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ORIGINAL

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Second application of Pacific Gas and Electric Company for approval of certain standard offers pursuant to Decision 82-01-103 in Order Instituting Rulemaking No 2.	Application 82-04-44 (Filed April 21, 1982; amended April 28, 1982, July 19, 1982, July 11, 1983, August 2, 1983, and August 21, 1986)
And Related Matters.	Application 82-04-46 Application 82-04-47 Application 82-03-26 Application 82-03-37 Application 82-03-62 Application 82-03-67 Application 82-03-78 Application 82-04-21

(See Decision 88-09-026 for appearances.)

OPINION ON RESULTS OF STANDARD OFFER 2
SOLICITATION BY SAN DIEGO GAS & ELECTRIC COMPANY

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OPINION ON RESULTS OF STANDARD OFFER 2 SOLICITATION BY SAN DIEGO GAS & ELECTRIC COMPANY

I. Introduction

Today's decision addresses issues raised by the oversubscription of San Diego Gas & Electric Company's (SDG&E) recently reinstated Standard Offer 2 (SO2). We find that all four qualifying facility (QF) proposals found to have met the initial screening requirements are eligible for SO2 contracts, but under a capacity price schedule reflecting the addition to SDG&E's system of the full 182.4 megawatts (MW) offered by these QFs. We will keep the size of this cohort of SO2 QFs in mind when we consider whether there should be any SO2 solicitation by SDG&E following our next biennial resource plan proceeding. Finally, we find existing queue management procedures inadequate to deal with this kind of oversubscription problem. Refinement of these procedures, or possible abandonment of "first-come/first-served" for SO2 will also be considered in the next biennial resource plan proceeding.

II. Background

A. Suspension of SO2

SO2 is limited to QFs that commit to provide firm capacity. The offer has energy payments based on the purchasing utility's short-run marginal operating costs, and capacity payments based on the full annualized fixed costs of a combustion turbine. The capacity payments are levelized over the term of the contract, which can be as much as 30 years.

By Decision (D.) 86-05-024, we suspended the availability of SO2 for the signing of new contracts. Concerns prompting the suspension were that our updating and capacity valuation procedures appeared inadequate to reflect the utilities' varying needs for new capacity. We have since made modifications meeting these concerns (see D.86-11-071, D.87-11-024). However, the low need for new capacity then apparent on the systems of Pacific Gas and Electric Company (PG&E) and Southern California Edison Company (Edison) led us to continue the suspension for those two utilities.

B. Reinstatement of SO2 for SDG&E

Although SDG&E showed no "avoidable resources" (basically, new baseload or intermediate generation that would be cost-effective to add during the eight-year planning horizon), SDG&E's resource plan identified a need for peaking generation in the near future. We determined in D.87-11-024 to reinstate SO2 for SDG&E as soon as possible.

We planned a limited solicitation of 100 MW on a first-come/first-served basis.[1] To better convey SDG&E's reliability needs, the capacity prices were calculated for two blocks of 50 MW each.[2] We also recognized the importance, in a first-come/first-served solicitation, of clear rules on queue management. Thus, we directed SDG&E to submit detailed proposals for such rules, and invited other parties to file concurrent comments. In D.87-12-056, we approved a set of queue management rules and related administrative provisions and directed SDG&E to file amendments to its SO2 power purchase agreement consistent with that decision.

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1 To deal with the possibility of a QF straddling the MW limit, we also provided that SDG&E would use the same "buffer" rule approved for final SO4. Under that rule, the total MW accepted for the SO2 solicitation could run as high as 110 MW; otherwise, the straddling QF would have to downsize to within the buffer or be passed over in favor of the next QF in the queue.

2 Under block pricing, capacity prices for the second block are calculated with the assumption that all QFs from the first block are already on-line. This results in somewhat lower prices that correspond to the purchasing utility's lower incremental capacity need for the second block.

Today's decision deals with that compliance filing as well as with the results of SDG&E's SO2 solicitation.

C. <u>The Oversubscription</u>

SDG&E's rules anticipate a gradual filling of the capacity blocks. The rules say how a QF responding to the solicitation can establish and maintain its priority in the queue. The rules address many contingencies, but unfortunately they fail to provide for what actually happened. Instead of a gradual response, the QF capacity in line at the opening of business on the first day already exceeded the available MW in the solicitation.

Specifically, five QF developers, sponsoring six projects with a total of about 220 MW, were in line on the first day of SDG&E's 100 MW solicitation. The following table, which details the QF response, is adapted from SDG&E's report (August 15, 1988) on the results.

Summary of QF Response
<u>To SDG&E's SO2 Solicitation</u>

Luz Development and Finance Corp.
Technology: Solar Thermal (gas enhanced)
Nameplate Rating: 80 MW
Available Capacity: 80 MW
Site: Harper Lake
Expected On-line: September 1993

Freeport-McMoRan Resource Partners
Technology: Geothermal
Nameplate Rating: 55 MW
Available Capacity: 50 MW
Site: Salton Sea
Expected On-line: January-May 1993

Bonneville Pacific Corp.

Technology: Cogeneration
Nameplate Rating: 56 MW
Available Capacity: 50 MW
Site: East of Yuma, Arizona
Expected On-line: June 1990

O'Brien Energy Systems

Technology: Biogas
Nameplate Rating: 2.4 MW
Available Capacity: 2.4 MW*

*O'Brien's reply comments indicate that the project output net of station load is 2.2 MW

Site: South Chollas Landfill
Expected On-line: July 1989

Luz Development and Finance Corp.

Technology: Solar Thermal (gas enhanced)
Nameplate Rating: 20 MW
Available Capacity: 20 MW
Site: Harper Lake
Expected On-line: September 1993

Intex Corporation

Technology: Cogeneration
Nameplate Rating: 21 MW
Available Capacity: 21 MW
Site: Escondido
Expected On-line: June 1990

III. Results of SDG&E's Screening

The QF must do more than simply show up at the utility's office in order to establish priority. The QF must meet certain requirements, chief of which are (1) providing a project description that contains specified information, and (2) paying a project fee calculated at $5 per kilowatt (nameplate). These are important requirements. They force the QF to formulate serious (though preliminary) plans, they provide fundamental information to the utility, and they discourage speculation by requiring a substantial commitment from the QF.

SDG&E reports that Intex and Luz (for the smaller of its two projects) have not met these threshold requirements. Regarding Intex, SDG&E alleges that the developer made no effort to pay the project fee. Although all the other QFs accepted our invitation to comment on SDG&E's report, we have had no response from Intex. We conclude that SDG&E has properly screened out this project.

Regarding the Luz 20 MW project, SDG&E rejected it "because of conflicting priorities with a previously signed contract with Southern California Edison." Luz disputes this. Luz explains that its 20 MW project is actually part of an 80 MW facility, of which 60 MW would be sold to Edison under an existing contract, with the remaining 20 MW going to SDG&E.

We do not rule out the possibility of a QF's selling energy and capacity to more than one utility from a single project, but we agree with SDG&E that a project description in apparent conflict with a prior commitment is defective.[3] In this instance, a substantial and objective uncertainty clouds the developer's ability to deliver energy and capacity as set forth in

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3 Compare D.86-08-017, where we found defective a project description that contained various inconsistencies.

its project description. Sound queue management dictates that such a QF not take priority equal or superior to other QFs whose project descriptions are complete.

The letter from Edison[4] that Luz submits together with its response to the SDG&E report only confirms the legitimacy of SDG&E's concerns. In relevant part, the Edison letter notes that, "[w]hile you propose to sell SDG&E power from SEGS XII, the contract between Edison and Luz only provides for the interconnection of a 60 MW nameplate project and the sale of firm capacity to Edison in the same amount. Your proposal to sell power to SDG&E via an Edison interconnection is therefore inconsistent with the terms of that contract and appears to be a substantial change in the project."

We stress that what we are deciding now is a queue management issue. We determine only that the Luz 20 MW project was not sufficiently defined to hold a place in the SO2 queue.[5]

The screening out of Intex and the Luz 20 MW project leaves four projects, representing 182.4 MW (nameplate), in the queue for 100 MW of SO2 contracts available from SDG&E.

IV. The Four-way Tie

SDG&E concludes (and we agree) that it presently has no basis for assigning different priorities to the four projects that

4 The Edison letter, dated July 21, 1988, and signed by P.J. Easterwood, responds to a preliminary inquiry from Luz on the delivery of power from the Luz projects (which are in Edison's service territory) over the Edison transmission system to SDG&E.

5 We also support the economic development of renewable energy technologies and innovative interutility arrangements to ensure that power from these technologies is delivered to where it is needed. In short, we do not reject the 20 MW Luz project; we simply find it ineligible for this particular SO2 solicitation.

have passed the initial screening. The QF commenters disagree on this point, owing largely to the different forms in which the developers presented their project fees.[6] This seems to arise from some confusion over the required form for these fees, a confusion for which SDG&E must bear some of the blame.

The solicitation package distributed by SDG&E on May 16, 1988 (one week before the actual availability of the SO2 contracts) says in relevant part: "The Project Fee may be submitted in the form of an Escrow Account..., or an Irrevocable Letter of Credit... acceptable to SDG&E." The solicitation then specifies the requirements for an acceptable letter of credit; it also contains a "Model Escrow Agreement."

In practice, however, SDG&E did not adhere to these formal requirements for the project fee. Luz and Freeport-McMoRan tendered checks, which they were permitted to convert later to letters of credit; SDG&E had apparently indicated to these QFs that this would be acceptable. According to SDG&E, Bonneville submitted a letter of credit with unacceptable terms, while O'Brien submitted

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6 Luz makes much of the fact (and submits notes from SDG&E security personnel to this effect) that its representative came to SDG&E's office on May 19 and again several hours before that office's opening at 8 a.m. on May 23. Unfortunately for Luz, our queue management rules do not enable a QF to establish priority by camping out in the utility's lobby. SDG&E, perhaps concerned over the possibility of such tactics, issued a notice on May 19 that "all applicants [for SO2 contracts] present at SDG&E's main office...at 8:00 a.m. on May 23 will be treated as having submitted their applications at the same time. To the extent necessary, SDG&E will seek resolution from the CPUC of any issues raised by any ties that may occur." SDG&E's notice was both prudent and proper.

an incomplete escrow agreement, unsigned by any bank.[7] After reviewing these deficiencies, SDG&E concluded that Bonneville and O'Brien had made a good faith effort to comply, that the deficiencies were minor, and that they were likely caused by the short time available to the developers. SDG&E indicates that, at its request, Bonneville and O'Brien have corrected these deficiencies and now have acceptable applications.

Not surprisingly, Luz and Freeport-McMoRan argue that they followed instructions and should take priority, while Bonneville disagrees that there was anything wrong with its letter of credit. O'Brien does not specifically address the project fee issue but argues it should have priority based on the project's alleged environmental benefits and its small (2.4 MW) size, which presumably does not materially contribute to the oversubscription.

We agree with SDG&E that the differences here in treatment of the project fees do not provide a fair or reasonable basis for assigning priority among the projects. All four QFs were permitted to perfect their project fees following initial tender. While letters of credit and escrow agreements are quite commonplace, we think the one-week period between SDG&E's announcement and actual availability of the SO2 contracts is a very short period in which to make these commercial arrangements. Finally, there is no assurance on this record that all four of these developers were given the same information regarding the acceptability of a check for these purposes. Accordingly, the projects all have equal priority at the head of the queue.

7 The record does not say whether or not Bonneville and O'Brien were informed that SDG&E would consider acceptable the submission of the project fee in the form of a check, to be converted later into a letter of credit.

V. Possible Tie-breakers

SDG&E's report identifies four alternatives for determining how to break the deadlock: negotiation among the utility and the four QF developers; downsizing according to a predetermined formula; holding a lottery; and awarding contracts based on energy and capacity price discounts bid by the developers.

A. Negotiation

SDG&E is willing to try negotiating with the QF developers as an alternative to its preferred tie-breaker, which is bidding. SDG&E proposes the following guidelines: First, SDG&E would accept no more than 110 MW, in accordance with the "straddling" rules.[8] Second, SDG&E would try to arrive at an arrangement acceptable to all parties, but if agreement could not be reached among all parties within 60 days, SDG&E would propose another tie-breaker (presumably, bidding.)

B. Downsizing

Under this alternative, SDG&E would request each developer to downsize its project to fit within the capacity available under this SO2 solicitation. There would have to be a formula for such downsizing; otherwise, this alternative would become a variant of negotiation. SDG&E suggests pro rata

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8 See Note 1 above. It is unclear whether, by this guideline, SDG&E intends to preclude the developers from apportioning their projects' capacity between SO2 and SO1. In other words, if each developer were willing to take SO2 capacity prices for 60.3% of project capacity and SO1 capacity prices for the rest, all four projects would fit within the SO2 capacity blocks originally announced. Note that energy prices under SO2 and SO1 are identical.

reduction, or about 60% under these facts.[9] However, SDG&E does not favor downsizing.

C. Lottery

SDG&E (or some other entity administering the lottery) would assign priority to the projects on some random basis until both 50 MW blocks of available capacity were filled. Capacity payments for a project straddling the two blocks would be weighted according to the proportion of project capacity in each block. A project straddling the MW limit would be treated as provided in D.87-11-024 and D.87-05-060.

SDG&E does not consider the lottery an acceptable alternative, except where a tie persists even after bidding.

D. Bidding

SDG&E would issue a request for proposals to the four developers, who would bid discounts on energy and capacity payments. Developers bidding the same price would then be ranked on their respective willingness to provide utility-desired performance features.

SDG&E would hold a lottery, should ties continue to persist. Priority would be awarded on a declining scale from highest to lowest value of bids, until both 50 MW blocks of capacity were filled. Straddling of blocks and of the MW limit would be resolved in accordance with D.87-11-024 and D.87-05-060.

SDG&E strongly prefers bidding to the other alternatives. SDG&E believes the proposed bidding process would award SO2 contracts to those projects that would provide the most benefit to

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9 The downsizing fraction would be 110 ÷ 182.4 = 60.3%, where 110 corresponds to the available MW after allowance for "straddling" (see Note 1 above) and 182.4 corresponds to the total QF capacity seeking SO2 contracts. Again, we are uncertain whether SDG&E's downsizing alternative would preclude the SO2/SO1 apportionment discussed in Note 8.

SDG&E's ratepayers. SDG&E also prefers bidding because of the alleged objectivity of the process and in order to gain experience with a QF auction.

SDG&E has submitted a draft "Request for Proposals" that it intends to use if its bidding alternative is approved. Only the four developers currently tied would be invited to submit proposals. Developers would have to submit bids in order to continue in the solicitation; however, they would not have to offer a discount (i.e., a zero discount bid is acceptable) or commit to provide any performance features. The discount bid by a developer would apply to <u>both</u> energy and capacity payments.[10] SDG&E is silent on whether a developer can target its bid to one or the other capacity block.

SDG&E would use a discriminative, rather than second price, auction. SDG&E argues that "[t]he prime purpose of the bidding alternative is to select proposals which can provide the maximum benefits to SDG&E's customers. In this situation, where only four developers are involved, the second price auction is likely to be as arbitrary as random selection and will not yield maximum benefits to SDG&E's customers." Also, a developer that includes performance features in its bid is committed to provide those features whether or not they are used to break a tie between developers bidding the same price. SDG&E would have "sole discretion" to evaluate these features, should that become necessary to break a tie.

10 SDG&E suggests that the same bidding process is used in final SO4. SDG&E is mistaken; the discounts in the final SO4 auction apply only to fixed payments under that contract. In other words, variable (energy) payments are not subject to discounting under final SO4. This is an important consideration, as we discuss in Section VI below.

E. Other Parties' Comments on Possible Tie-breakers

1. PG&E and Edison

PG&E and Edison filed brief comments. PG&E supports SDG&E's proposal to hold a discriminative auction. Edison asks that whatever tie-breaker the Commission approves be limited to this particular solicitation, and that the SO2 solicitation process be examined generically in the next biennial resource plan proceeding.[11]

2. DRA

Division of Ratepayer Advocates (DRA) supports bidding to break the tie, but favors an auction similar to that adopted for final SO4. Thus, winners would be paid the price bid by the lowest losing bidder (the so-called "second price"). DRA would also limit bidding to discounts on the capacity price only. DRA reasons that a developer required (as proposed by SDG&E) to bid a single discount for both energy and capacity would bid strategically as a protection against fluctuating energy prices, even if an "honest" bid would otherwise include a greater discount on capacity. Finally, DRA would exclude nonprice factors altogether, apparently because SDG&E has given no indication how it would value these factors in the event that a tie still exists after price-only bidding. DRA recommends reducing the likelihood of such a tie by requiring precise bids carried to tenths or even hundredths of a percentage point.

11 PG&E, SDG&E, and Edison will file their resource plans in that proceeding after the Energy Commission approves its Seventh Electricity Report. Final approval is planned for the near future. We have previously proposed a new approach for regulating the availability of SO2. (See D.88-09-026, mimeo. pp. 38-42.) The next biennial resource plan proceeding should include comment on that proposal and possible modifications or alternatives.

3. <u>QF Representatives</u>

Independent Energy Producers Association (IEP) and the four tied developers each filed comments. IEP believes that a tie-breaker is unnecessary because SDG&E's need for new capacity, as shown by SDG&E's own testimony in the last resource plan proceeding, greatly exceeds the 100 MW made available in this SO2 solicitation. Also, SDG&E has exaggerated the size of the oversubscription: because the three largest projects are outside SDG&E's service territory, SDG&E will receive (and pay for) fewer MW than the projects' net output. IEP estimates, and SDG&E does not dispute, that off-system losses would reduce total delivered capacity to about 170 MW. If the tie is to be broken by bidding, then IEP (supported by Bonneville) advocates that the Commission (1) use a second-price auction, and (2) allow projects under 5 MW to accept a contract at the price determined by the auction from bids submitted by the larger QFs.

Bonneville supports SDG&E's bidding proposal with modifications: (1) use a second-price auction; (2) reject the use of performance features as a tie-breaker after bidding, since SDG&E has neither identified these features nor indicated what value it would assign; and (3) clarify the capacity value against which the QF bids.[12] Regarding the latter point, Bonneville suggests treating the entire 100 MW as one block. SDG&E would then compute a single capacity price table, without varying its earlier assumptions, for the 100 MW block. Finally, Bonneville asks that SDG&E disclose, before the auction, all line-loss calculations and other adjustments that SDG&E proposes to apply to out-of-service-territory QFs.

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12 Bonneville also indicates that it would participate in negotiation as an alternative tie-breaker.

Freeport-McMoRan considers the need for a tie-breaker to be illusory. It points to SDG&E's own resource plan filing in this proceeding, which led to this SO2 solicitation. SDG&E's August 1987 brief is quoted at length by Freeport-McMoRan:

> "Under all scenarios which SDG&E presented, SDG&E has capacity requirements within the planning horizon. The QF participants agree with this conclusion. Tr. 7532 (Marcus); Tr. 7850, 7855 (Branchcomb). . . . Under the scenario which SDG&E considers to be the most reasonable outlook for the future, SDG&E has identified the need for 730 MW of capacity by 1995. Exh. 429 at 41 (Resource Plan 3)."

Freeport-McMoRan concludes that SDG&E can easily accommodate both the Luz (80 MW) and Freeport-McMoRan (50 MW) projects, and probably Bonneville and O'Brien as well. Any tie-breaker should be confined to the latter two developers.[13]

Freeport-McMoRan also believes that SDG&E has proposed various prerequisites and development risks that unfairly discriminate against out-of-service-territory QFs. We deal with these matters (interconnection, milestones, and conditions for project fee refunds) in Section VI below.

Luz's comments generally parallel Freeport-McMoRan's. Luz prefers a second-price auction to SDG&E's bidding proposal but submits that no auction is appropriate, given (1) line losses reducing the total MW delivered by the out-of-service-territory projects, and (2) vigorous demand growth on SDG&E's system. If the Commission determines that an auction is appropriate, Luz urges that the auction be structured to consider valuable nonprice

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13 For reasons described and rejected in Section IV above, Freeport-McMoRan and Luz believe that only they have complied with the project fee requirements, and that consequently the Commission need only consider whether the total 130 MW of their two projects constitute a significant oversubscription.

attributes (e.g., environmental advantages, fuel diversity, load-following, use of renewable resources) of the competing projects.

O'Brien is alone in preferring a lottery tie-breaker. O'Brien asserts that negotiating goes against the whole standard offer concept. Neither the second price nor the discriminative auction is fair or consistent with avoided cost principles, and O'Brien indicates that payments at less than full avoided costs would probably make its landfill project uneconomic compared to wasting the landfill gas by flaring. Finally, downsizing is not a practical alternative for O'Brien, since its project must be sized to consume all the landfill gas produced.

O'Brien argues that a lottery is the only tie-breaker fully consistent with the intent of this SO2 solicitation, i.e., "to provide defined prices for a limited quantity of MWs." O'Brien sets forth terms that would put its small project on an equal footing with the three larger QFs. Under these terms, O'Brien would get one of the SO2 contracts (1) where it placed first or second in the lottery, or (2) where it placed third but the total MW of the top three projects was within the 10% window (up to 110 MW) allowed for a project that straddles the 100 MW limit. Furthermore, O'Brien argues that the lottery winners should be given a stated period of time within which to arrange for wheeling (if located outside SDG&E's service territory) and interconnection. If any of the winners fails to do so, it loses its contract eligibility, which should then be offered to the remaining QF(s).

Finally, O'Brien argues that the Commission should consider simply exempting this small project from any tie-breaking process and instead award it a contract at the full (presumably first block) capacity price offered in the SO2 solicitation. The justification for the requested preference is the project's use of renewable fuel and environmental benefits, and the permanent loss of the project if it is not developed immediately.[14]

VI. Discussion

The fairest and most practicable resolution, and one that is consistent with SDG&E's resource needs, is to find all four projects eligible for SO2 contracts. This resolution entails a lower capacity price than announced in SDG&E's solicitation. This results from two circumstances. First, SDG&E will add as much as 182.4 MW to its system instead of 100 MW, and the value (i.e., contribution to reliability) of the extra QF capacity is lower, on a per-megawatt basis, than the value of the first 100 MW. Second, our plan to have capacity price tables for two blocks of QF capacity will not work, given the present four-way tie among the projects. Instead, we direct SDG&E to develop a new capacity price table for a single block of 182.4 MW, otherwise using the same assumptions that underlie the prices shown for the two 50 MW blocks originally contemplated.

This resolution is a compromise. We think that is inevitable under these circumstances. We explain below our basis for rejecting alternatives and the advantages of the adopted resolution.

A. Negotiation

A negotiated resolution might produce an optimal result in terms of fairness and resource planning, but we find that the present predicament offers little chance for successful negotiation. There are many parties, few established ground rules, and few incentives for compromise. An unsuccessful negotiating

14 O'Brien asserts that if it does not proceed in 1989, the municipality will have to install a flaring system on the landfill.

conference would leave us, some months down the line, with the same predicament we face today, except perhaps for attrition among the developers.[15]

We note that, were we farther along in "unbundling" generation resource needs (an analysis that we have already begun in this proceeding, see D.88-09-026, mimeo. pp. 35-38), negotiation in some form might well become part of the standard offer solicitation process. But to be fair to the QFs, the utility would have to disclose in advance the rules of the game. These would include a specification of the load-following and system stability features that the utility seeks; how (if at all) the utility would weigh environmental factors and fuel diversity; and how nonprice factors, price discounts, and front-loaded versus ramped payment streams would be ranked. These rules would have to be reviewed for consistency with the Energy Commission's integrated assessment of need (established in its biennial Electricity Report) and with the standard offer structure that we administer (in our biennial resource plan update) to ensure least cost planning and a fair opportunity for QFs to participate in filling the utilities' resource needs. Forcing QF developers to submit bids for evaluation at the utilities' "sole discretion" is simply a retreat to pre-standard offer days, when the utilities signed few contracts with QFs.

15 O'Brien says that its project faces development deadlines from the municipality that operates the landfill site, while Bonneville has to pay monthly for an option to develop the site planned for its cogeneration facility. Eliminating these projects by attrition would simplify our task in one sense but would bear little or no relationship to the merit of the projects and would be a disaster for our standard offer program, which was created in large part to minimize entry hurdles for QF developers.

B. Downsizing

No party supports mandatory downsizing. O'Brien says that its project cannot be downsized, and this may be true of some of the other projects as well. This tie-breaker also contradicts our policy to encourage careful planning by the developer, since optimal sizing would likely characterize a carefully planned project. Why invest money and effort in such planning if the result of the utility solicitation requires redesign of the project? Moreover, we would want to explore the possibility of a project's apportioning its capacity between SO2 and SO1 (see Note 8 above) before we would consider so harsh a remedy as mandatory downsizing. The point is moot here because, as we discuss later, the appropriate remedy is to expand the size of the SO2 solicitation to accommodate all four projects.

C. Lottery

The attraction of holding a lottery is its seeming simplicity and neutrality, but as O'Brien points out, a lottery could actually discriminate against a small project, depending on how the MW limit is administered. All of the parties believe this oversubscription problem should be resolved on a more compelling basis than luck-of-the-draw. We agree.

D. Bidding

In rejecting the use of bidding as a tie-breaker, we do not reject bidding as a component of QF procurement. In fact, this Commission was one of the first in the nation to approve QF bidding when we incorporated the second-price auction in our long-run marginal cost offer, final SO4. (See D.86-07-004.) However, there are at least four critical distinctions between what we did in final SO4 and SDG&E's proposed tie-breaker.[16] The distinctions have to do with risk, regulatory policy, how QF procurement is conducted, and what its aims should be.

First, in final SO4, based on avoidable resources, a relatively large part of the QF's payment stream is fixed and known in advance, and only the QF's fixed payments are subject to discounting through bidding. In SO2, based on short-run marginal costs, the major part of the QF's payment stream varies with the purchasing utility's energy costs (largely a function of fuel price). By requiring the QF to bid a discount on both energy and capacity payments, SDG&E's bidding proposal would impose great risks on QFs. The final SO4 QF knows exactly the impact of various discounts on its payment stream, while the SO2 QF (if SDG&E's proposal were adopted) is essentially making a bet on its forecast of fuel prices. The history of fuel prices over the last 20 years suggests this is a bad bet to make. We conclude that SDG&E's bidding proposal would tend strongly to award contracts to risk-takers ahead of prudent planners. Discounts from winners so selected may look significant, but the winners may not be able to deliver the promised energy and capacity over the life of their contracts.

Second, the final SO4 QF knows at the outset that it <u>might</u> receive a price lower than the costs of the avoidable resource, and can plan accordingly. The developers responding to this SO2 solicitation had an entirely different signal from the regulator, i.e., this Commission. SDG&E, pursuant to our decisions, announced fixed, levelized capacity payments for two 50 MW blocks. Nothing in our decisions or SDG&E's announcement

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16 Our rejection of bidding in the present context is not predicated on SDG&E's attempt to relitigate discriminative versus second-price auctions. SDG&E's bidding proposal would still be fatally flawed even were it to use a second-price auction.

informed the developers that both the fixed and variable price components in the SO2 payment stream might be subject to discounting or that their projects might be judged on their ability to provide unspecified performance features to SDG&E, to be evaluated at the utility's "sole discretion." Introducing these elements would completely change the nature of the solicitation. We intend to consider changes to the way we regulate the availability of SO2 in the next resource plan proceeding (see Note 11 above), but we think a fundamental principle of sound regulation is to make such changes on a prospective basis.

The third point, akin to the second point but nevertheless sightly different, is that the regulatory selection criteria should not only be consistent throughout a given solicitation cycle, they should also be "transparent."[17] In other words, the criteria should be fully disclosed and explained to the potential respondents to the solicitation. Final SO4 satisfies this requirement. SDG&E's proposed bidding tie-breaker does not. To the extent that the determination of winners depends on evaluation of certain aspects of the bids at SDG&E's "sole discretion," the selection criteria are unknown even to this Commission, let alone the QFs. Even more fundamental, where the announced method of selection (first-come/first-served) is replaced after-the-fact by a totally

17 PG&E, in a presentation of a recent DRA workshop on integrating price and nonprice factors in QF procurement, emphasized the need for "transparent" selection criteria. On this point, we entirely agree. Moreover, SDG&E has recently added its support to PG&E's position.

incompatible method (discriminative auction), what should be a transparent process proves to be a black box.[18]

Fourth, we have tried in final SO4 to devise a contract and an auction that is suitable for a broad range of QF technologies. We know that the lack of front-loading in final SO4 payments creates some difficulty, especially for QFs using capital-intensive technologies. However, those projects should continue to be financeable under final SO4, considering the high proportion of fixed payments provided in that offer. (See D.86-07-004, mimeo. p. 78.) In contrast, the payment stream in SO2 over the life of the contract shows a much higher proportion of variable payments. Adding a discriminative auction to the SO2 procurement process, as would SDG&E's bidding proposal, creates a strong bias in favor of less capital-intensive QF technologies, such as cogeneration.[19]

We believe there are sound bases (both price and other factors) for discriminating among QF projects. We also believe that choosing among these factors requires careful consideration and an ample record. Scrambling to break a tie does not provide an appropriate setting for such choices. Furthermore, SDG&E's bias (perhaps unintentional) towards cogeneration runs counter to the direction of our proposal in D.88-09-026 (mimeo. pp. 38-42) regarding future modifications to SO2. We there indicated our interest in

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18 This also refutes DRA's and SDG&E's argument that we should treat the tie as an opportunity to gain experience with QF bidding. If we want to run a bidding experiment, that fact should be established in advance. We doubt that many conclusions could be drawn about QF bidding where the potential participants were initially informed that bidding would <u>not</u> be part of the selection process.

19 Not surprisingly, the only cogenerator (Bonneville) among these four developers is also the only one to endorse a bidding tie-breaker.

making SO2 more suitable for capital-intensive QFs (such as waste-to-energy projects), not less so.

For all these reasons, we find SDG&E's bidding alternative unacceptable.

E. The Adopted Solution

We have concluded above that we lack a sound or attractive basis for breaking the tie. The question raised by several QF commenters is whether the tie really needs to be broken. We conclude that it does not.

Taken together, these four projects present virtually a showcase of the kind of development the QF program was designed to stimulate. They would greatly increase the use on SDG&E's system of renewable resources.[20] Three of the projects use new technologies, and one project (O'Brien's) contributes to the solution of our waste management problems. They are diverse in size and fuel mix, both among themselves and in comparison to SDG&E's existing generation resources. They all help maintain environmental quality, either by developing renewables or consuming fossil fuel more efficiently than traditional electric utility generation.

The developers are all well-established companies, with a significant amount of capacity already brought on-line in California and other states. In short, the only obvious criticism to be made of the results of SDG&E's SO2 solicitation is that it was too successful.

SDG&E's need for capacity is also not an issue. In our resource plan proceeding following the latest adopted (Sixth) Electricity Report, SDG&E asked to make some 380 MW available for deferral by QFs under final SO4. (See Exhibit 429, page 13 and

20 Freeport-McMoRan and O'Brien would use renewable fuels exclusively, while Luz would rely mostly on solar energy, with some supplemental gas firing to enable it to provide firm capacity.

Table 5.)[21] We denied that request because we could not find any cost-effective baseload or intermediate generation addition to serve as the avoidable resource for purposes of final SO4. But we did--with SDG&E's support--reinstate SO2. As we explained,

> "Standard Offer 2 is very well-suited to SDG&E's current needs. QFs contracting under this offer are committed to meet peak loads. They are upwardly dispatchable; their prices are time-differentiated; they must meet availability requirements keyed to the incidence of the purchasing utility's peak; they can achieve bonus payments for exceeding these availability requirements, and face derating if they fail to meet them.
>
> "Moreover, Standard Offer 2 is a short-run offer, using capacity and energy payment methods that track the purchasing utility's short-run marginal costs. As such, Standard Offer 2 is appropriate (indeed, it is the least-cost strategy) whenever a utility would not incur energy-related capital costs. Such is the case with SDG&E." (D.87-11-024, mimeo. p. 35.)

We emphasize that we endorse planning strategies that preserve the utility's flexibility to take advantage of exceptional purchase opportunities in times like the present, when neighboring utilities may have surplus capacity. In particular, we do not intend to fill up SDG&E's (or for that matter PG&E's or Edison's)

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21 The 380 MW figure derives from SDG&E's preferred planning scenario. SDG&E's more conservative scenario, based on Energy Commission assumptions, shows need for about 230 MW by 1992. However, <u>both</u> of these figures understate total need because under SDG&E's planning strategy, it immediately fills only those needs arising in the near-term and <u>half</u> of the needs perceived for the latter years in its planning horizon. In this way, SDG&E preserves flexibility and avoids premature commitment to resources that it may not actually need. However, SDG&E can absorb 180 MW of SO2 QFs by 1993 consistent with its resource plan and its "50/50" procurement strategy.

generation resource needs with SO2 QFs. We have already proposed, in D.88-09-026, to tie SO2 availability to a reliability threshold and a fraction of peak demand growth. If that proposal were applied to SDG&E in the coming resource plan proceeding, we would expect to authorize a new SO2 solicitation for about 60 MW, perhaps more. The present oversubscription, after allowing for line losses, essentially obviates the need for a new solicitation. Therefore, absent a compelling showing of extreme capacity shortage, we will not authorize any SO2 solicitation by SDG&E in the next resource plan update.[22]

We have considered but rejected the possibility of requiring the four tied developers to proceed under a contract apportioning their capacity payments between SO2 and SO1. (See Note 8 above.) The best compromise available to us is to have SDG&E recalculate its capacity price schedule, treating the entire 182.4 MW as a single block. This results in a lower capacity price to the QFs but preserves the promised levelization feature, while SDG&E gets more MW than it counted on (or perhaps wanted) but at a lower per-MW capacity price.

The long-term solution to the oversubscription problem is to avoid its occurrence by better queue management rules and/or tie-breakers established in advance of the solicitation. That solution must await the next biennial resource plan proceeding.

F. What Happens Next (Line Loss and Interconnection Studies, Contract Signing, Disposition of Project Fees)

We have previously authorized SDG&E to calculate, on an individual basis, the line loss impacts of QFs delivering energy from outside SDG&E's service territory. This would include the

22 This conclusion does not apply to final SO4: should SDG&E's resource plan show avoidable baseload or intermediate additions, these should be offered for possible deferral by QFs.

Luz, Bonneville, and Freeport-McMoRan projects. SDG&E will need to complete these studies shortly. These QFs must also conclude wheeling arrangements with other entities (such as Edison and Imperial Irrigation District) whose transmission lines may be used to get the QF energy to SDG&E. SDG&E must perform interconnection studies (at least for O'Brien), and the SO2 contracts will need to be signed. Finally, some QFs may find, as a result of the various studies or negotiations, that they are unable to go forward with their projects at this time, in which case, under certain circumstances, they may get a refund of their project fees. The QF commenters have raised some questions regarding the timeline and procedures for these steps, which should go as smoothly as possible to avoid further delay and uncertainty. We therefore address these questions in some detail.

1. <u>Contract Signing</u>

The four-way tie and the review that followed have delayed contract signing (normally to occur within six months after the QF submits its project definition) and the necessary arrangements preliminary to contract signing. SDG&E agrees that, in this case, an extension is reasonable. We believe the six months should start to run after our decision resolving the eligibility question. For purposes of this solicitation, the QF shall execute a power purchase agreement prior to or concurrently with its Interconnection Facilities Agreement with SDG&E (if applicable) but no later than six months after the effective date of today's decision. (Cf. the current (Fifth) Edition of the QF Milestone Procedure.) However, we will <u>not</u> extend the capacity price schedule past 1993: even with the delay that has occurred, these projects will have nearly a full five years within which to come on-line.

2. <u>Line Losses and Interconnection</u>

Bonneville and Freeport-McMoRan do not concede that their off-system projects will necessarily increase line losses on

SDG&E's system. We do not prejudge this point. We note that much of SDG&E's energy already comes from outside its service territory (e.g., from the San Onofre nuclear plants and purchases from utilities in the Pacific Northwest and Inland Southwest). We expect that the same transmission assumptions and analytic techniques that SDG&E uses to model the impacts from these other off-system resources will be used to calculate the impacts of the off-system QFs.

Bonneville, Freeport-McMoRan, and Luz should meet with SDG&E personnel as soon as possible to identify and exchange information needed by SDG&E to perform line loss studies. These should be completed within 30 days after the developer has provided any needed information, beyond that already included in the project definition.

In D.88-04-070, we held that a utility generally should contract with off-system QFs unless we determined, on an individual basis, that interconnection with such a QF would result in economic harm to the ratepayer, e.g., by bumping economy energy purchases off an intertie. SDG&E has not suggested that any of these QFs would have this effect; however, it should raise this issue (should it determine that the potential for such an effect exists) no later than the studies mentioned above. We would then expect the developer to accept an appropriately crafted economic curtailment provision. An example of such a provision already part of our standard offers is hydro spill pricing, under which a QF must either actually curtail output, or accept a price equal to the purchasing utility's actual marginal energy costs, whenever hydro conditions are such that the utility cannot store more water behind its dams.

Luz and Freeport-McMoRan feel themselves in a "Catch-22," in that SDG&E seems to require (as a condition to signing the SO2 contract) proof of their ability to deliver their energy to the point of interconnection, while the intervening utility is likely to condition the signing of a wheeling agreement on proof of an executed SO2 contract with SDG&E. SDG&E's reply comments offer a solution: "SDG&E is willing to allow up to 6 months after the power purchase agreement is executed for the QF to [finalize a wheeling agreement], so long as this obligation becomes an additional milestone [under the QF Milestone Procedure]." SDG&E indicates that missing this milestone should result in forfeiture of the QF's project fee. We believe that SDG&E's solution is reasonable and will adopt it.

3. Project Fee Refunds

In D.87-12-056, we approved for SDG&E's reinstated SO2 the use of project "milestones" that were drafted by a working group of QFs, utilities, and DRA, and incorporated in the final SO4 power purchase agreement. However, we also stated:

> "The QF Milestone Procedure provides that the QF's project fee will be refunded only in certain specified circumstances. SDG&E's proposal is silent on this subject. We think the refund provision is still appropriate and direct SDG&E to include that provision in its reinstated Standard Offer 2." (D.87-12-056, mimeo. p. 10.)

We had intended this statement to refer to the refund provision of the QF Milestone Procedure in its latest adopted version (D.86-11-005, as modified by D.87-04-039 and D.87-08-028). SDG&E apparently interpreted our statement differently, because its compliance filing (April 22, 1988) contains the more stringent refund provision from final SO4.

We continue to believe that the project fee should be refundable under the conditions described in D.86-11-005. The applicable provision is Section IV.B.5 of the QF Milestone Procedure. (See page 9 of Appendix A in D.86-11-005.) In particular, we note that a QF may get its project fee back under this provision if, as a result of the interconnection study, it finds that the project is infeasible or transmission capacity is not available. Three of the four QFs in this solicitation will interconnect from outside SDG&E's service territory, and we believe that the line loss studies could also affect project viability. These studies have not been performed as yet, and it would not be appropriate to put these developers at risk for their project fees until the results of these studies are known. We direct SDG&E to modify its compliance filing by substituting the project fee refund provision from the current (Fifth) Edition of the QF Milestone Procedure. "Interconnection study" as used in that provision shall be construed to include a line loss study performed for an out-of-service-territory QF.

Findings of Fact

1. SO2 was reinstated for SDG&E on a first-come/first-served basis but with a 100 MW limit on its availability. This limit was much less than SDG&E's indicated need for new capacity over the next five years.

2. SDG&E's queue management procedures do not address priority where SO2 is immediately oversubscribed, as is the case with this SO2 solicitation. Four projects, representing about 180 MW, are presently tied. The developers are Luz (80 MW project), Bonneville (50 MW), Freeport-McMoran (50 MW), and O'Brien (2.4 MW).

3. The four tied developers' tender of project fees did not initially comply with the letter of SDG&E's requirements. All four developers have subsequently perfected their project fees. The form of tender and subsequent events do not provide a basis for assigning priority among these developers.

4. SDG&E properly screened out two other projects: Luz (20 MW project) and Intex (21 MW).

5. There is no general agreement among the parties on how to break the tie.

6. The tie-breaking alternatives proposed by SDG&E all have major flaws.

7. Allowing the four tied developers to sign SO2 contracts while lowering the MW limit on SDG&E's next SO2 solicitation (or eliminating that solicitation altogether) is preferable to any of the proposed tie-breaking alternatives.

8. If all four tied developers are to be awarded SO2 contracts (after completion of contract signing prerequisites), the capacity price should be derived from a new capacity price table, calculated for a single block of 182.4 MW but otherwise ending with 1993 and using the same assumptions that underlie the prices shown for the two 50 MW blocks originally contemplated.

9. If all four tied developers are to be awarded SO2 contracts, this increased amount of SO2 capacity should be considered in the next resource plan proceeding and, absent a compelling showing of extreme capacity shortage, no further SO2 solicitation by SDG&E should be authorized as a result of that proceeding.

10. SO2 is very well-suited to SDG&E's current needs.

11. The next biennial resource plan proceeding will include consideration of how best to regulate the availability of SO2.

12. The four-way tie and the review that followed have delayed contract signing.

13. It is not clear, absent case-specific line loss studies, whether or not an out-of-service-territory QF will increase line losses on SDG&E's system.

14. SDG&E should complete a line loss study within 30 days after the out-of-service-territory QF has provided any needed information beyond that already included in the project definition. If SDG&E believes that taking energy from the particular QF would result in economic harm to the ratepayer, SDG&E should raise this issue no later than the line loss study performed for that QF. In such a case, the QF developer should be prepared to accept an appropriately crafted economic curtailment provision.

15. For purposes of this SO2 solicitation, an out-of-service-territory QF should have up to six months after the power purchase agreement is executed for the QF to finalize a wheeling agreement.

16. It is not appropriate, for purposes of this SO2 solicitation, to put QF developers at risk for their project fees until the results of line loss or interconnection studies (as applicable) are known.

Conclusions of Law

1. The developers and projects described in Finding of Fact 2 have satisfied the screening requirements for this SO2 solicitation. They may sign such contracts upon completion of contract signing prerequisites.

2. The developers and projects described in Finding of Fact 4 have not satisfied the screening requirements and are not eligible for SO2 contracts in this solicitation.

3. SDG&E should calculate a new capacity price table applicable to these SO2 contracts. The table should be for a single block of 182.4 MW, but should otherwise use the same assumptions as the tables shown in SDG&E's solicitation. The new table should show the last year for coming on-line as 1993, as in the current tables.

4. For purposes of this SO2 solicitation, the QF developer should execute a power purchase agreement prior to or concurrently with its Interconnection Facilities Agreement with SDG&E (if applicable) but no later than six months after the effective date of today's decision.

5. The deadline set forth in Finding of Fact 15 for finalizing a wheeling agreement should become an additional milestone for purposes of this SO2 solicitation. Missing this milestone should result in forfeiture of the QF's project fee.

6. SDG&E should modify its April 22, 1988, SO2 compliance filing by substituting the project fee refund provision in the current (Fifth) Edition of the QF Milestone Procedure.

"Interconnection study" as used in that provision should be construed to include a line loss study performed for an out-of-service-territory QF.

7. To minimize further delay and uncertainty, this order should be made effective today.

O R D E R

IT IS ORDERED that:

1. San Diego Gas & Electric Company (SDG&E) shall execute Standard Offer 2 (SO2) power purchase agreements with the qualifying facility (QF) developers, and for the projects, specified in Finding of Fact 2, on the condition that these developers complete any remaining contract signing prerequisites. For purposes of this SO2 solicitation, the QF developer shall execute a power purchase agreement prior to or concurrently with its Interconnection Facilities Agreement with SDG&E (if applicable) but no later than 6 months after the effective date of today's decision.

2. SDG&E shall calculate a new capacity price table applicable to the SO2 contracts specified in Ordering Paragraph 1. The table shall be for a single block of 182.4 megawatts but shall otherwise use the same assumptions as the table shown in SDG&E's SO2 solicitation. The new table shall show the last year for coming on-line as 1993.

3. For purposes of this SO2 solicitation, an out-of-service-territory QF shall have up to 6 months after the power purchase agreement is executed by both parties for the QF to finalize a wheeling agreement, and this deadline shall become an additional milestone. Missing this milestone shall result in forfeiture of the QF's project fee. SDG&E shall modify the reinstated SO2 in its April 22, 1988, compliance filing accordingly.

4. SDG&E shall substitute the project fee refund provision in the current (Fifth) Edition of the QF Milestone Procedure in place of the refund provision in its April 22, 1988, SO2 compliance filing. "Interconnection study" as used in the substitute provision shall include a line loss study performed for an out-of-service-territory QF.

5. SDG&E shall file modifications to its April 22, 1988, SO2 compliance filing, as specified in Ordering Paragraphs 2, 3, and 4, with all appropriate conforming changes, within 30 days of the effective date of this order.

6. For purposes of this SO2 solicitation, SDG&E shall complete a line loss study within 30 days after the out-of-service-territory QF has requested such a study and has provided any needed information beyond that already included in its project definition. SDG&E shall raise any claim regarding economic harm to the ratepayer (as specified in D.88-04-070) as soon as possible, and in no event later than this study.

This order is effective today.

Dated FEB 8 1989, at San Francisco, California.

G. MITCHELL WILK
President
FREDERICK R. DUDA
STANLEY W. HULETT
JOHN B. OHANIAN
Commissioners

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

Victor Weisser, Executive Director