STATE OF CALIFORNIA EDMUND G. BROWN JR., *Governor*

PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

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February 7, 2012

Agenda ID #11047
and
Alternate Agenda ID #11048
Ratesetting

TO PARTIES OF RECORD IN APPLICATION 10-11-002

Enclosed are the proposed decision of Administrative Law Judge (ALJ) Karl J. Bemesderfer previously designated as the presiding officer in this proceeding and the alternate decision of Commissioner Michael R. Peevey. The proposed decision and the alternate decision will not appear on the Commission's agenda sooner than 30 days from the date they are mailed.

Pub. Util. Code § 311(e) requires that the alternate item be accompanied by a digest that clearly explains the substantive revisions to the proposed decision. The digest of the alternate decision is attached.

When the Commission acts on these agenda items, it may adopt all or part of the decision as written, amend or modify them, or set them aside and prepare its own decision. Only when the Commission acts does the decision become binding on the parties.

Parties to the proceeding may file comments on the proposed decision and alternate decision as provided in Pub. Util. Code §§ 311(d) and 311(e) and in Article 14 of the Commission's Rules of Practice and Procedure (Rules), accessible on the Commission's website at www.cpuc.ca.gov. Pursuant to Rule 14.3, opening comments shall not exceed 15 pages.

Comments must be filed pursuant to Rule 1.13 either electronically or in hard copy. Comments should be served on parties to this proceeding in accordance with Rules 1.9 and 1.10. Electronic and hard copies of comments should be sent to ALJ Bemesderfer at kjb@cpuc.ca.gov and Commissioner Peevey's advisor Scott Murtishaw, at

sgm@cpuc.ca.gov. The current service list for this proceeding is available on the Commission's website at www.cpuc.ca.gov.

/s/ KAREN V. CLOPTON
Karen V. Clopton, Chief
Administrative Law Judge

KVC:lil

Attachment

ATTACHMENT

DIGEST OF DIFFERENCES BETWEEN ADMINISTRATIVE LAW JUDGE BEMESDERFER'S PROPOSED DECISION AND THE ALTERNATE PROPOSED DECISION OF COMMISSI0NER PEEVEY

Pursuant to Public Utilities Code Section 311(e), this is the digest of the substantive differences between the proposed decision of Administrative Law Judge Karl J. Bemesderfer (mailed on 2/7/2012) and the proposed alternate decision of Commissioner Michael R. Peevey (also mailed on 2/7/2012).

The Proposed Decision (PD) denies the application of Pacific Gas and Electric Company (PG&E) for authorization to invest ratepayer funds in Silicon Valley Technologies Corporation (SVTC), a start-up corporation that plans to build and operate a manufacturing development facility (MDF) for solar panels in Silicon Valley. The PD finds that the proposed investment provides no ratepayer benefits separate from the benefits that may accrue to the public at large from the construction and operation of the MDF. Accordingly, the PD concludes that any necessary investment should come from private sources rather than PG&E ratepayers.

The assigned Commissioner's Alternate Decision (AD) approves the application. It finds that the MDF is similar to research and development programs that the Commission has financed through ratepayer surcharges in the past. The AD notes that construction of the MDF is consistent with the Commission's program of encouraging utilities to increase their use of renewable resources; is supported by substantial grant funding from the United States Department of Energy; and that, as a research and development project, it is not expected to earn a return. The AD finds that the likelihood of reducing the cost of solar photovoltaic technology is a sufficient justification for the investment of ratepayer funds.

(END OF ATTACHMENT)

Decision **PROPOSED DECISION OF ALJ BEMESDERFER** (Mailed 2/7/2012)

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of Pacific Gas and Electric Company for Authority to Increase Electric Rates and Charges to Recover Costs Relating to California Solar Photovoltaic Manufacturing Development Facility. (U39E)	Application 10-11-002 (Filed November 1, 2010)

DECISION DENYING APPLICATION

1. Summary

We deny the application of Pacific Gas and Electric Company to invest $9.9 million of ratepayer funds in Silicon Valley Technology Corporation.

2. Background

Applicant Pacific Gas and Electric Company (PG&E) seeks Commission approval of a plan to invest $9.9 million of ratepayer funds in Silicon Valley Technology Corporation (SVTC), a start-up company that proposes to build a new solar panel fabrication facility, the photovoltaic manufacturing and development facility (PV MDF), in Santa Clara County. SVTC has already secured a commitment from the United States Department of Energy (DOE) for a $30 million investment. However, the DOE commitment is contingent upon SVTC raising an additional $9.9 million in matching funds.[1] On September 28,

[1] PG&E'a original application sought authority to invest $19.8 million in ratepayer funds which was a requirement for receiving an expected grant of $98 million from DOE. When DOE reduced the amount of the grant from $98 million to $30 million, the required matching investment was reduced to $9.9 million. While the dollar amount of

Footnote continued on next page

2011, Californians for Renewable Energy, Inc. (CARE) filed a motion to dismiss this action. On October 5, 2011, The Utility Reform Network (TURN), the Division of Ratepayer Advocates (DRA), Greenlining Institute (Greenlining), the Marin Energy Authority (MEA), and the Western Power Trading Forum (WPTA), all of whom together with CARE had protested the application, filed a joint motion to dismiss this action. CARE, TURN, DRA, Greenlining, MEA and WPTA are collectively referred to herein as "Protestors." On October 31, 2011, the assigned Administrative Law Judge (ALJ) denied the motions to dismiss. Pursuant to a schedule adopted at a prehearing conference on September 22, 2011, the parties filed joint opening briefs on November 21, 2011 and joint reply briefs on December 6, 2011. The parties waived evidentiary hearings.

PG&E argues that the PV MDF will engage in research and development (R&D) activities; that R&D investments of ratepayer funds are specifically authorized by Pub. Util. Code §§ 740 and 740.1;[2] and that we have approved

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ratepayer money at risk has been halved by this change, the percentage of total project cost to be covered by the ratepayers has increased from 20% to just under 25%. It should also be noted that ratepayers must be charged $17.8 million in order to provide PG&E with $9.9 million to invest in SVTC.

[2] **Section 740:**

> For purposes of setting the rates to be charged by every electrical corporation, gas corporation, heat corporation or telephone corporation for the services or commodities furnished by it, the commission may allow the inclusion of expenses for research and development.

Footnote continued on next page

such investments in the past. PG&E also argues that this investment is consistent with renewable energy programs sponsored by the Commission and points out that it is supported by Governor Brown. Finally, PG&E asserts that ratepayers will be adequately compensated for the investment through their ownership stake in SVTC.

Section 740.1:

> The commission shall consider the following guidelines in evaluating the research, development, and demonstration projects proposed by electrical and gas corporations:
>
> (a) Projects should offer a reasonable prospect of providing benefits to ratepayers.
>
> (b) Expenditures on projects which have a low probability for success should be minimized.
>
> (c) Projects should be consistent with the corporation's resource plan.
>
> (d) Projects should not unnecessarily duplicate research projects previously or immanently undertaken by other electrical or gas corporations or research organizations.
>
> (e) Each project should also support one or more of the following objectives:
>
> 1. Environmental improvement.
> 2. Public and employee safety.
> 3. Conservation by efficient resource use or by reducing or shifting system load.
> 4. Development of new resources and processes, particularly renewable resources and processes which further supply technologies.
> 5. Improve operating efficiency and reliability or otherwise reduce operating costs.

Protestors deny that the PV MDF will engage in R&D activities and argue that the investment is not authorized either by Pub. Util. Code §§ 740 and 740.1 or by § 2775.5,[3] which sets out specific requirements that must be met by

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[3] **Section 2775.5(a):**

> If an electrical or gas corporation desires to manufacture, lease, sell, or otherwise own or control any solar energy system, it shall submit to the commission, in such form as the commission may specify, a description of the proposed program of solar energy development which it desires to pursue. The corporation may pursue the program of solar energy development unless the commission, within 45 days after the commission has accepted the filing of the corporation's description pursuant to this subdivision, orders the corporation to obtain from the commission the authorization to do so provided in this section. In cases where the corporation seeks to pursue a program of solar energy development with costs and expenses to be passed through to the ratepayers, the corporation may not implement the program until it receives an authorization from the commission which includes findings and a determination, pursuant to subdivision (f), that the program is in the ratepayer's interest. No such authorization shall be required for any solar energy system which is owned or controlled for experimental or demonstration purposes. As used in this subdivision, "experimental or demonstration purposes" means a limited program of installation, use, or development the sole purpose of which is to investigate the technical viability or economic cost effectiveness of a solar application.
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> (b) The commission shall deny the authorization sought if it finds that the proposed program will restrict competition or restrict growth in the solar energy industry or unfairly employ in a manner which would restrict competition in the market for solar energy systems any financial, marketing, distributing, or generating advantage which the corporation may exercise as a result of its authority to operate as a public utility. Before granting any such authorization, the commission shall find that the program of solar energy development proposed by the corporation will accelerate the development and use of solar energy systems in this state for the duration of the program.

Footnote continued on next page

electrical or gas corporations seeking to invest ratepayer funds in solar energy systems. They assert that investing ratepayer funds in a for-profit start-up company is risky, unprecedented, and sets a disturbing precedent, regardless of its legality. They argue that this type of investment is better suited to a non-regulated entity and point out that shareholders of PG&E have made such investments in the past. Finally, they argue that if the Commission approves the investment, it should be subject to additional conditions designed to increase the probability that ratepayers will ultimately recover the investment.

3. Discussion

3.1. Is the proposed investment authorized by Pub. Util. Code §§ 740 and 740.1?

Pub. Util. Code § 740 authorizes utilities to charge ratepayers for "expenses for research and development." However, the statute does not define what constitutes an R&D expense. To assist our analysis of this issue, we adopt the definition of "research and development" from the federal Office of Management and Budget guidelines:

> Basic research is defined as systematic study directed toward fuller knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific application toward processes or products in mind.

(f) The costs and expenses of implementing a program of solar energy development shall not be passed through to the ratepayers of an electrical or gas corporation unless the commission finds and determines that it is in the ratepayers' interest to do so.

> Applied research is defined as systematic study to gain knowledge or understanding necessary to determine the means by which a recognized and specific need may be met.
>
> Development is defined as systematic application of knowledge or understanding, directed toward the production of useful materials, devices, and systems or methods, including design, development, and improvement of prototypes and new processes that meet specific requirements.[4]

To determine whether work done at the PV MDF falls within this definition, we look to the application and the supporting documentation including this description of the PV MDF in the SVTC grant proposal to DOE:

> A fabrication facility that 20-30 PV companies could use simultaneously to do pilot manufacturing on a fee for service basis. It would have baseline manufacturing equipment , plus specialized equipment bays and private locked bays for each company's unique technological process.[5]

In simple terms, the PV MDF is a facility housing a collection of basic manufacturing equipment for making solar panels, either alone or together with specialized tools owned by the users and stored at the facility. It is effectively a test lab in which solar panel fabrication companies can evaluate alternative product designs and manufacturing processes. The companies can rent the PV MDF rather than build their own test facilities, thereby shortening the time and lowering the cost of bringing solar panels to market.

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[4] http://www.nsf.gov/statistics/randdef/fedgov.cfm.

[5] SVTC Technologies' PV MDF Application for funding from DOE PV Manufacturing Initiative (DE-FOA-000237).

From the short description given above, it should be clear that users of the PV MDF would not be doing either basic or applied research. Nor would the users be developing manufacturing technologies at the PV MD; they would be testing products and processes developed elsewhere. On the other hand, the definition of "development" from the Office of Management and Budget (OMB) Guidelines, if read broadly, appears to cover this facility since testing of products and processes is part of developing them.

Turning from the general language of § 740 to the detailed requirements of § 740.1, it appears that the PV MDF supports "environmental improvement" as mandated by § 740.1(e)(1) and the development of "renewable resources" as mandated by § 740.(e)(4), but does not offer a reasonable prospect of providing benefits to ratepayers (§ 740.1(a), has a low probability of success (§ 740.1(b)) and duplicates work that would be done elsewhere (§ 740.1(d)). Weighing these outcomes we conclude that the project overall does not satisfy the requirements of the statute.

In its original application, PG&E argued that the utility's financial stake in the project would "provide the potential for full reimbursement to PG&E's customers over the long term."[6] More specifically, it would "provide an opportunity for reimbursement of PG&E's customers after five years."[7] Perhaps recognizing that this potential ratepayer benefit is speculative and remote, PG&E has minimized economic return on the invested funds in its amended application

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[6] *Application of Pacific Gas and Electric Company for Authority to Increase Electric Rates and Charges to Recover Costs Relating to California Solar Photovoltaic Manufacturing Development Facility*, dated November 1, 2010, at 1.

[7] *Ibid.* at 3.

and its briefs, choosing instead to emphasize the potential for lower cost solar energy as the principal ratepayer benefit:

> PG&E has never claimed that its investment in the MDF would be the source of benefits for the RD&D Project. Instead the primary benefit of the project is the RD&D potential for improved solar manufacturing processes and lower PV product costs and prices.[8]

PG&E has wisely replaced its emphasis on "the potential for full reimbursement" with more general potential benefits because there is no reasonable assurance that ratepayers will ever recover any of the money invested in the PV MDF.

DRA and TURN, respectively, have placed in the record news reports of rapidly falling prices for solar panels, a trend expected to continue for years,[9] and the reduction of the US solar panel industry in the face of Chinese competition.[10] The relatively high cost of manufacturing solar panels in California versus other parts of the world, the projected rapid price erosion and the current uncompetitive state of the American solar panel industry taken together cast substantial doubt on the long-term viability of this project.

Even if we assume, as PG&E asks us to do, that the major ratepayer benefit from the project is the "potential for improved solar manufacturing processes

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[8] *Reply Brief of Pacific Gas and Electric Company* dated December 6, 2011, at 5.

[9] "Solar Generation of Electricity at Grid Parity A Reality in Selected Geographies And16% Per Year Cost Decline for Next 5 Years Implies Major Markets Are Next: Exclusive Interview With Industry Expert" The Wall Street Transcript, March 4, 2011 cited in *Opening Brief of Division of Ratepayer Advocates* dated November 21, 2011, at 10.

[10] *Opening Brief of The Utility Reform Network* dated November 21, 2011, *Attachment 1: News Articles.*

and lower PV product costs and prices" it is difficult to see how this benefit rewards the ratepayers for their investment. All customers of California-based solar panel manufacturers, whether located in PG&E's service territory, elsewhere in California, or outside of California, would potentially benefit equally from lower prices for solar panels.

Finally, as SVTC itself noted in its DOE application, the focus of the PV MDF is on commercialization of solar panel manufacturing technology. Every solar panel manufacturer may be assumed to be focused on commercialization. While the existence of the PF MDF might marginally accelerate that process, it almost certainly duplicates the efforts of existing and future manufacturers.

For these reasons, we conclude that investment of ratepayer funds in this project is not authorized by Pub. Util. Code §§ 740 and 740.1.

3.2. Is the proposed investment authorized by Pub. Util. Code § 2775.5?

This section broadly authorizes gas and electric utilities to invest ratepayer funds in solar energy systems, provided that the Commission finds that the investment is in the ratepayers' interest, will accelerate the use of solar energy systems in California, and will not adversely impact the market for solar energy systems.

PG&E argues that the PV MDF meets all three requirements.[11]

We note this section's requirement that any investment of ratepayer funds in solar energy systems should be "in the ratepayers' interest." We interpret Section 2775.5 to mean that an investment in a solar energy system is in the

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[11] *Opening Brief of Pacific Gas and Electric Company* dated November 21, 2011, at 4-8.

ratepayers' interest only if some benefits to ratepayers are separate from benefits to the public at large. The potential lowering of solar panel costs, the creation of California-based jobs, and the other alleged benefits of the project all accrue either to the public at large or to groups other than PG&E ratepayers, for example, employees of SVTC or the PV MDF. We have already determined that the likelihood of ratepayers receiving a monetary return on their investment is too remote and inadequate to constitute a ratepayer benefit. Accordingly, we find that the proposed investment does not create a ratepayer benefit that is separate from the benefits to the public at large and fails to meet the requirement of § 2775.5(f) that it be in the ratepayers' interest.

Since a proposed investment in a solar system has to meet all the enumerated requirements to qualify under Section 2775.5, we need not discuss whether this investment meets the other requirements.

3.3. Should we approve this use of ratepayer funds in the absence of specific statutory authorization?

PG&E argues that we should approve this investment of ratepayer funds using the broad general regulatory authority conferred on us by Pub. Util. Code § 701,[12] even if it does not meet the specific requirements of § 740 or § 2775.5. PG&E states the investment will bring millions of otherwise foregone federal dollars into California during a difficult economic time, has the support of the governor, and is an appropriate complement to the state's programs of encouraging alternatives to fossil fuel burning.[13] In effect, the utility argues that

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[12] The commission may supervise and regulate every public utility in the State and may do all things, whether specifically designated in this part or in addition thereto which are necessary and convenient in the exercise of such power and jurisdiction.

[13] PG&E Application.

we should not turn down millions of dollars of federal grant money, with their associated positive impact on jobs and the environment, simply because the investment does not fit neatly into the sections of the Public Utilities Code that deal with investment of ratepayer funds in solar systems and related matters.

As all parties have pointed out in their briefs, we regularly consider whether to permit the use of ratepayer funds for activities that do not directly lower the cost or increase the reliability of utility service. We consider each such proposal on its merits and weigh the amount of public good, the cost to ratepayers, and the availability of alternative financing vehicles, among other things, in determining whether or not to authorize such investments. After weighing those various interests, we conclude that funding for this project is more appropriately sought from private sources.

4. Categorization and Need for Hearings

This proceeding was initially categorized as ratesetting and it was determined that hearings were required. We affirm the initial categorization and change the hearing determination to "not required."

5. Comments on Proposed Decision

The proposed decision of ALJ Bemesderfer in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and comments were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure. Comments were filed on _____, and reply comments were filed on _____ by _____.

6. Assignment of Proceeding

Michael R. Peevey is the assigned Commissioner and Karl J. Bemesderfer is the assigned ALJ for this proceeding.

Finding of Fact

1. The PV MDF is an R&D facility.
2. The PV MDF supports environmental improvement.
3. The PV MDF supports development of renewable resources.
4. The PV MDF has a low probability of success.
5. The financial return to ratepayers of an investment in the PV MDF is remote and speculative.
6. The benefits of a successful PV MDF flow either to the public at large or to persons unaffiliated with PG&E.
7. Work done at the PV MDF would duplicate work done elsewhere.

Conclusions of Law

1. Investment of ratepayer funds in SVTC is not authorized by Pub. Util. Code §§ 740 and 740.1.
2. Investment of ratepayer funds in SVTC is not authorized by Pub. Util. Code § 2775.5.
3. Authorization of the investment of ratepayer funds in SVTC pursuant to Pub. Util. Code § 701 is not in the public interest.
4. The application should be denied.

O R D E R

IT IS ORDERED that:

1. Application 10-11-002 is denied.
2. The hearing determination is changed from Yes to No.
3. Application 10-11-002 is closed.

This order is effective today.

Dated _____, at San Francisco, California.