoption of the GMM based line loss methodology may impact payments to QFs who are located in remote areas, especially renewable generators.

Conclusions of Law

1. CCC's June 14, 2000 Motion to Set Aside Submission should be granted.

2. Appendix A to CCC's June 14 Motion should be marked as Exhibit 29 and received into evidence as of June 14, 2000.

3. SCE's June 14, 2000 Motion to Strike should be denied.

4. CCC's June 21, 2000 Motion to Strike should be denied.

5. QF pricing must comply with both the requirements of PURPA and the Public Utilities Code.

6. Payments to QFs must reflect the full avoided cost of the utility purchasing the QF power.

7. Using GMMs is one reasonable way to allocate system line losses.

8. Proposals to modify the GMM methodology should be directed to FERC.

9. The Commission should adopt the GMM of each QF as its transmission loss factor once QFs are paid a PX-based energy price.

10. Until QFs are paid a PX-based energy price, the transmission loss factor should be GMM_{QF}/GMM_{SYS}.

11. QFs who have elected to switch to a PX-based SRAC should have the GMM of each QF applied as its transmission loss factor, effective immediately.

12. The societal benefits associated with resource diversity and environmentally preferred energy production by renewable resources merits special treatment for renewable QFs.

13. Renewable QFs paid under the Section 390(b) formula should receive a TLF that is the greater of GMM_{QF}/GMM_{SYS} or 0.95.

14. Renewable QFs who have elected to switch to a PX-based price will receive a TLF that is the greater of GMM_{QF} or 0.95.

15. We should adopt distribution loss factors based on the WDAT for SDG&E and SCE and of 1.000 for PG&E which will be multiplied by the TLF to arrive at the total loss factor for distribution level QFs.

16. This decision applies to all respondent utilities.

O R D E R

IT IS ORDERED that:

1. Once qualifying facilities are paid a PX-based energy price, the Generation Meter Multiplier (GMM) of each qualifying facility shall be applied as its transmission loss factor.

2. Effective with the first posting following this decision, the transmission loss factor shall be GMM $_{QF}$/GMM $_{SYS}$. Renewable qualifying facilities (QFs) paid under the Section 390(b) formula shall receive a transmission loss factor that is the greater of GMM_{QF}/GMM_{SYS} or 0.95.

3. QFs who have elected to switch to a PX-based price shall have its GMM applied as its transmission loss factor, effective immediately. Renewable QFs who have elected to switch to a PX-based price shall receive a transmission loss factor that is the greater of GMM_{QF} or 0.95, effective immediately.

4. Effective with the first posting following this decision, distribution loss factors shall be based on the Wholesale Distribution Access Tariff for San Diego Gas & Electric Company and Southern California Edison Company and shall be 1.000 for Pacific Gas and Electric Company. The distribution loss factor shall be

multiplied by the adopted transmission loss factor to arrive at the total loss factor for QFs connected at the distribution level.

This order is effective today.

Dated January 4, 2001, at San Francisco, California.

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> HENRY M. DUQUE
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APPENDIX A
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