

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA



FILED

11-21-11
04:59 PM

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)

A.10-11-002
(Filed November 1, 2010)

**DIVISION OF RATEPAYER ADVOCATES'
OPENING BRIEF**

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November 21, 2011

I. INTRODUCTION

Pacific Gas and Electric Company's (PG&E's) amended application requests a \$17.8 million increase in revenue requirements for 2012 and 2013 to match a US Department of Energy (DOE) grant to SVTC Solar (SVTC) to construct a solar photovoltaic manufacturing development facility (PV MDF) in California.¹ Reduced to its essence, the amended application seeks to make PG&E ratepayers unwitting investors in a private, for-profit venture to help solar manufacturers produce silicon products that can later be mass-manufactured.

PG&E's amended application should be denied because:

1. The PV MDF is not Research and Development (R&D) and is therefore ineligible for funding pursuant to Public Utilities Code sec. 740;
2. The PV MDF does not benefit ratepayers and therefore, is not an appropriate use of ratepayer funds.

Finally *and only* if the Commission decides to approve the application, DRA requests that the Commission place The Utility Reform Network's (TURN) conditions on its approval of the rate increase and require them to be incorporated into PG&E's contract with SVTC:

II. THE SVTC SOLAR MANUFACTURING FACILITY IS NOT RESEARCH AND DEVELOPMENT

Pub. Util. Code Section 740² authorizes the Commission to allow an electrical corporation to include in its rates expenses for research and development. Since the Public Utilities Code does not define research and development, DRA offers the federal definition to elucidate the difference between actual research and development and SVTC's manufacturing plant. The U.S. Office of Management and Budget defines basic research, applied research and development as

Basic research is defined as systematic study directed toward fuller knowledge or understanding of the fundamental aspects

¹ Amendment to Application of Pacific Gas and Electric Company for Share of Costs of California Solar Photovoltaic Manufacturing Development Facility Under U.S. Department of Energy Photovoltaic manufacturing Initiative p. 2

² Unless otherwise stated, all citations will be to the Public Utilities Code.

of phenomena and of observable facts without specific applications towards processes or products in mind.

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 to meet specific requirements.³

PG&E argued that “since the PV MDF will foster the testing and development of new production equipment, manufacturing processes, and solar technologies, PG&E’s proposed funding support for the PV MDF falls squarely within [the statutory allowance of Sections 740 and 740.1.]⁴ But SVTC, owner of the PV MDF, repeatedly denied that the facility was for research and the concurrent development. Instead, the purpose of the facility is to “fill the gap from lab to fab,”⁵ to use existing research and development to help SVTC Solar’s customers manufacture silicon products. SVTC’s venture is therefore not R&D and its expenses should not be passed on to ratepayers.

A. SVTC Solar Did Not Seek a DOE Grant for R&D

In its Proposal for a Solar Development Center submitted to the DOE on March 25, 2009, SVTC describes the solar development center as a bridge between research and production. Although the bridge includes development – it is not the development of a research idea but, as SVTC itself says, commercialization of research already done.⁶ For example, in the same proposal, SVTC states that two rapid cycle silicon development lines are already available to its customers.⁷ The proposal describes opportunities to innovate, facilities to innovate, access to a broad range of alternative semiconductor

³ <http://www.nsf.gov/statistics/randef/fedgov.cfm>.

⁴ Response of PG&E to Motion to Dismiss at 3-4.

⁵ SVCT Solar: A Photovoltaic Product Development Center p.3

⁶ SVTC Proposal for a Solar Development Center DOE 3/25/09 p. 1 (emphasis added)

⁷ SVTC Proposal for a Solar Development Center DOE 3/25/09 p. 6-7

processes, and flexibility to integrate new materials.⁸ The in-house supporting services that “enable rapid feedback for development” focus on the manufacturing process, including materials and device analytics, failure analysis, certification, lamination and assembly and reliability certification.⁹ SVTC touts its synergy with research centers like National Renewable Energy Laboratory’s (NREL) Process Development and Integration Lab (PDIL). The line graph that shows this synergy clearly places SVTC’s work after NREL has done the research and product development.¹⁰ This proposal indicates that the basic and applied research and even development have already been done – what SVTC Solar proposes is a place for customers to take existing research and development and use it to manufacture solar products.

In its Application for funding from the DOE PV Manufacturing Initiative, SVTC describes the PV MFD as:

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.¹¹

In its Proposal Overview Presentation to DOE, SVTC describes itself as focused on manufacturing development, not basic research.¹² Further, SVTC recognizes that the NREL has already built the thin film device development equipment.¹³ In promoting its synergy with NREL, SVTC advertises NREL’s PDIL as: “The world’s most advanced

⁸ SVTC Proposal for a Solar Development Center DOE 3/25/09 p. 8-11.

⁹ SVTC Proposal for a Solar Development Center DOE 3/25/09 p.12.

¹⁰ ¹⁰ SVTC Proposal for a Solar Development Center DOE 3/25/09 p. 15.

¹¹ SVTC Technologies’ PV Manufacturing Development Facility Application for funding from DOE PV Manufacturing Initiative (DE-FOA-000237 (Released April 21; Due June 3, 2010).

¹² SVTC’s Proposal Overview Presentation DOE PVM I Oral Review Meeting January 25, 2011 p. 21.

¹³ SVTC’s Proposal Overview Presentation DOE PVM I Oral Review Meeting January 25, 2011 p. 30.

process development R&D facility for thin-film PV technologies.”¹⁴ The MDF’s customers will extend NREL’s research capabilities toward commercialization.¹⁵

In the Question and Answer (Q&A) Session with DOE, SVTC emphasized the separation between SVTC Solar and NREL’s National Center for Photovoltaics (NCPV.)¹⁶ In response to DOE’s question: “What steps will be taken to ensure that organizational overhead is minimized to allow for maximum funding to go towards R&D activities?” In response, SVTC replaced “R&D Activities” with “expanded capabilities and services;”¹⁷ and stated that “the MDF is not a research consortium and will not fund R&D.”¹⁸ SVTC defined its proposal solicitation as “Sales and Marketing of MDF Services.”¹⁹

In its own list of key requirements of a Solar Development Center, SVTC includes “manufacturing equipment, leverage across tools, flexibility to innovate, manufacturing expertise and culture, alternative materials, analytical services, IP ownership/security and many types of customers.”²⁰ Absent from this list is anything connected with research and development. In fact, SVTC apparently intends to use the research conducted at Stanford University, the University of California, Berkeley, and the Lawrence Berkeley National Laboratory (LBNL) in its Advanced Technology Inputs.²¹

Not surprisingly, then, DOE’s press release announcing the grant to SVTC clearly states that the MDF will focus on commercialization:

¹⁴ SVTC’s Proposal Overview Presentation DOE PVMI Oral Review Meeting January 25, 2011 p. 31

¹⁵ SVTC’s Proposal Overview Presentation DOE PVMI Oral Review Meeting January 25, 2011 p. 35

¹⁶ DOE Q&A Session, DOE PVMI Oral Review Meeting, January 25, 2011 p. 24; See also, SVTC’s Update on SVTC Solar Team p. 4

¹⁷ DOE Q&A Session, DOE PVMI Oral Review Meeting, January 25, 2011 p. 57

¹⁸ DOE Q&A Session, DOE PVMI Oral Review Meeting, January 25, 2011 p. 61

¹⁹ DOE Q&A Session, DOE PVMI Oral Review Meeting, January 25, 2011 p. 63

²⁰ SVTC’s Update on SVTC Solar Team at p. 5

²¹ Id. at p.19

SVTC will create a fee-for-service PV Manufacturing Development Facility (MDF) that will enable start-ups, materials suppliers, and other PV innovators to eliminate a major portion of their up-front capital and operating costs during product development and pilot production. This will potentially accelerate development time to market by 12 to 15 months. The MDF will focus on the commercialization of PV manufacturing processes and technologies, and aim to reduce the costs and development time for participating PV industry leaders to deliver innovation, emerging technologies from the laboratory to the commercial manufacturing lines. The MDF will support SunShot targets by strengthening and accelerating growth along the PV manufacturing industry's entire supply chain by reducing the cost, time, and risk associated with commercialization²²

Contrast the same press release announcing a grant of \$25 million for University-Focused Development that is the research and development SVTC only purports to be:

Bay Area PV Consortium (BAPVC) will fund industry-relevant research and development to impact high volume PV manufacturing using a competitive selection process open to all universities. This project, managed by Stanford University and the University of California, Berkeley, will develop and test the innovative new materials, device structures, and fabrication processes necessary to achieve cost effective PV modules in high volume production. The research will advance technologies that bring down manufacturing costs and improve device performance characteristics to help achieve SunShot's price targets. An industry board composed of representatives from PV companies will determine the specific topics for research and development to assure close alignment with industry and manufacturing needs.²³

In every stage of its application for the DOE grant, SVTC denied that its PV MFD would conduct research and development. Since the venture is not for research and development, under Section 740, it cannot be funded with ratepayer dollars and the amended application should be denied.

²² <http://energy.gov/articles/secretary-chu-announces-over-110-million-in-Sunshot-Projects> (emphasis added)

²³ Id.

B. SVTC and PG&E Characterized the Venture as R&D to Get Ratepayer Dollars

In its written presentation at the Commission’s March 23, 2011 workshop, SVTC has described the solar manufacturing development facility in many ways – none of them research and development.

- The bridge between research and production.²⁴
- Filling the gap from lab to fab²⁵

During the March 23, 2011 workshop, however, SVTC’s representatives reconsidered their previous characterization of the project and introduced a new description: “applied research pilot scale R&D”.²⁶ Despite the new description, the idea of the project is the same: “to provide companies with all of the capital equipment, infrastructure, research expertise, engineering expertise – everything that they would need to build for themselves in order to get their technology from the lab to through applied R&D and into the market, provide them on a variable cost basis so that they didn’t have to make the upfront investment.”²⁷ Judge Bemesderfer gave a plain-English description of the project: “a test shop for solar fabrication technologies.”²⁸ In other words, SVTC is not conducting its own research; instead, as it stated to DOE, the research and development have already been done. The purpose of the facility is to allow SVTC’s customers to take this research and development and refine it into silicon products for sale. SVTC’s Mr. Empedocles acknowledged as much: “But this is the proposal that we’ve submitted for creating a manufacturing development facility to advance companies’ R&D from lab prototype through to something that is ready to move into manufacturing.”²⁹

²⁴ SVTC Solar’s Presentation at the March 23, 2011 workshop p. 4.

²⁵ SVCT Solar: A Photovoltaic Product Development Center p.3.

²⁶ TR 29:22.

²⁷ TR 31:10-19.

²⁸ TR 15: 26-27.

²⁹ TR 39:10-14.

The March 23, 2011 hearing provided a possible explanation for the change in project description: SVTC’s inability to get the cost share that the DOE grant requires from other sources. Mr. Empedocles stated that for SVTC to qualify for the DOE program, it needs to show a mandatory 40% cost share in the first two years.³⁰ “The investment by PG&E ratepayers is very important to this project. In order for us to qualify for this program, we need to show significant industry cost share or cost share to this program in the early years.”³¹ “And that’s where the PG&E dollars come in, to help us with the start up and to help us meet the mandatory 40 percent cost share in the first two years.”³² He explained the lack of investor interest: “investors are no longer willing to fund technologies until they’ve been proved viable for manufacturing.”³³ PG&E’s Mr. LaFlash stated that this is a “R&D investment and our corporate parent [PG&E Corporation] has not and does not make R&D investments.”³⁴ PG&E stated that SVTC has not applied for any CSI RD&D Programs due to the size of the DOE award and the reduced scope of the project.³⁵ Nor did SVTC apply for any funding from the State of California.³⁶ The two venture capital companies who are owners of the parent company, SVTC Technologies, denied SVTC Solar’s request for a private equity match.³⁷ That leaves the DOE grant and \$17.8 million in cash from PG&E’s ratepayers – which may be authorized only if the venture is truly research and development, which it is not.

The record shows that the PV MDF is not the R&D for which Pub. Util. Code Sections 740 and 740.1 authorize the Commission to pass on expenses to ratepayers, provided the applicant shows that the R&D will benefit ratepayers and is consistent with the applicant’s resource plan. But even if the Commission were to somehow determine,

³⁰ TR 57:25-28, 58:1.

³¹ TR 57:16-20.

³² TR 57:25, 58:1.

³³ TR 30:21-24.

³⁴ TR 67:27-28, 68:1.

³⁵ PG&E’s Response to TURN’s Data Request 008-06.

³⁶ PG&E’s Response to TURN’s Data Request 008-07.

³⁷ TR 86:21-25; 88:18-23.

notwithstanding the substantial evidence to the contrary, that the venture is R&D, it does not benefit ratepayers. On this basis alone, the amended application should be denied.

III. THE RECORD DOES NOT SUPPORT PG&E'S CLAIMED RATEPAYER BENEFITS

Section 740.1 directs the Commission to consider a set of guidelines in evaluating the research, development, and demonstration programs proposed by electrical and gas corporations before it approves a rate increase for R&D. PG&E has failed to demonstrate that this venture will benefit ratepayers and is inconsistent with PG&E's resource plan.

A. The Project Does Not Offer a Reasonable Probability of Ratepayer Benefit

During the March 23, 2011 workshop, SVTC's Mr. Empedocles acknowledged that the venture's rate of return is too low for a typical private investor to want to look at given the risk profile and the terms and restrictions on the stock itself.³⁸ "What investor is going to put money in and know they can't get a return for five years?"³⁹ The only justifications SVTC has offered for ratepayers to invest in the venture are the improved solar and lower solar costs.⁴⁰

PG&E elaborates on the purported benefits to ratepayers: "(1) through reduced equipment costs for those customers who elect to install PV technologies at their facilities, and (2) through reduced costs for large scale power procured from PV sources, which translates to lower overall energy and environmental costs to customers to the extent that California load-serving entities must continue meeting the State's overall energy policy goals for increased renewable, non-GHG emitting energy resources, including under Renewable Portfolio Standards requirements."⁴¹ In a supplemental response, however, PG&E conceded that at least for contracts PG&E has already signed, lower solar panel prices will not affect contract pricing. PG&E admitted that "[c]urrent

³⁸ TR 89:2-7.

³⁹ TR 90:23-25.

⁴⁰ TR 90:26-28.

⁴¹ PG&E Response to DRA Data Request DRA 001-05.

contracts with PV projects that have been approved by the CPUC have agreed-upon pricing that would not be affected by future changes in the price of PV.⁴² The reduced cost potential would neither affect current contracts nor current contracts with PV projects.⁴³ Since the average length of these contracts is 23.5 years,⁴⁴ ratepayers will not see the promised reduced costs for a long time, if ever.

PG&E represents that the “ultimate direct benefits” of the proposed PV MFD would apply to *customer-scale level* as well as *utility-scale level* solar PV projects, the difference being system size.⁴⁵ PG&E categorizes customer-scale size systems from less than one kilowatt up to just over one megawatt and the utility-scale systems starting at one megawatt up to 100 megawatts plus.⁴⁶ PG&E claims that *both* system sizes *could* see reductions in equipment costs, “which translates to lower overall energy and environmental costs” to meet California’s overall energy policy goals including the State’s Renewable Portfolio Standards (RPS).⁴⁷

What PG&E fails to reveal when it promotes the supposed benefits to ratepayers of the possible reduction in cost, is that on the utility-scale level PG&E ratepayers are already on the hook for more than \$36 billion.⁴⁸ Moreover, PG&E admits that its utility-scale PV contracts with “agreed-upon pricing...would not be affected by future changes in the price of PV.”⁴⁹ Table 1 below illustrates PG&E’s utility-scale PV and Renewables RFO programs with the approximated cost from public sources of information.

⁴² PG&E Response to DRA Data Request DRA 001-05, Supplemental-01.

⁴³ PG&E Response to DRA Data Request DRA 001-05, Supplemental-01.

⁴⁴ PG&E Response to DRA Data Request DRA 001-05, Supplemental-01.

⁴⁵ DRA_001-5.

⁴⁶ PG&E’s presentation, CPUC Workshop on PG&E’s Application to Support SVTC’s Solar PV Manufacturing Development Facility, Pacific Gas and Electric Company, slide 5, March 23, 2011.

⁴⁷ DRA_001-05.

⁴⁸ Annual Report of Pacific Gas and Electric Company to the Public Utilities Commission of the State of California For the Year Ended December 31, 2009, Volume No. 1 (Form 1) (ED. 12-88) p. 123.56.

⁴⁹ DRA_001-05 Supplemental-01.

Table 1 Expected PG&E Ratepayer Burden

PG&E Utility-Scale Programs by Type System Size in Megawatts (MW)		CPUC Approved Ratepayer Costs \$ (Billion)
Renewables RFO		34.7
PPA PV RFO		Up to 1.45
Utility Owned PV		1.45
1 MW ----- 20 MW	100 MW ++	

On the customer-scale level, which would include ‘possible’ reduced costs for PG&E customers wanting to purchase and install solar PV for residential use, PG&E fails to address or acknowledge two key questions. First, why should only PG&E ratepayers pay for state-wide policy to encourage solar PV, especially in these trying economic times?⁵⁰ Second, how much lower (and how fast) can solar PV panel prices fall, and is it time to stop the subsidies?⁵¹ Press and industry reports overwhelmingly and herald almost daily the ‘freefall’ in solar PV panel prices since 2008 because of competition and advances in solar manufacturing technologies. Moreover, this project seems more than a day late and millions if not billions short in that other funded innovators have left the gate a long time ago, and duplicative, collaborative efforts are underway across the United States and around the world.⁵² It does not appear that either PG&E or SVTC participated

⁵⁰ “Low-Carbon Haves and Have-Nots,” Chris Raphael, California Energy Market, No. 1155, November 11, 2011 (p. 4). The author presents another perspective going one step further in suggesting that the California Solar Initiative (subsidized residential roof-top solar) is akin to a 50% tax loophole for the wealthy as compared to the 20% discounted rates for low-income Californians available through California Alternate Rates for Energy.

⁵¹ “Solar Generation Of Electricity At Grid Parity A Reality In Selected Geographies And 16% 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 <http://www.twst.com/yagoo/zaman9.html>.

⁵² Rocky Mountain Institute: “Achieving Low-Cost Solar PV: Industry Workshop Recommendations for Near-Term Balance of System Cost Reductions.” DOCUMENT ID: 2010-20; Authors: Bony, Lionel; Doig, Stephen; Hart, Chris; Maurer, Eric; Newman, Sam. “This report synthesizes the specific design strategies and technical and process best practices that emerged from RMI’s June 2010 “Solar PV Balance of System” design charrette. BoS costs—all the upfront costs associated with a PV system except the module—account for over half of PV system cost and pose a barrier to widespread adoption. The charrette process identified many opportunities that could offer the potential to reduce balance of system

in the Rocky Mountain Institute's 2010 collaborative industry workshop addressing the very same 'issues' that PG&E and SVTC claim to solve, reducing solar PV costs.^{53]}

PG&E has not demonstrated the reasonable probability of benefits to ratepayers to warrant Commission approval to use ratepayer funds to support SVTC's Solar PV MDF. As shown above, PG&E ratepayers are locked in for decades to paying for previously negotiated RPS contract prices and CPUC approved Power Purchase Agreements (PPAs) and utility-owned solar PV projects. PG&E's deemed 'urgency' to approve this project or face the pending consequences of failing to meet California's RPS goals at lower cost to ratepayers rings hollow indeed.

In fact, DRA's *Green Rush Report*,⁵⁴ based on the Investor Owned Utilities (IOUs) self-reported statistics, shows that the IOUs are on track to achieve the 20 percent RPS goal by the end of flexible compliance in 2013 and are ahead of schedule to meet the 33 percent goal by 2020.⁵⁵ It all boils down to the fact that PG&E ratepayers are significantly burdened and contributing extensively for more than their fair share toward renewable energy development in California in the myriad of programs and subsidies already funded.⁵⁶

costs to \$0.60 - \$0.90/watt, a 45 percent to 65 percent reduction over current best practices. This report quantifies and prioritizes cost reduction strategies and provides detail on specific recommendations to reduce costs.”

<http://www.greentechmedia.com/articles/read/how-to-drop-solar-to-1-a-watt-try-diamond-saws-says-dick-swanson/>; <http://www.next100.com/2011/03/the-race-to-harness-the-sun.php>.

⁵³ Ibid.

⁵⁴ <http://www.dra.ca.gov/DRA/energy/Renewables/greenrush.htm>.

⁵⁵ The Division of Ratepayer Advocates, *The Green Rush: Implementing Renewables in California*, August 2011 presentation at <http://www.ora.ca.gov/NR/rdonlyres/7EB305CC-4C7D-4997-98A2-C51168163F1F/0/RenewablesOverviewPrezAug2011FINAL.pdf>, slide 11.

⁵⁶ DRA Presentations: “Implementing the Renewable Portfolio Standard in California” C. Walker, Program Manager, Electricity Policy and Planning Branch, November 3, 2011 (<http://www.dra.ca.gov/NR/rdonlyres/40143FCE-06EF-4BE8-A0C1-DCA24963DA3D/0/RPSpublic11311.ppt>); “The Green Rush: Implementing Renewables in California” D. Ashuckian, Deputy Director, August, 2011 (<http://www.dra.ca.gov/NR/rdonlyres/7EB305CC-4C7D-4997-98A2-C51168163F1F/0/RenewablesOverviewPrezAug2011FINAL.pdf>).

The new renewable energy agreements PG&E signed in 2009 include some of the largest-ever commitments for utility-scale solar energy:⁵⁷ PG&E ratepayers are currently expected to pay for these and more, in the billions of dollars for decades to come. The Commission should flat out reject PG&E's request to burden ratepayers with a project that even the venture capitalists and banks will not fund.. PG&E should get back to the business of providing safe, reliable electricity at affordable prices and not use ratepayer dollars as venture capital.

PG&E also claims that the venture will expand the U.S. solar panel manufacturing base: "The facility will create an incentive for PV manufacturing facilities to locate in the U.S. rather than abroad; ' that one of its benefits is '[t]o expand the deployment of advanced solar PV domestic manufacturing technologies; and that "[t]he California Solar PV MDF is designed to strengthen and speed the growth of the U.S. PV manufacturing industry."⁵⁸ However, nothing in the project requires manufacturers who use the line to site their manufacturing in California. While SVTC claimed that American companies' desire to protect their intellectual property is a strong motivator for them to keep their manufacturing in the United States, this claim is easily refuted by the presence of many American high tech manufacturing facilities in China.

As TURN's Mr. Freedman stated at the workshop:

[T]he bigger question is will one facility offering this services move entire global solar market. There are hundreds of solar manufacturers. There are billions of dollars of capital being invested. Every company that is large is trying to come up with the next big idea. Small companies are out there manufacturing, selling into Europe and Asia. California is not an island. And it is very questionable whether this one facility could be assumed to move the entire global market. I think that's kind of a leap.⁵⁹

⁵⁷ For a partial list of PG&E's solar thermal and PV projects by Developer, Capacity, Location and Technology see http://www.pgecorp.com/corp_responsibility/reports/2009/en05_renewable.jsp#sectionfour.

⁵⁸ Application at 2, 7 and 9.

⁵⁹ TR 112:21-113:6.

The other supposed ratepayer benefit PG&E cites involves providing support for university and research laboratories,⁶⁰ but PG&E nowhere explains how this synergy benefits ratepayers. While these benefits may contribute to larger social goals, it is difficult to discern actual ratepayer benefits from the work, a proposition the Legislature recognized when it reversed a Commission decision to set up a climate change research institute at UC Berkeley.⁶¹

In summary, none of PG&E's claimed "ratepayer benefits" stand up to scrutiny. Without such benefits, the venture simply cannot legally be funded, and the Application should be denied.

B. The Project Is Inconsistent With PG&E's Resource Plan

The Commission has repeatedly stated that one of the reasons why it has and continues to approve high-priced renewable projects that the utilities bring forward, especially solar, is that it desires and places great value on 'portfolio diversity.' PG&E's portfolio is now comprised of some of the most expensive solar resources and on the verge of overwhelming other more cost-effective renewable resource options such as wind.

On March 1, 2010, with over 6,000 MW of RPS contracts, PG&E showed that solar PV contracts comprised 23.7% and solar thermal 38.7% of its total RPS contracts.⁶² By mid-year 2010, June 24 – July 2, these percentages changed to 26.2% and 31.2% respectively, with total RPS MW increasing to over 8,000 MW from 6,000 MW just a few months previous.⁶³ In essence, PG&E's RPS portfolio comprises over 50% in solar contracts, some of the most expensive technology.

⁶⁰ Application at 7-8.

⁶¹ AB 1338 (Stats. 2008, ch. 760) "The Public Utilities Commission shall not execute an order, or collect any rate revenues, in Rulemaking 07-09-008 (Order Instituting Rulemaking to establish the California Climate Institute for Climate Solutions), and shall not adopt or execute any similar order or decision establishing a research program for climate change unless expressly authorized to do so by statute." See D.08-11-060, implementing the statute.

⁶² http://www.pgecorp.com/investors/pdfs/2010_inv_conf-final.pdf, slide 72.

⁶³ http://www.pgecorp.com/investors/pdfs/europe_investor_mtgs_06-24_to_07-02-10.pdf, slide 23.

As noted previously, PG&E is on track to meet California's RPS 20% and 33% goals, and, at least for contracts PG&E has already signed, and its utility-owned solar PV, lower solar panel prices will not affect contract pricing. Approving this project would be inconsistent with Section 740 and with PG&E's Resource Plan, heavily solar subscribed. It would also be contrary to the Commissions' mandate to ensure just and reasonable rates.

IV. APPROVAL OF PG&E'S AMENDED APPLICATION WOULD RESTRICT COMPETITION IN THE SOLAR ENERGY MARKET

Both SVTC Solar and PG&E hail the venture as building a solar cell manufacturing base in California. But approval of PG&E's amended application would actually harm California's effort to promote solar cell manufacturing and restrict competition because 1) banks, venture capitalists, even company shareholders are unlikely to invest in similar projects as long as some solar manufacturers can draw on a captive cache of ratepayer cash; 2) investors who do choose to fund solar development projects would be prejudiced by the no-cost/no-risk financing of ratepayer dollars; and 3) the companies who don't have access to ratepayer cash will not attract the necessary investment.

Section 2775.5 provides guidance on two points bearing on PG&E's amended application. First,

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 ratepayers' interest.

Second, Section 2775(b) requires the Commission to deny the authorization if it finds that the proposed program will restrict competition or growth in the solar energy industry.

While State policy strongly encourages solar development, it recognizes that before ratepayers pay for a solar energy system, the Commission must find that the ratepayers benefit from that system. Further, the Commission must deny authorization

for projects that restrict competition. Had PG&E sought ratepayer funding for a project like SVTC's venture, the Commission would have to deny its application because venture does not benefit ratepayers and restricts competition. The Commission should not permit PG&E to do indirectly what it could not do directly. PG&E's amended application should be denied.

V. CONCLUSION

PG&E asks this Commission to make its ratepayers shareholders in a venture that is not research and development; does not benefit ratepayers; is inconsistent with PG&E's resource plan; and restricts competition in California's solar energy market. PG&E makes this request because no banks, no venture capital firms, not even SVTC Technologies stockholders or PG&E stockholders are willing to invest in SVTC's venture. If the venture is not good enough for banks, venture capital and PG&E's and SVTC's shareholders, it's not good enough for PG&E's ratepayers. The Commission should deny PG&E's amended application.

Respectfully submitted,

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