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Decision 07-04-044 April 12, 2007

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

William Arterberry, dba Farm ACW, Complaint, vs. San Diego Gas & Electric Company (U 902-M), Defendant.	Case 05-07-001 (Filed July 5, 2005)

Dick Semerdjian, and Michael J. Strumwasser,
Attorneys at Law, for William Arterberry,
dba Farm ACW, complainant.
Steven D. Patrick, Attorney at Law,
for San Diego Gas & Electric Company, defendant.

DECISION GRANTING PARTIAL RELIEF

Summary

William Arterberry, dba Farm ACW, disputes $118,474.38 in charges billed by San Diego Gas & Electric Company (SDG&E) for departing load and other charges for the period from February 2001 through July 2, 2005. SDG&E asserts that the charges were billed in accordance with SDG&E's tariffs and all applicable statutes. We find that Farm ACW is not liable for any departing load charges but is liable for standby charges of $16,235.

Background

In addressing the energy problems confronting California in 2000 and 2001, the Legislature enacted a number of bills to assure that customers of energy utilities paid for the costs of ameliorating those problems. One of the measures was a process by which customers who attempt to leave the utility system must, under some circumstances, still pay for certain programs. Those customers are called "departing load customers" and the charges they remain liable for include public purpose programs (PPP), nuclear decommissioning (ND) costs, and competition transition charges (CTC). (For a more detailed analysis see D.03-04-030, our OIR regarding direct access.)

The statutes requiring departing load customers to pay for the emergency costs provide exceptions for departing load customers to avoid those costs. In this complaint case the issue is whether or not complainant is exempt from departing load charges.

Pursuant to Pub. Util. Code § 372, SDG&E filed Tariff Rule 23, defining departing load as:

> [T]hat portion of a Utility electric customer's load, subject to changes occurring in the normal course of a business as verified by metered data, for which the customer, on or after December 20, 1995: (1) discontinues or reduces its purchases of electric supply and delivery services from the Utility; (2) purchases or consumers electricity supplied and delivered by sources other than the Utility to replace such Utility purchases; and (3) remains physically located at the same location or within the Utility's service area as it existed on December 20, 1995. …

A departing load customer must pay certain surcharges unless exempt. The departing load charges consist of PPP, ND costs, and CTC. SDG&E's Rule 23 sets forth specific circumstances under which "departing load" is not liable for CTC. "The billed CTC calculation shall not include consumption

served by: (1) nonmobile on-site or over-the-fence self-generation capacity or cogeneration capacity that was operational on or before December 20, 1995[.]" (Rule 23, Cal P.U.C. Sheet No. 10619-E, No. 2(b).) Furthermore, "[a]fter June 30, 2000, consumption served by an on-site or over-the-fence nonmobile self-generation or cogeneration facility is not subject to the billed CTC calculation, per Section 372(a)(4) of the PU Code." (Rule 23, Cal. P.U.C. Sheet No. 10620-E, No. 2(d).) For customers exempt by Rule 23, Schedule E-Depart exempts departing load customers from ND and PPP charges (Cal. PUC. Sheet No. 18385-E, Special Condition 3.)

The Public Utilities Code provides the basic definition for "cogeneration":

> 218.5. "Cogeneration" means the sequential use of energy for the production of electrical and useful thermal energy. The sequence can be thermal use followed by power production or the reverse, subject to the following standards:
>
> (a) At least 5% of the facility's total annual energy output shall be in the form of useful thermal energy.
>
> (b) Where useful thermal energy follows power production, the useful annual power output plus one-half the useful annual thermal energy output equals not less than 42.5% of any natural gas and oil energy input.

The charges in dispute are:

Public Purpose Programs (PPP)	$ 72,876.84
Nuclear Decommissioning Costs (ND)	10,493.01
Competition Transition Charges (CTC)	18,781.63
	$ 102,151.48
Standby Charges	16,235.00
	$ 118,386.48
Basic Service Charges	61.21
	$ 118,447.69
Miscellaneous Charges	26.69
	$ 118,474.38

The major issues in this case are 1) whether Farm ACW was a cogenerator during all relevant times, and 2) whether Farm ACW is liable to SDG&E after SDG&E disconnected its system from Farm ACW.

Farm ACW Evidence

At all times prior to the beginning of this dispute in 2001, Farm ACW was a customer of SDG&E. Dr. William Arterberry, the owner of Farm ACW, a 1,000-acre avocado farm, testified that Farm ACW periodically needed generators on its property to deal with SDG&E outages and other contingencies. He found it more cost-effective to purchase used generation equipment on the surplus market than to rent generators to service the farm during blackouts, brownouts, or other utility failures. His largest generator (1,500 kW), on which he primarily relied to serve the entire farm, was installed in 1992 or 1993, and was moved to his generator building in 1995. The large generator was used to shave peak electric usage and reduce his electric bill. His generator was used during peak hours because during the hot summer months avocadoes cannot survive without water, which required pumping. In addition to operating the

pumps, the farm uses electricity for refrigeration, dormitories, and other services that cannot be completely shut off.

Dr. Arterberry testified that the farm irrigation system delivers not only water to the 180,000 producing trees, but also fertilizer, which is mixed with the water pumped from the farm's wells and is conveyed over the farm's 1,000 acres. He stated that one of the most important nutrients avocadoes require is potassium, and the best compound to provide that nutrient is the relatively insoluble potassium sulfate. In order to dissolve the potassium sulfate, he increased the water temperature in his mixing pond using the waste heat from the generation process. He explained that cooling water removes the jacket heat from the farm's 1,500 kW generator, taking it to a heat exchanger through which well water is passed to raise the water's temperature. In addition, the generator's exhaust gasses are diverted into a pipe, into which the hot well water from the heat exchanger is sprayed. The water is further heated by cooling the gas. The hot water flows into the pond, raising its temperature to a level at which potassium sulfate is soluble, enabling Farm ACW to dissolve the fertilizer in the irrigation water for delivery to the trees. The water that is sprayed into the exhaust also removes carbon from the gas. The carbon and attached oil floats on the surface of the water; by adding compost to the pond, bacteria are introduced that digest the carbon and are conveyed through the irrigation system providing the avocado trees additional nutrition.

Dr. Arterberry further testified that on or about January 22, 2001, Farm ACW disconnected both its lower voltage level switch and its main switch from SDG&E's system. After the disconnect, electricity could not flow from SDG&E's system to the farm.

Jaley Firooz, a registered engineer with degrees in electrical engineering and finance who had worked for SDG&E for over 20 years, in the course of which she had, among many other duties, performed analyses of cogeneration projects, was called to offer expert testimony on whether the Farm ACW operation satisfied the definition of "cogeneration" established in Public Utilities Code Section 218.5.

Ms. Firooz analyzed the Farm ACW cogeneration process. She explained the application of the two-part test prescribed by Section 218.5 to the process described by Dr. Arterberry. The statute's first test (specified in subdivision (a)) compares the percent of useful thermal energy to the total annual energy output of the facility. She calculated the useful thermal energy produced by the facility by determining the quantity of heat energy, measured in BTUs, necessary to raise the 900 gallons of well water passing hourly through the heat exchanger by 25 degrees Fahrenheit. She then calculated the facility's total energy output by determining the electricity output of the generator and adding that figure to the facility's useful thermal energy output. She concluded that 6.8% of the energy produced by Farm ACW's generator was in the form of useful thermal energy, surpassing the 5% requirement of the statute.

To administer the second test prescribed by Section 218.5 (subdivision (b)), she divided the sum of the annual electric power output and one-half of the useful thermal energy by the total fuel input, concluding that the fuel efficiency of the cogeneration system was 43.2%, surpassing the statutory requirement of 42.5%. She gave her expert opinion that Farm ACW's generation facility satisfied both standards for cogeneration established by Section 218.5.

SDG&E's Evidence

SDG&E's Regulatory Policy Manager testified that the billing period in dispute is January 23, 2001 through July 2, 2005.

SDG&E has billed and Farm ACW has not paid amounts that were billed from January 23, 2001 through July 2, 2005. This period can be broken down as follows:

January 22, 2001	Date of last meter read that showed any consumption.
July 23, 2001	Date on which SDG&E determined that Farm ACW was operating generation on-site to meet its load and the date on which SDG&E calculated revised bills including standby fees and departing load back to January 23, 2001.
August 3, 2001	Date on which SDG&E service to Farm ACW was de-energized by SDG&E.
July 3, 2005	Date that SDG&E re-energized the customer's primary metering station and re-established electrical service to Farm ACW.

The amount in dispute is $118,474.38.

The Regulatory Policy Manager testified that from January 23, 2001 through August 3, 2001, SDG&E's service remained connected and available to Farm ACW. Farm ACW had opened its service on its side of the service entrance point. On August 3, 2001, SDG&E de-energized service to Farm ACW at the cable pole serving Farm ACW's primary metering station. From August 3, 2001 through July 3, 2005 SDG&E's service remained available to Farm ACW pending their receipt of approvals from a County of San Diego electrical inspector and payment of the amounts in arrears. At no time was service unavailable,

provided that Farm ACW obtained clearance from the inspector and brought its payments current.

SDG&E's expert engineering witness testified that actual recorded values, i.e., the actual measured inputs of fuel, and outputs of electricity and heat, over the course of a calendar year, not assumptions, must be used to determine whether a generator is a legitimate cogenerator pursuant to Section 218.5. He stated that estimates based on assumptions were not adequate for SDG&E to give an applicant cogenerator status. He said that when Ms. Firooz worked at SDG&E she did not do heat or efficiency calculations to determine cogenerator status. He said that not only was Ms. Kirooz unqualified to render an opinion on whether a cogenerator meets the standards of Section 218.5, but also, it was improper to base an opinion on assumptions.

Discussion

SDG&E argues that complainant has not met the burden of proof for establishing that the generators at his facility were nonmobile self-generation. We disagree. SDG&E's Rule 23 contains exemptions from competition transition charges for certain specific parties. Those exemptions apply to "an on-site or over-the-fence non-mobile self-generation or cogeneration facility." The evidence shows that Farm ACW had purchased a large 1,500 kW generator in 1992 or 1993 and placed it in its generator building in 1995. The generator supplies electricity and heat to a 1,000 acre farm with 180,000 avocado trees as well as providing electricity to refrigeration, dormitories, and other services. It has remained in place since 1995, certainly nonmobile.

SDG&E argues that complainant's testimony, and the proffered testimony of a putative expert witness to perform the arithmetic described in Section 218.5 fail to properly demonstrate that complainant's generation facility meets the

definition of cogeneration. SDG&E contends that Farm ACW's expert witness must be disqualified, and her testimony stricken, because: (a) she fails to satisfy the requirements for qualification as an expert witness under Evidence Code Section 720; and (b) her opinion testimony is not based upon reliable evidence, as required under Evidence Code Section 801, subdivision (b).

Evidence Code Section 720 states:

> (a) A person is qualified to testify as an expert if he has special knowledge, skill, experience, training, or education sufficient to qualify him as an expert on the subject to which his testimony relates. Against the objection of a party, such special knowledge, skill, experience, training, or education must be shown before the witness may testify as an expert.
>
> (b) A witness' special knowledge, skill, experience, training, or education may be shown by any otherwise admissible evidence, including his own testimony.

SDG&E asserts that the testimony that Farm ACW qualifies as a cogenerator is based entirely on its expert's calculations based on information received from Mr. Arterberry. She said she had never performed this calculation prior to being retained by complainant in this matter. She had to contact SDG&E's expert for advice.

We disagree with SDG&E's assertion that Farm ACW's expert is not qualified to render an opinion on cogeneration. She is an engineer with 20 years experience with SDG&E including analyses of cogeneration projects and reviewing cogeneration drawings. When she had a question she consulted an SDG&E expert for advice, who agreed that based on the assumptions given to her, the numbers were accurate. We find Farm ACW's expert to be qualified.

The principal issue is the validity of the use of assumptions and the assumptions themselves. Evidence Code, Section 801, provides that an expert witness' opinion testimony must have a reliable basis:

> If a witness is testifying as an expert, his testimony in the form of an opinion is limited to such an opinion as is:
>
> (a) Related to a subject that is sufficiently beyond common experience that the opinion of an expert would assist the trier of fact; and
>
> (b) Based on matter (including his special knowledge, skill, experience, training, and education) perceived by or personally known to the witness or made known to him at or before the hearing, whether or not admissible, **that is of a type that reasonably may be relied upon by an expert in forming an opinion upon the subject to which his testimony relates,** unless an expert is precluded by law from using such matter as a basis for his opinion. (Emphasis added.)

The rule stated in subdivision (b) permits an expert to base her opinion upon reliable matter, whether or not admissible, of a type that may reasonably be used in forming an opinion upon the subject to which her expert testimony relates. "The value of opinion evidence rests not in the conclusion reached but in the factors considered and the reasoning employed." (*PG&E v. Zuckerman* (1987) 189 Cal.App.3d 1113, 1134; Witkin, Opinion Evidence, § 30, § 61.)

The matter for decision is whether the Farm ACW expert witness reasonably relied on Dr. Arterberry's testing in order to form her opinion. We find that she did. We will not repeat the testimony of Dr. Arterberry set forth above. We note, and find, that the details of his operation were not refuted by SDG&E. SDG&E did not provide any witness to explain how a 1,000 acre avocado farm with 180,000 trees operates, nor how to make potassium sulfate soluble. The farm was operating in 1995, it is operating today, and it operated

from 2001 to June 30, 2005 without electricity provided by SDG&E. We have no doubt Dr. Arterberry knows whereof he speaks, and his expert could reasonably rely on his description of his operations.

Safety

SDG&E's witness testified that SDG&E de-energized its service to Farm ACW on August 3, 2001, because of safety considerations and failure to pay past due amounts. He said SDG&E remained willing and able to resume supplying electricity to Farm ACW provided that Farm ACW obtained safety approval from the County of San Diego. Service was re-established July 3, 2005. As a consequence, SDG&E argues that regardless of any determination made concerning the other issues set out above, the Commission must fulfill its obligation to determine whether or not SDG&E, under the circumstances, acted pursuant to its tariff by ensuring the continued isolation of the complainant's generators until their safe interconnection with its distribution system could be determined.

In this case we need not determine whether SDG&E acted prudently in disconnecting Farm ACW from its system. We make no finding on this issue. Our concern is with the amount of the charges, if any, owed by Farm ACW. We have found that during the period covered by this complaint Farm ACW was a cogenerator within the meaning of SDG&E's tariffs and as such is not liable for the departing load charges billed by SDG&E. The question remaining is whether Farm ACW is liable for standby charges.

Standby Charges

SDG&E argues that even though Farm ACW was a cogenerator, standby service charges are applicable. Complainant argues that under SDG&E Rate Schedule CGDL-CRS, he is not liable for any standby charges because he had

physically disconnected from SDG&E's electric distribution system in January 2001 or was disconnected from SDG&E's system by SDG&E in August 2001. Complainant is incorrect. Standby service is applicable to complainant because SDG&E would have provided standby or breakdown service[1] to complainant for the period from January 2001 until August 2001 had complainant simply made the unilateral decision to throw a switch and do so. Schedule S requires that SDG&E base the charges from Schedule S on the lower of the nameplate of the customer's generating facilities and SDG&E's estimate of the customer's peak demand. In developing the billing amount of $16,235 SDG&E has complied with the two Schedule S criteria independent of any requirement for a contract with the customer. Therefore, SDG&E asserts that standby charges are properly due from complainant.

Farm ACW argues that as a legal matter, there is no tariff authority for assessment of standby charges. It says Schedule S, SDG&E's tariff in force at the time Farm ACW disconnected from SDG&E's grid, is explicit that there is no basis for Farm ACW to be assessed standby charges. SDG&E's tariff clearly states that "[t]his schedule shall apply only when a Contract Generation Agreement is signed with the utility." (Sch. S, Cal P.U.C. Sheet No. 10914-E at 3.) SDG&E has conceded that there was no such contract in this case.

Farm ACW claims that Section 489 requires that all rules affecting rates be filed with and enforced by the Commission. Under the filed-rate doctrine, the tariff, "when so published and filed, had the force and effect of a statute, and any

[1] (Schedule S, Applicability) "The service provided on this Rate Schedule is standby or breakdown service where all or part of the customer's electrical requirements are supplied by a generation source, other than the Utility, which is located on the customer's premises."

deviations therefrom were unlawful unless authorized by the commission." *(Dyke Water Co. v. Public Util. Comm'n* (1961) 56 Cal.2d 105, 123.) The Commission has repeatedly affirmed that approved and filed tariffs have the force and effect of law. (See, e.g., *Almond Tree Hulling Co. v. Pacific Gas & Elec. Co.,* D.05-10-049 at fn. 4.)

Farm ACW contends that in addition to the factual and legal reasons why the imposition of standby charges on Farm ACW is unsupportable, there are significant policy concerns about imposing standby charges on a customer who disconnects from the grid to run its own generators and does not contract for standby service. Such a precedent, holding that SDG&E may impose standby charges on any customer who disconnects from the grid or who ceases to use SDG&E's power for limited periods of time, would have potentially sweeping implications, in complainant's opinion. As one example, agricultural customers who run separately-metered water pumps (unlike Farm ACW) and shut down the pumps during on-peak periods. Such a customer remains connected to SDG&E, and could, at its own discretion, turn its pumps back on and draw power at SDG&E's peak period. Similarly, a customer who shifts load using self-generation, as Farm ACW did for years, could stop operating its generators and use SDG&E power at peak periods. Either type of customer retains the option and the power to utilize energy that it normally does not consume, thereby effectively placing SDG&E in the same position with respect to the provision of standby power: the customer retains full control over whether it draws power from SDG&E during these peak periods, and the utility must therefore be prepared to meet the customer's demand.

Complainant's argument is without merit; complainant is liable for standby charges of $16,235. Complainant's attempt to put himself in the same

position as a customer who receives power by turning his wall switch on or off misses the mark. The issue is the cost of being connected to the SDG&E electric system. When you turn your lights off you are not disconnected from the system and your electric bill depends on the rate schedule applicable to your service. But when you disconnect from the SDG&E system you are in a different position altogether. If the disconnect is permanent you are no longer a customer; but if you are in a position to reconnect without the consent of the utility then you are using the utility as a backup and are liable for a backup charge. Any customer that retains control over whether it draws power from the grid must be assessed standby charges for the privilege of so deciding. If complainant were to escape all standby fees because he has no contract, Schedule S would be effectively rendered useless. Persons similarly situated as complainant would not need to pay for standby service, they would receive it without cost.

There is good reason to require a contract for standby service. It gives the utility the opportunity to refuse if the service might cause a problem on the utility system.[2] Special Condition 7 of Schedule S provides:

> 7. Refusal of Standby Services. The utility reserves the right to refuse service to demands normally served by customer

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[2] See, Pub. Util. Code § 399:

> (a) This article shall be known, and may be cited, as the Reliable Electric Service Investments Act.
>
> (b) The Legislature finds and declares that safe, reliable electric service is of utmost importance to the citizens of this state, and its economy.
>
> (c) The Legislature further finds and declares that in order to ensure that the citizens of this state continue to receive safe, reliable, affordable, and environmentally sustainable electric service, it is essential that prudent investments continue to be made in all of the following areas:
>
> (1) To protect the integrity of the electric distribution grid.

> generation where supplying such service could cause or contribute to a system emergency.

For us to hold that a Contract Generation Agreement is the sole way to obtain standby service, would be to hold that complainant, who did not comply with Schedule S, received standby service at no cost while customers who complied with Schedule S paid for standby service. To argue that you should not pay for services received because you failed to abide by the tariff is preposterous. We reject that result.

Comments on Proposed Decision

The proposed decision of the Administrative Law Judge in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and Rule 14.2(a) of the Commission's Rules of Practice and Procedure. Comments were filed only by SDG&E which supports the decision as written.

Assignment of Proceeding

Michael R. Peevey is the assigned Commissioner and Robert Barnett is the assigned Administrative Law Judge in this proceeding.

Findings of Fact

1. Farm ACW is a 1,000-acre avocado farm with approximately 180,000 avocado trees.

2. Farm ACW's largest generator (1,500 kW), to serve the entire farm, was installed in 1992 or 1993, and was moved to the farm's generator building in 1995. The generator is nonmobile.

3. The generator services the farm irrigation system which delivers not only water to the 180,000 producing trees, but also fertilizer, which is mixed with the water pumped from the farm's wells and is conveyed over the farm's 1,000 acres.

4. One of the most important nutrients avocadoes require is potassium, and the best compound to provide that nutrient is the relatively insoluble potassium sulfate. In order to dissolve the potassium sulfate, the water temperature in the mixing pond is increased using the waste heat from the generation process.

5. On or about January 22, 2001, Farm ACW disconnected both its lower voltage level switch and its main switch from SDG&E's system. After the disconnect, electricity could not flow from SDG&E's system to the farm.

6. Farm ACW expert analyzed the Farm ACW's cogeneration process. She concluded that 6.8% of the energy produced by Farm ACW's generator was in the form of useful thermal energy, surpassing the 5% requirement of the statute. She concluded that the fuel efficiency of the cogeneration system was 43.2%, surpassing the statutory requirement of 42.5%. She gave her expert opinion that Farm ACW's generation facility satisfied both standards for cogeneration established by Section 218.5. The Farm ACW witness is qualified to give that opinion.

7. Dr. Arterberry's expert witness reasonably relied on Dr. Arteberry's testimony in order to form her opinions.

8. July 23, 2001 is the date on which SDG&E determined that Farm ACW was operating generation on-site to meet its load and the date on which SDG&E calculated revised bills including standby fees and departing load back to January 23, 2001.

9. August 3, 2001 is the date on which SDG&E service to Farm ACW was de-energized by SDG&E.

10. Complainant's cogeneration operation comes within the exception to SDG&E's Rule 23. Farm ACW's consumption is served by: (1) nonmobile on-site cogeneration capacity that was operational on or before December 20, 1995.

(Rule 23, Cal P.U.C. Sheet No. 10619-E, No. 2(b).) Consumption served by complainant's nonmobile cogeneration facility is not subject to the billed CTC calculation, per Section 372(a)(4) of the Pub. Util. Code. (Rule 23, Cal. P.U.C. Sheet No. 10620-E, No. 2(d).) Because complainant is exempt by Rule 23, Schedule E-Depart exempts him from ND and PPP charges (Cal. PUC. Sheet No. 18385-E, Special Condition 3.)

11. Complainant is not liable for PPP, ND costs, and CTC for the period January 22, 2001 to July 3, 2005.

12. Standby service is applicable to complainant because SDG&E would have provided standby or breakdown service to complainant for the period from January 2001 until August 2001 had complainant simply made the unilateral decision to throw a switch and reconnect to SDG&E's grid.

13. Any customer that unilaterally disconnects from a utility electric system but retains control over whether it draws power from the grid must be assessed standby charges for the privilege of so deciding.

14. Complainant, dba Farm ACW, is not liable for any departing load charges but is liable for standby charges of $16,235.

Conclusions of Law

1. Complainant is not liable for PPP, ND, and CTC costs for the period January 22, 2001 to July 3, 2005.

2. Complainant is liable to defendant for $16,235 for standby charges.

O R D E R

IT IS ORDERED that:

1. The money on deposit with the Commission shall be disbursed as follows: $16,235 to defendant SDG&E and the balance to complainant.

2. Case 05-07-001 is closed.

This order is effective today.

Dated April 12, 2007, at San Francisco, California.

MICHAEL R. PEEVEY
President
DIAN M. GRUENEICH
JOHN A. BOHN
RACHELLE B. CHONG
TIMOTHY ALAN SIMON
Commissioners