Application: 12-04-
(U 39 E)
Exhibit No.:
Date: April 24, 2012
Witnesses: Redacted
Steven Malnight
Redacted

PACIFIC GAS AND ELECTRIC COMPANY

GREEN OPTION PROGRAM

PREPARED TESTIMONY

PACIFIC GAS AND ELECTRIC COMPANY
GREEN OPTION PROGRAM
PREPARED TESTIMONY

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PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 1
INTRODUCTION AND POLICY

A. Introduction

This chapter presents background on Pacific Gas and Electric Company's (PG&E) proposed Green Option voluntary rate schedule. The Green Option is a product developed in response to demonstrated customer interest and represents an opportunity for customers to support renewable energy beyond the green content of the renewable energy portfolio of their standard bundled electric rates. The proposed Green Option will leverage the practices of proven, successful voluntary green pricing programs, as well as lessons from PG&E's ClimateSmart™ Program.

With California Public Utilities Commission (CPUC or the Commission) approval of this application, PG&E bundled electric customers will be given the opportunity to support 100 percent renewable energy through the purchase of Green-e Energy Certified Renewable Energy Credits (REC) for a modest premium on their utility bill. The proposed program will offer customers two options of Green-e Energy Certified RECs: a "100% green power" product implemented through a volumetric kilowatt hour (kWh) adder, or "blocks" at a fixed price.

All administrative, marketing, and procurement costs of PG&E's Green Option will be borne solely by participating customers. PG&E anticipates that it may take several years to recover initial start-up costs from participating customers, as is typical of new green pricing programs. Over the course of the program, costs in excess of revenues received from participating customers, to the extent that they are not recovered through rates charged to participating customers, will be borne by PG&E. The RECs procured by PG&E to support the program will be additional to renewable energy obtained by PG&E to comply with California's Renewable Portfolio Standard (RPS), and PG&E will not use the Green Option RECs for compliance with the RPS. PG&E will not earn any profit or incentive payments under the program.

B. PG&E's Green Option Responds to Requests From PG&E Customers and California Leaders

PG&E's Green Option responds to requests by customers and leaders in PG&E's service area for an optional green rate. PG&E has commissioned five separate customer surveys and studies since 2008[1] to help determine customer interest and response to voluntary renewable energy programs, and has found interest among a sizeable subset of its customers. As further described in Chapter 2, these commissioned studies have been insightful in helping PG&E design its proposed Green Option to respond to the strong interest of its customers.[2]

Government leaders and policymakers also have asked PG&E to provide an option to customers to increase their support for renewable and clean energy. The Mayors of the cities of San Jose, Berkeley, Davis, Hayward, Carmel-by-the-Sea, and Napa have requested that PG&E implement a Green Option for PG&E's customers. In addition, PG&E's Green Option is supported by the Natural Resources Defense Council, Environmental Defense Fund, the Bay Area Climate Collaborative, Joint Venture Silicon Valley Network, North Bay Leadership Council, Sustainable Napa County, and the Sonoma Valley Chamber of Commerce. Copies of letters of support are attached to this testimony.

Additionally, national and state voluntary green programs have demonstrated strong customer interest. According to the National Renewable Energy Laboratory (NREL) study of U.S. trends in renewable energy markets, in 2010 the total number of residential and non-residential customers that voluntarily purchased under utility green pricing programs increased by approximately 5 percent, and voluntary sales totaled 5.4 million megawatt-hours (MWh).[3] At the end of 2010, the median participation rate in utility green pricing

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1 PG&E commissioned these studies from June 2008 to February 2012. These studies were completed by the following vendors: Venables Bell & Partners, Talley Research Group, Socratic Technologies, and RDA Group.

2 Customer survey results (2011 and 2012) are described in Chapter 2.

3 NREL "Status and Trends in U.S. Compliance and Voluntary Renewable Energy Certificate Markets (2010 Data)," October 2011, p. 21.

programs nationally was 1 percent.[4] Customer participation rates in green pricing programs offered by PG&E's neighboring municipalities also indicate high customer interest levels in their communities. For example, "Palo Alto Green" has a participation rate of 21.5 percent and is ranked number 1 in the country, Sacramento Municipal Utility District's (SMUD) "Greenergy" has a customer participation rate of 8.7 percent and is ranked number 5 in the country, and Silicon Valley Power's "Santa Clara Green Power" has a participation rate of 7.8 percent and is ranked number 7 in the country.[5]

PG&E has a diverse customer base and a larger territory than these utilities, and therefore customer adoption rates will likely differ. Furthermore, it took a number of years for these other programs to achieve their current enrollment rates. However, PG&E plans to learn from these programs and to focus on specific strategies based on successful industry practices in California and around the country to cost-effectively offer the Green Option to our customers.

C. PG&E's Green Option Is Comparable to Similar Green Pricing Programs Offered by Utilities Across the United States

PG&E's Green Option is based on successful green pricing programs in California and across the United States. Today, more than 860 utilities offer green power programs to their customers.[6] More than half of U.S. electricity consumers have an option to purchase some type of green power product directly from a retail electricity provider.[7] These industry models provide a strong base of already proven, successful green pricing programs for PG&E to draw from in the design of its Green Option such as: (1) Procuring RECs certified through Green-e Energy; (2) Offering a per kWh or block purchase approach; and (3) Working with experienced third-party partners for marketing and REC procurement services.

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4 NREL "Status and Trends in U.S. Compliance and Voluntary Renewable Energy Certificate Markets (2010 Data)," October 2011, p. 26.

5 US DOE Green Power Network, Top 10 Utility Green Power Programs, December 2010 data, http://apps3.eere.energy.gov/greenpower/markets/pricing.shtml.

6 NREL "Status and Trends in U.S. Compliance and Voluntary Renewable Energy Certificate Markets (2010 Data)," October 2011, p. 1.

7 NREL "Status and Trends in U.S. Compliance and Voluntary Renewable Energy Certificate Markets (2010 Data)," October 2011, p. 1.

As discussed further in Chapter 2, PG&E has designed its Green Option to leverage the simplicity and customer convenience of similar green programs in California and around the country. PG&E customers will have two simple options to purchase Green Option RECs: either 100 percent of their non-RPS eligible electricity use implemented through a volumetric (per kWh) adder, or blocks of RECs at a fixed price. PG&E proposes to work with a third-party partner for marketing and REC procurement services. As detailed in Chapter 2, certain successful green pricing programs are using green marketing experts which specialize in cost-effective marketing to customers interested specifically in green products and programs. Thes e specialized companies have proven success in subscribing customers for green tariffs and programs. In addition, industry experts agree that using a third party can be an effective approach as it leverages the marketer's experience in this highly specialized industry. The marketer will be contracted to work under PG&E's active management and direction. In addition, as further described in Chapter 2, PG&E intends to select a third party with expertise in administering and procuring RECs for utility green pricing programs.

D. PG&E's Green Option Will be Independently Certified and Procured From California and Western Electric Coordinating Council Sources

As further described in Chapter 2, PG&E's Green Option will seek Green-e Energy Certification, and will offer Green-e Energy Certified RECs to provide customers with a trusted and reliable product that has a proven track record of success in the voluntary green power industry. In 2010, six of the "Top 10" utility green pricing programs (ranked by customer participation rate) were Green-e Energy Certified, including successful neighboring green tariff programs offered by the City of Palo Alto Utilities, SMUD, and Silicon Valley Power.[8] Green-e Energy, administered by the San Francisco-based non-profit Center for Resource Solutions, provides assurances to consumers and businesses that the green electricity products they purchase meet strict standards regarding renewable content and have the potential to reduce the environmental impacts of electricity use. All renewable energy that Green-e Energy certifies goes

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8 NREL "Status and Trends in U.S. Compliance and Voluntary Renewable Energy Certificate Markets (2010 Data)," October 2011, p. 56.

through a thorough verification process that is detailed in Chapter 2. In addition, the Green-e Energy Standard requires that eligible RECs or renewable energy can be used only once. RECs procured for customers cannot be claimed by another party or used for another program, including PG&E's RPS Compliance.

In order to provide PG&E's customers with the local and regional benefits of Green-e Energy Certified RECs, PG&E intends to procure RECs for its Green Option only from California and Western Electricity Coordinating Council (WECC) sources, with a preference for California-based solar and other California RECs that meet Green Option price targets.

E. PG&E Will Price the Green Option Based on Current California and WECC REC Markets

PG&E plans to offer customers a Green Option premium in line with other utility green power programs.[9] PG&E expects to initially price the product at a modest premium above the bundled electricity rate otherwise applicable to a participating customer. In order to provide flexibility in light of likely changes in REC market prices, PG&E will have authority to adjust the Green Option price down or up, but not to exceed 2 cents/kWh above the otherwise applicable bundled rate. PG&E will exercise this pricing flexibility through 90 days prior notice to customers and a Tier 1 advice filing.

F. The Green Option Expands California's and PG&E's Commitment to Renewable Energy

The Green Option represents an opportunity for PG&E to further complement and expand its clean electricity mix,[10] as supported by the CPUC's energy policies, by offering an additional option for customers to support

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9 NREL "Status and Trends in U.S. Compliance and Voluntary Renewable Energy Certificate Markets (2010 Data)," October 2011, p. 28.

10 Although PG&E serves almost 5 percent of the U.S. population, it emits less than 1 percent of national carbon dioxide (CO_2) emissions associated with the generation of electrical power. Among California utilities, PG&E's CO_2 emissions rate was 445 pounds of CO_2 per MWh of delivered electricity in 2010, where the statewide average was 681 pounds per MWh. In 2010, counting all forms of clean generation, including large hydro and nuclear, PG&E actually obtained approximately half of its electricity from sources that are carbon-free or renewable. Citations include:

- PG&E's 2010 report to The Climate Registry, Electric Power Sector Protocol spreadsheet.
- U.S. Environmental Protection Agency eGRID2010 Version 1.1, which contains year 2007 information configured to reflect the electric power industry's current structure as of December 31, 2010.
- http://www.pge.com/myhome/environment/pge/cleanenergy/index.shtml.

renewable energy. Renewable energy plays a vital role in California's energy mix and PG&E is committed to deliver on our state's policies to adopt increasing levels of renewable electricity. As exemplified by PG&E's March 2012 Renewables Portfolio Standard Procurement Progress Report and Project Development Status filed with the CPUC,[11] PG&E met 19.4 percent of its electricity sales in 2011 from eligible renewable sources.

PG&E offers customers a variety of renewable programs as part of the state's renewable energy goals and mandates, including the California Solar Initiative, Self-Generation Incentive Program, Net Energy Metering Service (NEM), and Feed-In Tariff programs. PG&E has successfully interconnected roughly 64,000 solar roofs through our NEM program with growth at roughly 1,000 new interconnections per month.[12] In 2011, PG&E interconnected roughly 162 MW[13] of distributed generation solar, helping to secure the top utility position in the annual Solar Electric Power Association (SEPA) megawatts ranking for the fourth year in a row.[14]

The proposed Green Option builds on PG&E's existing commitment to renewable energy by offering customers the opportunity to support renewable resources beyond the levels provided by PG&E's current renewable energy supply mix and programs.

G. The Green Option Offers Customers an Additional Opportunity to Personally Support Renewable Energy

PG&E shares its commitment to renewable energy with all of our customers. We applaud customers that have already made the commitment to adopt renewable resources by taking advantage of PG&E rebate programs to install clean energy systems on their own facilities. At the same time, PG&E recognizes that certain customers may experience some practical limits to renewable energy adoption under these programs. The Green Option provides

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11 PG&E, Rulemaking 11-05-005, March 1, 2012.

12 PG&E's General Interconnection Service Report, as of January 31, 2012.

13 Based on PG&E official California Energy Commission Alternating Current rating submission to SEPA, using customer-side of the meter distributed generation.

14 Solar Electric Power Association (2012). Pacific Gas & Electric is ranked first in the Top 10 in the Annual Megawatts category. The 2011 SEPA Utility Solar Rankings [Press release]. Solar Electric Power Association, Report 05-09 (2008), Report 01-10 (2009), Report 01-11 (2010).

another choice for those customers that may encounter certain limiting factors to self-generation, such as:

1) Suitability of rooftop and location: According to a 2008 study produced by NREL, only 22-27 percent of residential rooftops are suitable for hosting on-site photovoltaic (PV) systems after adjusting for structural, shading, and other constraints.[15]
2) Lack of available space (land or rooftop) or inability to change existing systems/structures to support a new installation.
3) Property ownership: If a customer does not own the property, self-generation may not be possible.
4) Lack of Flexibility: The proposed Green Option offers flexibility to support renewable resources without a long term commitment. PG&E intends to allow customers to enroll in this program with no minimum enrollment term.

PG&E has designed the Green Option to be a straightforward, flexible program that is simple for customers to implement and requires a relatively modest monthly premium for participants. While California's self-generation programs have been very successful, PG&E realizes current programs may not be practical for *all* our customers. In this application, PG&E proposes to help remove certain barriers to renewable energy adoption by offering our customers an option to personally support renewable energy that is not constrained by location, available space, or home ownership status.

H. PG&E Has Designed the Green Option to Include "Lessons Learned" From Its ClimateSmart Program, Including Customer Outreach and Marketing Lessons

The ClimateSmart program was a voluntary carbon offset program offered by PG&E to its customers from mid-2007 through the end of 2011. It was the first program of its kind focused entirely on carbon offsets, a somewhat new concept for energy consumers. Upon closure of the program, as directed by the CPUC in Decision 10-10-025, PG&E hired an external consultant to perform a comprehensive evaluation of the program. Section D of that evaluation,

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15 NREL "Supply Curves for Rooftop Solar PV-Generated Electricity for the United States," November 2008, p. 4. *This number is highly uncertain, and will vary regionally due to several factors including local climate and vegetation; heating, ventilation and air-conditioning equipment requirements; and building density.*

received in March 2012, summarized lessons learned from both the consultant's and PG&E's perspectives.

The ClimateSmart program, like the proposed Green Option, was a voluntary program that required participants to pay an additional amount on their monthly bill for an environmental purpose. As such, the ClimateSmart Program evaluation was instrumental in PG&E's design of the current Green Option program. Indeed, voluntary green power programs were the only comparable industry benchmark for carbon offsets when PG&E filed its application for the ClimateSmart Program, and were referenced extensively in that application. PG&E was grateful for the opportunity to have an external consultant's view of the lessons learned from the ClimateSmart Program, and has incorporated those lessons in the design of the Green Option.

As noted in Section D of the report, entitled "ClimateSmart Program Comprehensive Evaluation," the following is a summary of lessons learned, along with PG&E's incorporation of those lessons in the design of the Green Option.

TABLE 1-1
PACIFIC GAS AND ELECTRIC COMPANY
CLIMATESMART PROGRAM "LESSONS LEARNED" AND APPLICATION TO GREEN OPTION PROGRAM DESIGN

Line No.	ClimateSmart Program "Lessons Learned"	Green Option Program Design
1	A robust marketing strategy focused on enrollment tactics.	PG&E plans to take advantage of the more cost-effective approaches employed for the ClimateSmart Program, and hire a reputable third-party with specialized expertise in marketing green power programs.
2	The ClimateSmart Program participants had lower-than-average energy usage.	PG&E plans to use lower-than-average energy use assumptions for the Green Option.
3	The turnover of program management and marketing functions should be minimized.	PG&E will maintain consistency of leadership in the program management and marketing of the program.
4	Marketing costs and results should be tracked better.	PG&E is investing in new marketing reporting capabilities for the Green Option, as described in Chapter 2.
5	As was done in the ClimateSmart program, care should be taken to select at least some supply that is locally-sourced.	As described in Chapter 2, the Green Option will seek resources from California and the WECC region only.
6	More care should be paid to the program duration and also the renewal process to minimize interference with the marketing activities and maximize the "long view" of the program.	PG&E is proposing an ongoing Green Option Program.

I. The Green Option Will Not Affect or Impact PG&E's Ability to Meet Its RPS Requirement

As described in Chapter 2, PG&E's RPS procurement will be separate from its Green Option procurement and will not overlap or impact PG&E's RPS procurement activities or costs. All aspects of the Green Option program will be accounted for separately from PG&E's ongoing RPS compliance program. The only overlap between the two programs will be annual coordination to determine the appropriate Green Option procurement target, because for the 100 percent Green Option, PG&E will need to procure RECs for the non-RPS-eligible portion of energy delivered to the participating customers. In other words, planning for the procurement amounts for the 100 percent Green Option will be based on the

difference between PG&E's prior year percentage delivery of RPS-certified power and delivering 100 percent clean energy.

J. Green Option Costs Will Be Borne by Green Option Participants, and PG&E Will Be at Risk for Any Revenue Shortfalls

As described in Chapters 2 and 3, PG&E proposes that all costs associated with the program be borne by Green Option participants. PG&E anticipates that it may take several years to recover initial start-up costs from participating customers, as is typical of new green tariff programs. Over the course of the program, costs in excess of revenues received from participating customers will be borne by PG&E. PG&E will be responsible for managing both start-up costs and variable costs, such as procurement of RECs, to fully recover costs over the life of the program. All costs, including the REC procurement and marketing costs incurred by the third-party partner or PG&E, will be borne by Green Option program participants through the price of the premium added to their bills, with PG&E bearing the risk of any costs in excess of revenues over the life of the program, to the extent that the costs are not recovered through rates charged to participating customers.

K. Conclusion

The proposed Green Option enhances PG&E's current renewable energy programs and offers our customers another option to exercise their personal choice to support a quality and reputable source of renewable resources. Based on customer research conducted by PG&E, the Green Option will respond to the interest and requests of our customers. PG&E has based the Green Option on proven successful green pricing programs offered by utilities in California and around the country to respond to our customer's demands. If the Commission approves PG&E's Green Option application, our customers will have an option to participate in a quality Green Option program that expands their opportunity to support renewable energy.

PACIFIC GAS AND ELECTRIC COMPANY

CHAPTER 1

ATTACHMENT 1

LETTERS OF SUPPORT

Office of the Mayor

Tom Bates
Mayor

Steven E. Malnight
Vice President, Customer Energy Solutions
Pacific Gas and Electric Company
77 Beale Street
San Francisco, CA 94105

Dear Mr. Malnight,

The City of Berkeley is nationally recognized as an environmental, solar, and green technology leader.

To green our economy and reduce greenhouse gas emissions in and around our community, I co-founded the East Bay Green Corridor Partnership with the mayors of Oakland, Emeryville and Richmond, the Chancellor of the University of California, Berkeley, and the Director of the Lawrence Berkeley National Laboratory. Together, we work closely with community partners, public agencies, the business community, neighboring cities, and regional planning bodies to meet our environmental goals.

In 2009, the Berkeley City Council adopted its Climate Action Plan which is the community's guide for reducing greenhouse gas (GHG) emissions to 33 percent below 2000 levels by the year 2020 and to 80 percent by the year 2050. To achieve these aggressive goals, we realize that multiple strategies must be employed to not only reduce energy use but increase the level of renewable energy sources. We have successfully implemented a variety of options, including a forward-thinking solar financing program for our residents, to increase the level of renewable energy serving our community. That's why I fully support PG&E's application to the California Public Utilities Commission (CPUC) for a new Green Option program.

The Green Option program will allow residents to have the opportunity to receive green energy in an affordable and convenient way should they choose to participate – through their current utility provider and on their current bill. The Green Option program significantly reduces the cost barrier to purchasing green energy and it is optional, which is especially important in this economy and with Berkeley's diverse population.

I am hopeful that the Green Option program will be approved by the California Public Utilities Commission. Again, I am pleased to support this PG&E initiative.

Sincerely,

Tom Bates

Tom Bates

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E-mail: mayor@ci.berkeley.ca.us

CITY COUNCIL

Joe Krovoza, *Mayor* – Rochelle Swanson, *Mayor Pro Tem*
Councilmembers: Sue Greenwald, Stephen Souza, Dan Wolk

23 Russell Boulevard, Suite 1 – Davis, California 95616
Phone: 530/757-5602 – FAX: 530/757-5603 – TDD: 530/757-5666
1300 AM www.cityofdavis.org

Davis
California

April 17, 2012

Mr. Michael R. Peevey
President
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, California 94102

Dear President Peevey,

I write to support PG&E's application to the California Public Utilities Commission for a new Green Option program for its ratepayers. This stand is consistent with the City of Davis' long-standing tradition of support for low-carbon supply and demand-side energy innovations.

The Green Option program will provide Davis residents with an important tool that they can use to pursue 100 percent clean energy. They will have the opportunity to receive green energy from their utility in an affordable and convenient manner. PG&E's Green Option program will also significantly reduce the cost barrier to purchasing green energy and will spur further investment in the green technology sector.

This option will empower citizens to participate in California's low-carbon energy future. Consumer engagement in renewable energy moves us one step closer to stabilizing the Earth's climate by achieving an 80 percent reduction in carbon emissions by 2050. PG&E's Green Option is also one more important bridge to pique consumer interest in the re-direction of our energy future. I am convinced that consumer investment in clean supplies accelerates their interest in demand reduction options such as more efficient appliances, peak shifting, and overall demand reductions.

Given Davis' role as an incubator for energy innovation for decades, I am pleased to support the advancement of this important program.

Sincerely,

Joe Krovoza
Mayor

CITY OF
HAYWARD
HEART OF THE BAY

April 16, 2012

Mr. Steven E. Malnight
Vice President, Customer Energy Solutions
Pacific Gas and Electric Company
77 Beale Street
San Francisco, CA 94105

Mr. Malnight:

As the "Heart of the Bay," the City of Hayward considers itself a community that embraces forward-thinking ideas. We have a history of being the home to both innovation and implementation of green technologies. Our Climate Action Plan is robust and considered one of the best and most complete in California. We are Bay Area leaders in water conservation; and, we have a Green Building Ordinance in place along with ordinances for recycling, Bay Friendly Landscaping, a prohibition on the use of Poly Styrofoam in our restaurants, and an ordinance discouraging the use of single-use bags. In addition, we have multiple photo voltaic installations in our community, including two owned by the City: our oldest at 276 kilowatts and our newest at 1 megawatt.

As a City, we want to eventually be able to generate and/or purchase 100% green energy for our own use. The Green Tariff program, when offered by PG&E, will allow the City of Hayward to make progress toward that goal without major infrastructure costs. The program will also allow our residents the opportunity to receive green energy in an affordable and convenient manner.

With PG&E's application for the Green Tariff program, I am hopeful that the market, along with PG&E, will create a uniquely California marketplace where new, green technologies will continue to flourish.

Therefore I encourage the California Public Utilities Commission to approve the Green Tariff Energy Program, and to include two critical components: that the benefits of Green Tariff Program participation accrue to the customer and not be limited to any single meter; and that the revenue received from the program be targeted and limited to assisting PG&E in reaching as much renewable energy as quickly as possible, thereby exceeding their planned future targets.

Sincerely,

Michael Sweeney
Mayor

Cc: City Council
Fran David, City Manager
Tom Guarino, PG&E

OFFICE OF MAYOR MICHAEL SWEENEY
777 B STREET, HAYWARD, CA 94541-5007
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EMAIL: michael.sweeney@hayward-ca.gov

CITY of NAPA

MAYOR/CITY COUNCIL
955 School Street
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P.O. Box 660
Napa, California 94559-0660
Voice Mail: (707) 258-7876
FAX # (707) 257-9534

Steven E. Malnight
Vice President, Customer Energy Solutions
Pacific Gas and Electric Company
77 Beale Street
San Francisco, CA 94105

Dear Mr. Malnight,

The City of Napa and its residents have energy needs and demands that vary greatly. That's why I am excited to learn that PG&E plans on seeking approval for a new "Green Option" that will allow individual customers to choose the green energy plan that best fits their individual needs.

Many of my constituents are strong advocates for renewable energy and PG&E's "Green Option" program will allow those who wish to enroll the option of purchasing 100 percent green energy.

Over time, I believe this program will help to create a market for renewable energy on a broad scale. PG&E's decision to introduce such a program to residents in Napa is a choice I would like Napans to have.

Sincerely,

Jill Techel

Jill Techel
Napa Mayor

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Chuck Reed
MAYOR

April 9, 2012

Steven E. Malnight
Vice President, Customer Energy Solutions
Pacific Gas & Electric Company
77 Beale Street
San Francisco, CA 94105

Dear Mr. Malnight,

The City of San José adopted the *Green Vision* in 2007 to demonstrate that the goals for economic development and environmental stewardship are linked. The *Green Vision* aims to continue San José's roll as the world center of Clean Technology innovation. One of the *San José Green Vision* goals is to achieve 100 percent of the City's electricity from renewable sources by 2022.

San José has been a leader in the deployment of solar systems, both commercial and residential, in an effort to reach our renewable energy goal however we realize we can not reach our goal simply by adding solar to our buildings. The newly proposed Green Tariff by PG&E will make it possible for San José to reach its renewable energy goal by supplementing the power we produce with the power from PG&E.

The Green Tariff will also allow businesses and residents of San José to receive green energy in an affordable and convenient way – through their current utility provider and on their current bill. I often hear from businesses and residents that the cost threshold to receive renewable energy is too high – the Green Tariff significantly reduces this barrier. We believe we can reach our long-term renewable electricity goal should the Green Tariff be implemented.

Thank you for your consideration.

Sincerely,

Chuck Reed
Mayor

200 East Santa Clara Street, 18th floor, San José, CA 95113 *tel* (408) 535-4800 *fax* (408) 292-6422 www.sjmayor.org

NATURAL RESOURCES DEFENSE COUNCIL

April 20, 2012

Steven E. Malnight
Vice President, Customer Energy Solutions
Pacific Gas and Electric Company
77 Beale Street
San Francisco, CA 94105

Dear Mr. Malnight,

On behalf of the Natural Resources Defense Council (NRDC), we support PG&E's new Green Option program. We advocate on behalf of our nearly 250,000 California members and activists who have an interest in reducing the environmental impact of California's energy use, many of whom are PG&E customers. The proposed Green Option will offer a way for customers to reduce their environmental footprint and support a growing clean energy economy.

NRDC understands that protecting our environment means uniting business, government, and millions of Americans around common goals, such as greening our energy supplies. The new Green Option program is exactly the kind of partnership we need to safeguard our environment and jumpstart a greener economy. California's world-leading Renewable Portfolio Standard will ensure that the state gets one-third of its power from renewable sources by 2020. The Green Option program will give your 15 million customers the chance to go even farther and faster to green their energy mix, which will help both protect our environment and create green jobs by increasing regional demand for renewable energy sources.

California is a leader in clean energy, and we need to continue to advance clean energy whenever possible. The Green Option will do just that. We strongly support this program that offers cleaner energy choices to your customers, protects our environment, and promotes a clean energy economy.

Sincerely,

Peter Miller
Senior Scientist
Natural Resources Defense Council

www.nrdc.org

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San Francisco, CA 94104
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NEW YORK · WASHINGTON, D C · LOS ANGELES · CHICAGO · BEIJING

BAY AREA CLIMATE COLLABORATIVE

Steven E. Malnight
Vice President, Customer Energy Solutions
Pacific Gas and Electric Company
77 Beale Street
San Francisco, CA 94105

Dear Mr. Malnight,

As an organization devoted to creating common direction and accelerating the clean energy economy and responding to climate change in the heart of PG&E's service territory, we are very pleased to learn of your company's offering customers voluntary enrollment into the Green Option program. By providing those you serve with a 100 percent clean energy option, you're taking a valuable step to fight climate change in the Bay Area and across California.

With this in mind, I wanted to the let you know that the Bay Area Climate Collaborative is happy to support PG&E in its efforts to gain approval for the Green Option program. So we can be most responsive to PG&E and all our stakeholders, we look forward to getting additional detail on the program when it becomes available.

While there remains a great deal of work to be done to ensure that the state, and our region are truly up to the green standards we are striving for, the Green Option is clearly a sign that PG&E is moving in the right direction. Clean energy must be available to everyone in this country. And PG&E's Green Option will make it available to more than 15 million customers in California affordable manner.

We look forward to supporting PG&E's efforts towards clean energy, including the Green Option and appreciate our continued partnership.

Sincerely,

Rafael Reyes
Executive Director
Bay Area Climate Collaborative

Joint Venture
SILICON VALLEY NETWORK

17 April 2012

Steven E. Malnight
Vice President, Customer Energy Solutions
Pacific Gas and Electric Company
77 Beale Street
San Francisco, CA 94105

Dear Mr. Malnight,

Since 2007, Joint Venture has been working with business, government, academia, labor and the community to encourage the growth of our clean and green industries as they simultaneously reduce greenhouse gas emissions.

The strategy for this initiative – The Greenprint for Silicon Valley – provides the framework for a plan of action to insure that Silicon Valley is the leader in the clean energy revolution that will meet our current economic, environmental and energy challenges. Our Climate Prosperity Initiative focuses on four areas based on the California Global Warming Solutions Act and the opportunity to leverage local resources: renewable energy, building efficiency, clean, convenient transportation and green infrastructure.

It is with this Climate Prosperity Initiative in mind that I write to support the Green Option program put forth by PG&E and being considered by the California Public Utilities Commission.

The Green Option program is the type of innovative thinking synonymous with Silicon Valley that will help address some of the most pressing environmental challenges of our time. It is this type of program that will also help foster growth in Silicon Valley's already robust green tech sector, which is why Joint Venture supports PG&E's efforts on this front.

The Green Option program will be an easy affordable way for our public and private sector members to green their footprints considerably. It will also allow residents the opportunity to receive green energy in an affordable and convenient – through their current utility provider. From our conversations with Silicon Valley leaders – we also know that a lower-cost, green-energy option is top-of-mind for tens of thousands of Silicon Valley residents.

Joint Venture is hopeful that the Green Option program will be approved by the California Public Utilities Commission and please be sure to call upon us for support.

Sincerely,

Russell Hancock

Russell Hancock
President and CEO

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(408) 298-9330 tel • (408) 404-0865 fax • www.jointventure.org

NORTH BAY LEADERSHIP COUNCIL

April 17, 2012

Steven E. Malnight
Vice President, Customer Energy Solutions
Pacific Gas and Electric Company
77 Beale Street
San Francisco, CA 94105

Dear Mr. Malnight:

North Bay Leadership Council (NBLC) represents the leading employers in the North Bay and is committed to empowering all of them – and those they serve – with green energy options that fit their needs. It is with that goal in mind, that we wanted to let you know our organization is pleased to offer our public support for PG&E's Green Option Program, which we understand will be officially filed for approval in the coming weeks.

As you know, the North Bay is a national leader in using and promoting green energy. And many of the groups we work with have pioneered solar and other green energy programs. I am confident that the green energy choice they will be allowed to make under the Green Option Program will be a choice they're excited to have.

NBLC applauds PG&E for its ongoing commitment to promoting green energy usage to benefit our environment and our economy. We look forward to partnering with you to help educate North Bay business customers about the benefits of the Green Option Program and are confident the program will provide those customers with an affordable option many of them will be eager to embrace. In these challenging economic times, cost management and reduction is important to every employer's bottom line.

Please feel free to contact me with any questions as the approval process moves forward.

Sincerely,

Cynthia Murray

Cynthia Murray
President & CEO

775 Baywood Dr., Suite 101 • Petaluma, CA 94954
707.283.0028 • Fax: 707.763.3028 • www.northbayleadership.org

Sustainable
NAPA COUNTY

April 23, 2012

Steven E. Malnight
Vice President, Customer Energy Solutions
Pacific Gas and Electric Company
77 Beale Street
San Francisco, CA 94105

Dear Mr. Malnight,

Sustainable Napa County is a nonprofit organization bringing together local stakeholders as part of a comprehensive campaign to take action for economic vitality, environmental health, and community engagement.

Sustainable Napa County is also a partner in Napa County Energy Watch and we are always looking for ways to assist the residents and businesses in our community achieve their own green energy goals.

Pacific Gas and Electric Company's Green Option Program is an innovative green energy program that Sustainable Napa County supports and we are eager to share this information with the community and businesses in Napa County.

By delivering a green energy option that individual and business customers can participate in on a voluntary basis, PG&E is sending an important message to the public about its commitment to customer choice. At the same time, PG&E is demonstrating yet again that it is a national leader in the utility sector when it comes to promoting and using renewable energy.

In the weeks and months to come, I'm sure you will be reaching out to customers to inform them of this exciting new option. Please feel free to call on us to help with your education and outreach efforts in Napa County. We look forward to continuing our work with you.

Sincerely,

Jeri Gill
CEO
Sustainable Napa County

1556 First Street, Suite 102, Napa, CA 94559
PH 707-927-3858 www.SustainableNapaCounty.org

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Steven E. Malnight
Vice resident, Customer Energy Solutions
acific Gas and Electric Company
77 Beale Street
San Francisco, CA 94105

Dear Mr. Malnight,

The Sonoma Valley Chamber of Cpmomoerteesprcogrnsaimstse tl ynesupbpoerts
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utility sector, in promoting and using renewable energy.

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supporting your education and outreach efforts in Sonoma Val

Sincerely,

ennifer Yankovich, CEO
Sonoma Valley Chamber of Commerce

PACIFIC GAS AND ELECTRIC COMPANY

CHAPTER 2

PROGRAM DESCRIPTION

PACIFIC GAS AND ELECTRIC COMPANY
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CHAPTER 2
PROGRAM DESCRIPTION

A. Introduction

In this chapter, Pacific Gas and Electric Company (PG&E) discusses the design, features, price and bill impacts, forecast costs and implementation of the proposed Green Option voluntary rate schedule.[1]

This chapter is organized as follows:

- Section B – The Proposed Green Option Will Follow Best Practices of Leading Utility Green Pricing Programs and Will Meet the Needs and Preferences of PG&E's Customers
- Section C – Program Features
- Section D – Role of Third-Party Partner
- Section E – Implementation
- Section F – Program Costs, Rate and Bill Impacts to Participants
- Section G – Conclusion

B. The Proposed Green Option Will Follow Best Practices of Leading Utility Green Pricing Programs and Will Meet the Needs and Preferences of PG&E's Customers

1. Utility Green Pricing Programs

Utility green pricing programs began in the early 1990s when a small number of utilities offered the option to their customers. Today, over 860 utilities in the United States (U.S.) provide a green pricing option to their customers.[2] More than half of U.S. electricity customers have an option to purchase some type of green power product directly from a retail electricity provider. The utility green pricing market sector continues to grow, with

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1 It is PG&E's intention that, if approved, the Green Option be renamed to a suitable customer-facing name with the involvement of third-party experts in utility voluntary green programs.

2 NREL "Status and Trends in U.S. Compliance and Voluntary Renewable Energy Certificate Markets (2010 Data)," October 2011, p. 1.

estimated voluntary sales of 5.4 million megawatt-hours (MWh) in 2010, as shown below.

TABLE 2-1
PACIFIC GAS AND ELECTRIC COMPANY
EST. ANNUAL VOLUNTARY SALES, 2006-2010
(MILLIONS OF MWH)

Line No.		2006	2007	2008	2009	2010
1	Utility Green Pricing	3.4	4.2	4.8	5.2	5.4
2	% Change From Previous Year	39%	23%	15%	7%	5%

Source: NREL "Status and Trends in U.S. Compliance and Voluntary Renewable Energy Certificate Markets (2010 Data)", p. 21.

Some of the leading national utility green pricing programs are located in California. For example, the City of Palo Alto Utilities' "Palo Alto Green" program, Sacramento Municipal Utility District's "Greenergy" program, and Silicon Valley Power's "Santa Clara Green Power" programs are among the National Renewable Energy Laboratory's (NREL) national "Top 10" list for customer participation rate.[3]

The design and program features of PG&E's Green Option include the best practices and elements from leading green pricing programs in California and around the country. These best practices and features include:

- Using Green-e Energy certified voluntary Renewable Energy Credits (REC)
- Offering a "percent-of-use product" option
- Offering a "block product" option
- Working with a third-party partner with proven expertise and economies of scale for marketing and REC procurement services

[3] NREL "Status and Trends in U.S. Compliance and Voluntary Renewable Energy Certificate Markets (2010 data)," Appendix C, p. 52.

2. PG&E Customer Research Demonstrates a Strong Interest Among a Significant Segment of PG&E Customers for a Voluntary Green Option

PG&E has conducted extensive customer research, including five studies since 2008, to gauge customer interest in a renewable energy option like the Green Option proposed here. The studies have consistently shown that there exists a strong interest within PG&E's customer base for a renewable energy option.

The most recent such study, a 2012 study of PG&E's small and medium business (SMB) and residential "green-minded"[4] customers revealed several key observations:

- 42 percent of "green-minded" residential respondents and 43 percent of SMB respondents rated their interest in the proposed green pricing program "high" (8-10 on a 10 point scale).[5]
- Among those who rated the program high, "interest in renewable energy" was the most frequently cited reason. Among those who rated it low, "not interested in higher costs" was the most frequently cited reason.
- While customers rated the green power program description high in terms of clarity, many still wanted additional information about costs and the purpose, source, and reliability of the green power. Although this may simply reflect the design of the survey questions, PG&E considers this an important concern.

Some verbatim comments from research respondents included:

"We are very interested in supporting clean energy initiatives, and would be very pleased to be able to buy solar/wind-generated power." (Residential Customer)

"There is a need for green power in the face of global climate change. Businesses should contribute to this effort." (Business Customer)

"I support the use of alternate energy and the cost to support it is minimal. I can cancel at any time." (Business Customer)

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4 Approximately 40 percent of PG&E's residential customers are designated "green minded," a variable which designates households which are using environmentally-friendly products and services, eating or growing organic food, donating to environmental organizations, etc.

5 This program was described at a price of 1.5 cents/kilowatt-hour (KWh) or $6/month for the average residential customer, with resources such as wind and solar coming from California and the Pacific Northwest.

"Sounds like an easy way to support renewable energy from a customer's point of view. The price and barrier to entry is low enough not to really affect most people's bills significantly." (Residential Customer)

However, some respondents clearly are not interested in paying more for renewable energy:

"I don't want to pay more for electricity." (Business Customer)

"Again, without full financial disclosure and long term benefit, it is not justifying added cost." (Residential Customer)

"Still more expensive than conventional. I will chose the cheaper option for the same product." (Residential Customer)

"Not interested in increasing operating expenses, so we can use 'clean' energy.'" (Business Customer)

Several studies that PG&E commissioned prior to 2012 also indicated a strong interest among a significant subset of customers for a green pricing program.

A 2011 survey of residential customers[6] found that 65 percent of respondents said they were "extremely" or "very" interested in a program that allowed them to buy 100 percent of their electricity from renewable sources. This question should not be used to assess level of enrollment as no price was mentioned. It is only intended to indicate interest in the concept. This survey also studied customers' sensitivity to the location (in-state vs. out-of-state) and found that 77 percent of respondents stated willingness to take renewables produced out of state, or stated indifference to location. Two-thirds of customers stated preference for energy produced further away if it is less expensive. Finally, this study examined customers' knowledge of RECs, and found that while only 15 percent of customers state that they had heard of a REC, 94 percent of those that had had neutral or positive comments about them.

Notwithstanding these strong indications of customer interest, PG&E expects that actual customer interest and enrollment will be limited and gradually progress, comparable to the performance of green pricing programs in the rest of the country. Moreover, PG&E expects that other factors that affect adoption of "green" products in general will affect

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6 RDA Group web-based survey sent to 20,000 residential customers; over 2,800 completes, January 2011. Responses weighted to reflect PG&E customer demographics.

enrollment in PG&E's Green Option, such as the state of the economy, disposable income, the number of "early green adopters" in PG&E's service area, and competition with other green products and green charitable options.

Nonetheless, PG&E considers the significant interest of its customers in green programs in general and green pricing in particular, as well as the support from policymakers and leaders in the community, as a broad endorsement of PG&E offering the Green Option to all its bundled electric customers on service-area wide basis. PG&E has designed the Green Option so it is "self-supporting" by participants and thus does not depend on support from non-participating customers regardless of the actual level of enrollment.

PG&E has incorporated these customer insights and findings into the Green Option design by:

- Planning to price the Green Option as efficiently as possible within market constraints, and providing a block purchase option to enable the certainty of a stable monthly price for those customers who prefer this option.
- Providing customers with full information about the costs, purpose, source, and reliability of the product they are purchasing. This information will be provided to customers through PG&E's website, through the Green-e Energy "Product Content Label,"[7] and through program collateral.

C. Program Features

1. A Participant-Funded, Self-Supported Program

The Green Option is voluntary, appealing to a subset of PG&E's customers. All costs associated with the program, including incremental administrative and marketing costs, will be borne by participants of the program. PG&E will be at risk for costs that exceed revenues collected from

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7 The Green-e Energy Code of Conduct and Customer Disclosure Requirements detail the requirements for a Product Content Label, p. 20, http://www.green-e.org/getcert_re_stan.shtml#coc.

voluntary participants over the life of the program, to the extent that the costs are not recovered through rates charged to participating customers.

2. Eligibility – All Bundled Electric Customers

PG&E customer research indicates that the interest in a voluntary renewable energy option exists among all customer classes including residential, SMBs and large commercial customers. For this reason, the program will be available to all PG&E bundled[8] electric customers.

3. Green-e Energy Certified Program and Product

PG&E proposes to seek Green-e Energy certification for the Green Option program and product. Green-e Energy is the nation's leading independent certification and verification program for the voluntary renewable energy market. It is administered by the non-profit Center for Resource Solutions, based in San Francisco, California. Sellers of Green-e Energy certified renewable energy must complete a twice annual review of marketing materials to ensure that they live up to their claims. The certified energy is accounted for and tracked through the annual Green-e Energy verification audit process.

Green-e Energy is the procurement choice for many leading voluntary green energy programs. As of 2010, the Green-e Energy standard was the certification choice of 6 of the top 10 utility green power programs ranked nationally by customer participation rate.[9] Included are the following California utilities' voluntary green power programs: City of Palo Alto Utilities, Sacramento Municipal Utility District, and Silicon Valley Power. The Green-e Energy standard is also a national leader on a volumetric basis, having certified 65 percent of voluntary renewable energy market retail sales in 2010.[10]

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8 Since PG&E is providing RECs for the non-RPS eligible portion of PG&E's generation mix, the offering is only available to PG&E's energy supply customers.

9 NREL "Status and Trends in U.S. Compliance and Voluntary Renewable Energy Certificate Markets (2010 data)," Appendix C, p. 56.

10 Green-e Energy certified more than 23.1 million MWh of retail transactions in 2010, compared to NREL's reported total 2010 voluntary market retail sales of 35.6 million MWh, NREL "Status and Trends in U.S. Compliance and Voluntary Renewable Energy Certificate Markets (2010 data)," Chapter 3.3.2, p. 30.

4. Two Product Options: 100% Green Power and Blocks

PG&E proposes to offer two product options to its customers: a "100% green power" option implemented through a volumetric (per kWh) adder, and a block product of a set amount of kWh. Both options are described below.

a. 100% Green Power

The 100% green power option enables customers to purchase 100 percent green energy by matching the non-Renewables Portfolio Standard (RPS) eligible portion of their electricity use with Green-e Energy certified RECs. This percentage will be determined on an annual basis by a formula for each customer's bill: 100 percent minus the prior year's percentage of delivered RPS-eligible energy to bundled customers. For example, if PG&E delivered 20 percent RPS-eligible energy in the prior year to its bundled electricity customers, then a customer enrolling in the 100% green energy option would have 80 percent of their kWh electricity use in a given month matched with certified Green-e Energy RECs.

b. Block Product Option

Some customers may prefer the certainty and stability of a renewable energy premium that does not vary each month based on kWhs consumed, or may prefer a lower cost way to purchase renewables. Many utilities offer a block product option that can address these needs.[11] PG&E's Green Option will offer a block product option of a denomination to be determined after the price of the product is known. Customers would be able to purchase as many or as few blocks as they wish. Their purchase will not be correlated to their actual electricity usage; that is, a customer may purchase kWh blocks either below or above their average kWh usage. As there will be no promise of matching 100 percent of their electricity usage to green power, there will also be no modifying of the block purchase to accommodate the percentage of RPS-certified energy.

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[11] NREL "Status and Trends in U.S. Compliance and Voluntary Renewable Energy Certificate Markets (2010 Data), Heeter and Bird, October 2011, p. 28.

The price for the block product will be based on the same price per kWh as the volumetric adder product. At the time of enrollment, a customer will be asked to specify how many blocks he or she would like to purchase and the corresponding price for that number of blocks will appear on the customer's monthly energy statement along with the number of kWh blocks purchased.

5. A Blended REC Product With Preference for California Solar, Then California RECs, Then Western Electric Coordinating Council RECs

As described in Section D below, PG&E will work with a third-party partner with proven success and expertise in both REC procurement and green marketing services. One of the ways that PG&E will seek to protect program participants from potentially dramatic price fluctuations for REC commodities from a specific region or technology is to offer a blend of resources from multiple geographies and technologies. Thus, PG&E has designed the Green Option to offer, in priority order, California solar RECs, California RECs of other resource types, and Western Electric Coordinating Council (WECC) RECs. The actual percentages procured will vary based on availability of resources within the overall price target. However, at any given time, the current blend of resources will be on display for customers to see via a "Product Content Label" on the PG&E website and in current marketing materials and customer outreach. These percentages will be kept up-to-date in accordance with Green-e Energy Standard labeling requirements.[12]

In its contract with the third party, PG&E will specify in advance a minimum amount of California solar RECs and California RECs of any resource type that the third party will procure to the extent available at the target price. The determination of the particular percentage will depend upon the price of each type of REC at the time of contracting and procurement.

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12 The Green-e Energy Code of Conduct and Customer Disclosure Requirements detail the requirements for a Product Content Label, p. 20 http://www.green-e.org/getcert_re_stan.shtml#coc

6. No Minimum Enrollment Term

PG&E intends to allow customers to choose to enroll and de-enroll on a monthly basis, with no minimum enrollment term. PG&E does not expect significant customer churn, as typically, utility green pricing programs have low attrition rates. In 2010, utilities reported that an average of 7.0 percent and a median of 4.7 percent of customers dropped out of green pricing programs.[13] In other words, the average life of a utility green pricing program customer is over 14 years (1/attrition rate). PG&E's ClimateSmart™ program also had low attrition, with 4.9 percent of customers' de-enrolling from the program in 2011.

D. Role of Third-Party Partner

1. Utilizing Proven, Cost-Effective, and Specialized Expertise in Utility Green Pricing Programs for Marketing and REC Procurement

Given the widespread growth of green pricing programs in recent years, there are now a number of companies that specialize in the ability to reach potential green pricing program customers in a cost-effective manner. In 2010, for example, 24 percent of utility green pricing programs reported working with a third-party to market their program.[14] The average participation rate among utilities that use a third-party marketing partner is significantly higher than those who do not. In 2006, the last year for which this data is available from NREL, the average participation rate for programs which partnered with third-party marketers was 4.3 percent, compared to 1.4 percent for other utilities.[15]

In the summary of its report "Utility-Marketer Partnerships: An Effective Strategy for Marketing Green Power?" the NREL has concluded, "Strategic partnerships between utilities and marketers can be an effective approach to marketing green power. Partnerships offer the advantage of leveraging the

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13 NREL "Status and Trends in U.S. Compliance and Voluntary Renewable Energy Certificate Markets (2010 Data), Heeter and Bird, October 2011, p. 27.

14 NREL "Status and Trends in U.S. Compliance and Voluntary Renewable Energy Certificate Markets (2010 Data), Heeter and Bird, October 2011, p. 32.

15 NREL "Trends in Utility Green Pricing Programs (2006)", Bird and Kaiser, October 2007, p. 17.

marketer's experience with selling green power and procuring renewable energy supplies, and the utility's reputation and access to customers."[16]

To support the Green Option, PG&E intends to procure both REC and marketing services from a third party partner for all or a portion of its Green Option needs in order to leverage the combined expertise, cost-effectiveness and economies of scale of such an arrangement. A third party which handles many other green pricing programs and manages a large portfolio volume can closely follow renewable energy credit markets. Moreover, a third party with a large portfolio volume is well positioned to manage price, product mix and volumetric risk for the Green Option. PG&E will seek an arrangement with a third-party supplier to provide RECs at a set price or within a stated range of prices.

2. Customer Outreach and Marketing

PG&E will actively manage the work of the third-party RECs and marketing partner. PG&E will seek a partner with expertise and a proven track record in marketing green power programs. PG&E expects that the third party will provide marketing and customer outreach services that include, among other things, training for PG&E's personnel, information and graphical content needed for advertising or billing inserts, program design expertise and consumer education, outreach print materials, and web-based communication.

Notwithstanding the expertise and green pricing experience of the third party, PG&E will direct and manage the third party at all times, and the third party will be accountable for performance, record-keeping and cost reporting. The GreenOption will be offered to PG&E customers directly by PG&E, which will maintain all customer service, billing, and customer-facing relationships with the customers choosing the Green Option.

A recent comprehensive evaluation of PG&E's ClimateSmart program noted that the program's cost of acquiring new customers could have been lowered by the use of particular targeted enrollment tactics. PG&E intends to incorporate the ClimateSmart "lessons learned" and leverage the

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16 NREL "Utility-Marketer Partnerships: An Effective Strategy for Marketing Green Power?", Bird and Brown, April 2006, p. 40.

expertise of its third-party marketing partner in order to better target likely customers and make cost-effective use of marketing resources. By drawing on the third-party's green pricing experience as well as PG&E's own experience, PG&E intends to increase its success and cost-effectiveness in enrolling customers in the Green Option.

3. REC Procurement Services

PG&E's Green Option will use a third party with familiarity and proven experience in procuring RECs in voluntary REC markets in the WECC region, with access to a wide mix of renewable energy products, and a track record soliciting large volumes of RECs for other green pricing programs. The third party should be well positioned to manage price and volumetric risk on behalf of PG&E's customers as well.

4. PG&E Will Procure Renewable Energy Products That Meet the Green-e Energy National Standard

The Green-e Energy National Standard is the leading method used to certify utility voluntary green pricing programs in the U.S. The Green-e Energy standard has been in place for over a decade, was developed in coordination with leading environmental, energy and policy organizations and is kept current to meet the needs of the renewable energy marketplace.

The Green-e Energy National Standard is a separate standard from the California RPS. While the two standards are not exactly the same, the eligibility requirements are sufficiently close. PG&E has chosen to procure products that meet the Green-e Energy National Standard because of its proven track record and wide spread acceptance for voluntary green pricing programs.

a. The Green-e Energy National Standard Defines Eligible Renewables to Include Solar, Wind, Geothermal, Low-Impact Hydro and Various Forms of Biomass

PG&E's Green Option will be sourced from all Green-e Energy eligible technologies. The following types of renewable energy are eligible to supply Green-e Energy Certified products:[17]

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17 Green-e Energy National Standard Version 2.1, Section II A., pp. 2 and 3.

- Solar Electric
- Wind
- Geothermal
- Hydropower[18]
- Biomass[19]

Only new or repowered renewables can meet the Green-e Energy Standard. In order to be eligible for a given year, the facility must begin operations or have been repowered within 15 years of the delivery year.[20] In addition, in order for generation to be counted in a given year, it must be generated in a timeframe in accordance with the Green-e Energy Standard. Green-e Energy Certified products must be generated either during the calendar year in which the product is sold to customers or during the first three months of the following year or the last six months of the prior calendar year.[21]

b. REC Procurement for the Green Option Will Be Audited and Verified by Green-e Energy Each Year of the Program

As part of Green-e Energy certification, program participants must submit audited supply and sales information. The Green-e Energy program requires that utility green pricing programs undergo an independent annual audit to demonstrate compliance with Green-e Energy's rigorous consumer-protection standard and environmental standards.[22] The renewable energy that Green-e Energy certifies goes through a thorough verification process to ensure that it is:[23]

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18 Must be from new generation capacity on a non-impoundment or new generation capacity on an existing impoundment that is certified by the Low Impact Hydropower Institute or consists of a turbine in a pipeline or a turbine in an irrigation canal.

19 Solid, liquid, and gaseous forms of Biomass from the following fuels are eligible: all woody waste, all agricultural crops or waste, all animal and other organic waste, all energy crops, landfill gas and wastewater methane. Municipal solid waste is eligible if it is first converted to a clean burning fuel that is then used to generate electricity (subject to various standards).

20 Green-e Energy National Standard Version 2.1, Section II E. p. 5.

21 Green-e Energy National Standard Version 2.1, Section III B. p. 7.

22 2010 Green-e Verification Report, p. 4.

23 Green-e Energy National Standard, Version 2.1.

- From an eligible resource – such as solar, wind, geothermal, biomass, or "low impact" hydropower, as further described below.
- New – from an eligible project beginning operation or repowered after the date indicated in the governing standard.
- Not double-counted – certified renewable energy sold to a consumer cannot also be counted toward a state's renewable energy goal or RPS. Renewable energy must only be attributed to the individual customer purchasing it.

5. PG&E Will Procure a Blend of Renewable Resources for the Green Option

PG&E will procure Green-e Energy eligible products from a blend of renewable energy technology resources in the WECC geographic region: California solar, California renewables of any type, and non-California WECC renewables of any type. The specific percent allocation to each technology and geography may change over time in order to mitigate the impacts of changing renewable resource prices and provide a stable price product to customers.

Minimum amounts of California solar and California resources of any type will be specified in the contract with the third party. PG&E market research has shown that customers are largely interested in renewable energy credits if the price is lower, irrespective of whether the RECs are from in-state or from out-of-state.[24]

PG&E's selected third-party partner will manage price and volumetric risk associated with the program by procuring a mix of products with respect to both renewable energy technologies and location. Voluntary REC prices will vary with the location (California vs. WECC) of the generator. Procuring RECs from a wider region, such as throughout the WECC geographic region will help manage price and product mix risk. Although such risks can be further mitigated by procuring from nationally sourced RECs, PG&E believes restricting its Green Option product procurement to within the WECC region strikes a reasonable balance between price and product mix risk and

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24 See 2011 Green Option research described in Section B, 2 of this chapter.

anticipated customer appeal. In addition, procuring RECs from within the WECC region allows PG&E to identify the product as Green-e Energy Certified Renewable Energy. PG&E also believes that procuring from a mix of renewable technologies is necessary to manage price risk.

6. PG&E Will Procure Sufficient Quantities of RECs to Meet Green Option Enrollment Needs

PG&E will procure sufficient quantities of RECs to meet the procurement needs for each year of the Green Option. PG&E will estimate program enrollment periodically to determine ongoing procurement needs. PG&E will work closely with its third-party program partner to update its enrollment projections as new information becomes available. PG&E will specify to its third-party partner a bandwidth around its enrollment quantity in which actual procurement of product must range between. At the end of each year there will be true-up period to adjust for any shortfall or excess of product procured.

The procurement needs of customers signing up for 100% green energy will be determined by computing the difference between PG&E's prior year percentage delivery of RPS-certified power to all retail customers and 100 percent. The procurement needs of customers signing up for block procurement will be based on those customers' aggregate commitments. PG&E will follow Green-e Energy protocols to meet the program's procurement requirements. In addition to the facility eligibility requirements described above, Green-e Energy Certified products must be generated either during the calendar year in which the product is sold to customers or during the first three months of the following year or the last six months of the prior calendar year.[25]

7. Market Outlook

Based on currently observed REC prices within the WECC geographic region, PG&E believes it can achieve a program price target comparable to other utility green pricing programs for the program launch.

While current prices cannot be relied on as an indication of future prices, PG&E expects price fluctuations can be managed by procuring a broad mix

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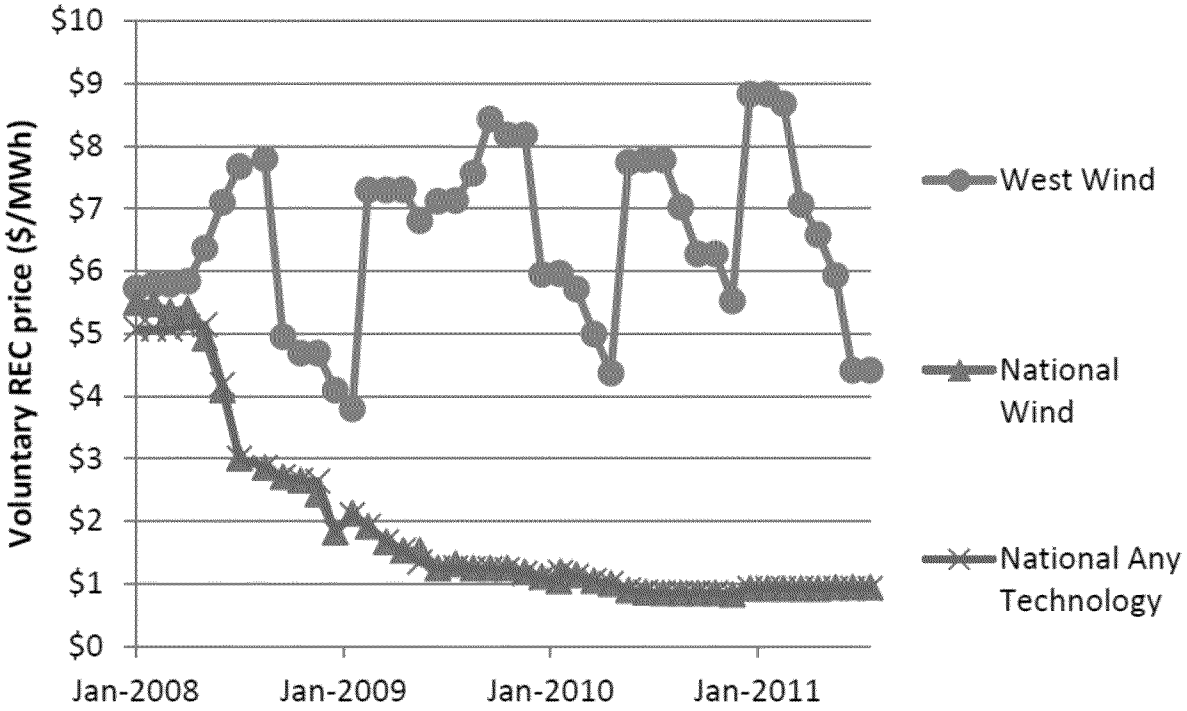
25 Green-e Energy National Standard Version 2.1, Section III B, p. 7.

of products by technology and throughout the WECC geographic region. Figure 2-1 below, excerpted from the 2010 NREL "Status and Trends in U.S. Compliance and Voluntary Renewable Energy Certificate Markets (2010 data)" report[26] shows voluntary market REC price trends over the last three years for both nationally sourced RECs and RECs from the West. Voluntary Wind REC prices in the West, while higher than national prices, have fluctuated between $4 to $9/MWh from 2008-2011.

FIGURE 2-1
PACIFIC GAS AND ELECTRIC COMPANY
VOLUNTARY REC PRICES, JANUARY 2008-AUGUST 2011



Research and discussions with voluntary REC providers indicate that projected forward prices for California solar could be in the $5 to $10/MWh range over the next three years, and that forward prices for WECC RECs of any type could be in the $2 to $10/MWh range.

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26 NREL "Status and Trends in U.S. Compliance and Voluntary Renewable Energy Certificate Markets (2010 data)," Figure 16, p. 33. Sources: Evolution Market 2007; Spectrum Group 2011.

8. Procurement for the Program Will Not Impact PG&E's RPS Procurement and Compliance Obligations

PG&E's RPS procurement will be entirely separate from its procurement under the Green Option program and will not overlap or impact PG&E's RPS procurement activities. All aspects of the Green Option program will be managed separately from PG&E's ongoing RPS compliance. This separation will apply to procurement origination, payment administration, product tracking and program verification.[27] In addition, the Green Option program will ensure that RECs procured for customers cannot also be used by any other program, including compliance with PG&E's RPS targets. The only overlap between the two programs will be annual coordination to determine the appropriate voluntary procurement target, since the Green Option program will purchase RECs for the non-RPS eligible portion of delivered energy (or block options). In other words, procurement amounts are based on the difference between PG&E's prior year percentage delivery of RPS-certified power and 100% clean energy.

Given California's RPS procurement rules, PG&E's proposal to offer a REC-based Green Option to its customers will not significantly impact PG&E's ability to meet its RPS requirements. Any possible impact is further reduced by the scale of the Green Option program compared to the RPS procurement volumes.

Finally, utilizing a third party for marketing and procurement of the proposed Green Option program will further ensure that the two programs will remain separate and independent for cost accounting and reporting purposes.

E. Implementation

1. Information Technology (IT) and Billing System Enhancements

In addition to the third-party marketing and RECs procurement partner discussed above, PG&E will make modifications to its internal billing

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27 Program verification will be conducted annually by Green-e through its annual Verification Process Audit. The Verification Process Audit requires providers of retail and wholesale Green-e certified renewable energy products to complete an annual third-party verification of their renewable energy purchases and sales. (http://www.green-e.org/getcert_re_veri.shtml#vpa.)

systems, interfaces, and website in order to facilitate customer enrollment and de-enrollment in the program, billing calculation and presentment, and presentment of green rate options and pricing. PG&E's website will include detailed program information as well as customized enrollment cost estimates based on a customer's historical average electricity usage. Customers will be provided with simple enrollment options via the website and will be able to enroll immediately through the website or by calling a Customer Service Representative (CSR). These start-up costs will be recovered over the program time-frame only from participating customers.

2. Customer Operations Enhancements

PG&E will facilitate a customer-service oriented end-to-end customer experience with the program. A subset of call center CSRs will be trained in depth on the program and will be capable of managing customer inquiries, enrollments, or de-enrollments. Customers will be able to enroll via any of three channels: website, call center, or hardcopy (bill inserts or other printed material). A brief description of the process for each is provided here:

- *Website*: Program information will be provided through both a signed-in portion of the website, and a non-signed in portion. The non-signed in portion will provide full program details as well as pricing for the 100% green power and block option products. After signing-in, customers will be authenticated for eligibility and, in addition to the general program information, will be able to view customized enrollment cost estimations based on their historical usage. When a customer completes the enrollment form, the information will be immediately sent to the billing system for automatic enrollment and generation of the welcome materials.

- *Call Center*: PG&E will work with its third-party marketing partner to determine the most cost-effective strategies for call center enrollment, including working with CSRs and/or a service enrollment company. A separate PG&E toll-free number will be established for the Green Option, such that customers can speak with a trained CSR about the program and enroll. CSRs will be provided with call scripts to answer questions and enroll customers. From the general queue, when a

customer who is already enrolled in the program seeks to close an account and re-open in a different location within our service territory, the CSR will be trained to ask if the customer would like to transfer his/her green tariff enrollment to the new location.

- *Hardcopy* (bill inserts or other printed material): When a customer mails a completed hardcopy enrollment form, a CSR will input this information into the billing system for immediate enrollment into the program.

PG&E will store information in the customer record about their program enrollment, including the channel through which he/she enrolled, date of enrollment, and first effective billing cycle date. After enrollment, PG&E will send customers welcome materials with information about renewable energy and the projects that the customer is supporting. PG&E will share program updates and news periodically with customers throughout their enrollment. If a customer de-enrolls from the program, the customer will receive a confirmation letter to that effect.

Whenever possible, PG&E will use email for customer communications in order to reduce costs, minimize environmental impact, and appeal to this subset of customers.

3. Reporting Capabilities

PG&E will implement a wide range of accounting, tracking and reporting capabilities for the Green Option. These fall generally in three categories:

a. Revenue and Cost Reporting – PG&E will establish a new memorandum account, the Green Option Memorandum Account (GOMA), which will track program costs (including the cost of RECs, administration, and marketing) and revenues collected from participants.

b. Enrollment Reporting – This will include reports on the number of customers enrolled by day, week, month, and program-to-date; de-enrollments and drop-offs, enrollment by customer class, and kWhs enrolled in the program.

c. Marketing Campaign Tracking – PG&E will implement new campaign tracking records for this program such that detailed information will be available for reporting on each outreach campaign. This will include

information about target audience, messaging, and channel, as well as results and cost-effectiveness for each campaign.

F. Program Costs, Rate and Bill Impacts to Participants

1. Program Costs

The following are projected internal administrative and marketing costs for the first five years of the program. The variable costs are illustrative only and will depend on actual program enrollment. The start-up costs are not dependent on actual program enrollment, but also are estimates only. Because the Green Option is totally supported by voluntary participants, PG&E will remain at risk throughout the program for recovery of any undercollection resulting from costs in excess of revenues collected from participating customers over the life of the program, to the extent that the costs are not recovered through rates charged to participating customers.

TABLE 2-2
PACIFIC GAS AND ELECTRIC COMPANY
ESTIMATED INTERNAL GREEN OPTION COSTS: YEARS 1-5(a)

Line No.	Estimated Internal Admin Costs	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
1	Program Mgmt & Marketing Labor	$56,250	$225,000	$231,750	$238,703	$122,932	$126,620
2	Green-e Energy Certification Fee		13,500	13,500	13,500	13,500	13,500
3	Contract Support	45,000	15,000	15,000	15,000	15,000	15,000
4	Customer Care Set-Up	24,000					
5	Customer Care Operations		48,000	45,000	48,000	24,000	24,000
6	Reporting Set-Up	123,000					
7	IT/Billing System Enhancements	943,000					
8	Total Internal Admin	$1,191,250	$301,500	$305,250	$315,203	$175,432	$179,120

(a) The Customer Care Operations costs shown in this table are variable with enrollment. While PG&E cannot know with certainty what percent of its customers will participate in this program, for purposes of this internal cost forecast PG&E assumes that approximately 30,000 customers, or 0.68 percent of eligible customers enroll in the program by the end of the third year, at which point there is a stabilization in the number of customers. While this is slightly lower than the national median of 1.0 percent, as shown in Table 2-3, the average age of national programs in the NREL study is about eight years, giving them more time to achieve this level of enrollment.

In addition to these costs, PG&E also will incur expenses through the third-party partner for marketing services and REC procurement services, including the cost of managing REC price and volume fluctuations. These costs will vary based on contract terms and actual REC prices and marketing costs, but PG&E will only include actual incurred contract costs in the GOMA. If for any reason (e.g., termination of the third-party contract) PG&E were required to take on the procurement function, PG&E would include its REC procurement costs including associated internal costs with its Green Option program costs in the GOMA.

The majority of program costs, such as the cost of RECs and marketing services, are directly variable with enrollment. When enrollment is low, these costs are low. When enrollment is higher, these costs are higher. In this way, much of the financial risk of enrollment uncertainly is borne by the third party and has little impact on the program's financials directly. The only costs that are not fully variable with enrollment are the costs incurred by PG&E in the implementation and ongoing management of the program, as shown in Table 2-2 above.

PG&E will not know the estimated costs of the RECs and the third-party marketing services until contract negotiations are complete with the third party and any contract costs that vary with REC prices in the marketplace are known. For benchmarking purposes, the ClimateSmart Comprehensive Evaluation showed tactics which are often used by utility green pricing programs, such as bill inserts, direct mail, and call center challenges, with acquisition costs in the $25 to $109 per customer range. PG&E will work with its third-party marketing partner to determine the best and most cost-effective enrollment channels for marketing and acquiring customers for the Green Option.

Although PG&E does not expect frequent or dramatic price changes in the costs of RECs required to support the Green Option, it is possible that at some point market conditions, REC costs, or customer enrollment may change such that a change in the price of the product is warranted or termination of the Green Option rate is necessary. With 90 days' prior notice to participating customers and the Commission, PG&E will be authorized: (a) to vary Green Option pricing up or down but not to exceed

2 cents/kWh above the otherwise applicable bundled rate of the customer; (b) to cap Green Option enrollment; or (c) to terminate the Green Option rate schedule through a Tier 1 advice letter filing.

2. Rate and Pricing to Participants

While the exact price of the Green Option will not be known until contracting with third party is complete, we expect that it will be in line with other utility green pricing programs around the country and in northern California. As shown in Table 2-3 below, other green pricing programs price in the range of 1 to 2 cents per kWh. PG&E intends to manage the program such that the initial price premium is a modest premium, with the flexibility to vary the price up or down but not to exceed 2 cents/kWh based on market conditions, customer participation and costs.

TABLE 2-3
PACIFIC GAS AND ELECTRIC COMPANY
UTILITY GREEN POWER PROGRAM DATA

Line No.	Utility Green Power Program	Retail Price Per kWh	Customer Participation Rate	% of Load
1	**National Programs**			
2	> 860 utilities	1.67 cents Avg. 1.5 cents Median	1.0% Median	0.3% Median
3	**Select Northern California Programs**			
4	PaloAltoGreen	1.5 cents	21.5% (#1)	7.4% (#4)
5	SMUD SACRAMENTO MUNICIPAL UTILITY DISTRICT The Power To Do More.®	1 cent	8.7% (#5)	3.9% (#9)
6	Silicon Valley Power CITY OF SANTA CLARA	1.5 cents	7.8% (#7)	–

Sources: National data from NREL "Status and Trends in U.S. Compliance and Voluntary Renewable Energy Certificate Markets (2010 Data), Heeter and Bird, October 2011, pp. 22, 26 and 28. Northern CA data from program websites and NREL Top 10 lists: http://apps3.eere.energy.gov/greenpower/resources/tables/topten.shtml

a. Sample Bill Impact

For illustrative purposes, PG&E has calculated a sample bill impact using a sample rate of 1.5 cents/kWh for the Green Option. For a

customer enrolling in the 100% green power option, please see Table 2-4 below.

TABLE 2-4
PACIFIC GAS AND ELECTRIC COMPANY
EXAMPLE: BILL IMPACT FOR SAMPLE CUSTOMER ENROLLED IN VOLUMETRIC (PER KWH) ADDER PRODUCT

Line No.		
1	Sample Monthly Electricity Usage	500 kWh(a)
2	% RPS-Certified in Prior Year Delivery	20%
3	Non-RPS-Certified Energy	400 kWh (80% x 500 kWh)
4	Sample Rate	1.5 cents/kWh
5	Sample Bill Impact	$6/month This would increase the average residential electric bill of a customer in Territory X from $74.76 to $80.76, an increase of 8.0%.

(a) At the end of 2011, PG&E's residential users used 540 kWh per month on average. The average for PG&E's ClimateSmart program customers was 450 kWh per month. For these purposes we are assuming a number in between, 500 kWh per month.

For a customer enrolling in the block product option, if the product premium were 1.5 cents/kWh, then the price of a 250-kWh block would be $3.75. Customers will be able to purchase as many blocks as they would like. The charge presented on their monthly energy statement will correspond to the price of a block times the number of blocks purchased.

G. Conclusion

In conclusion, PG&E proposes to introduce a new renewable energy option for its customers that will follow the best practices of other leading utility green pricing programs, take into account the lessons learned from PG&E's own ClimateSmart program, and meet the stated needs of PG&E's customers for more renewable energy options.

PG&E proposes a program that will be:

- Participant funded
- Offered as a voluntary option to all bundled customers

- Use Green-e Energy certified RECs from California and the WECC region
- Provide two product options: 100% green power and blocks
- Require no minimum enrollment term

Finally, PG&E will work with a reputable third-party partner with expertise in utility green pricing programs for marketing services and REC procurement services.

PACIFIC GAS AND ELECTRIC COMPANY

CHAPTER 3

PROGRAM RATES AND TARIFFS

PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 3
PROGRAM RATES AND TARIFFS

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PACIFIC GAS AND ELECTRIC COMPANY
CHAPTER 3
PROGRAM RATES AND TARIFFS

A. Introduction

The purpose of this chapter is to present Pacific Gas and Electric Company's (PG&E) proposed rate design for the Green Option price premium added to the rates and charged to participating bundled electricity customers who enroll in the program. In addition, this chapter describes the Green Option Memorandum Account (GOMA) that will record Green Option costs and revenues to ensure that the Green Option costs are recovered solely from participating customers over time and not other customers, and that PG&E does not earn a profit or any incentive payment under the program. PG&E plans to manage the Green Option such that the initial price premium at the start of the program is at a modest premium above the otherwise applicable bundled rate, but with the flexibility to vary the price not to exceed 2 cents/kilowatt-hour (kWh) based on market conditions, customer participation and costs. PG&E proposes to establish a new Green Option rate and tariff to collect the Green Option premium from program participants. PG&E also proposes to establish the GOMA to track and record all costs and revenues associated with the Green Option Program.

B. New Green Option Program Rate

The Green Option Program costs presented in Chapter 2 reflect a scope of work that has not been requested nor adopted by the Commission in any of PG&E's other proceedings. PG&E seeks authorization to recover all costs associated with the Green Option Program through the Green Option rate charged to participating customers.

As discussed above, PG&E intends to manage the program such that the initial price premium at the start of the program is at a modest premium, but with the flexibility to vary the price not to exceed 2 cents/kWh based on market conditions, customer participation and costs. PG&E will file a Tier 1 Advice Letter to establish the initial Green Option rate prior to commencement of the program. At any time thereafter, PG&E proposes to file a Tier 1 Advice Letter to change the Green Option rate periodically or to close, cap

enrollment, or cancel the Green Option Program, with a 90-day customer notice prior to the effective date of the revised rate or closed, capped or cancelled program.

C. Green Option Memorandum Account

PG&E proposes to establish the GOMA to track and record the actual costs and revenues associated with the Green Option Program. Every five years, or earlier if PG&E terminates the Green Option, PG&E will file a Tier 2 advice letter for California Public Utilities Commission (Commission or CPUC) approval of the disposition of any excess revenues PG&E may have collected above the actual costs of the Green Option during the program.

PG&E will remain at risk throughout the program for recovery of any undercollection resulting from costs in excess of revenues collected from participating customers over the life of the program, to the extent that the costs are not recovered through rates charged to participating customers. PG&E will not earn a profit or any incentive payment under the program.

The GOMA will record the costs of the program, including internal fixed and administrative, operating and maintenance costs, as well as the external costs of Renewable Energy Credits (REC) and marketing under contracts with third parties. Entries into the GOMA will include only the actual costs of the program, including start-up costs and ongoing operating costs such as the cost of RECs and marketing, and revenues from participating customers.

D. Conclusion

PG&E requests that the Commission find that its proposals presented in this testimony are reasonable and issue the following Orders:

1) Approve the establishment of the Green Option rate to be collected from all Green Option Program participants.
2) Approve PG&E's proposal to file a Tier 1 Advice Letter to establish the initial Green Option rate.
3) Approve PG&E's proposal to change the Green Option rate periodically or to close, cap or cancel the program via a Tier 1 Advice Letter with 90-day customer notice prior to the effective date of the revised rate or closed, capped or cancelled program.

4) Approve the establishment of a new memorandum account, GOMA, to track and record all costs and revenues associated with the Green Option Program.

5) Approve PG&E's proposal to review the balance in the GOMA every five years and submit a Tier 2 advice letter to the Commission for disposition of any overcollection that may exist.

PACIFIC GAS AND ELECTRIC COMPANY

APPENDIX A

STATEMENTS OF QUALIFICATIONS

PACIFIC GAS AND ELECTRIC COMPANY
STATEMENT OF QUALIFICATIONS OF Redacted

Q 1 Please state your name and business address.

A 1 My name is Redacted and my business address is Pacific Gas and Electric Company, 77 Beale Street, San Francisco, California.

Q 2 Briefly describe your responsibilities at Pacific Gas and Electric Company (PG&E).

A 2 I am a principal in Redacted PG&E's Regulatory Relations organization, focused on case work related to the Renewables Portfolio Standard CPUC proceeding.

Q 3 Please summarize your educational and professional background.

A 3 I earned a bachelors degree in business administration at the Redacted Redacted. In Redac I earned a masters degree in business administration from Redacted Redacted

From Redacted I was an auditor at Redacted I joined PG&E in Redac as a Redacted Redacted group focused on Securities and Exchange Commission and Federal Energy Regulatory Commission reporting. In Redac I joined the Redacted, and was a senior analyst, senior regulatory case manager, and then principal in this group, where I focused primarily on renewable energy.

Q 4 What is the purpose of your testimony?

A 4 I am sponsoring the following testimony submitted in support of the Application of PG&E to Establish a Green Option Tariff:

- Chapter 3, "ProgramRates and Tariffs."

Q 5 Does this conclude your statement of qualifications?

A 5 Yes, it does.

PACIFIC GAS AND ELECTRIC COMPANY
STATEMENT OF QUALIFICATIONS OF Redacted

Q 1 Please state your name and business address.

A 1 My name is Redacted and my business address is Pacific Gas and Electric Company, 245 Market Street, San Francisco, California.

Q 2 Briefly describe your responsibilities at Pacific Gas and Electric Company (PG&E).

A 2 I am a principal product manager in the Redacted Redacted organization. In this organization, I manage "green" and "conservation"—oriented programs, such as the Redacted Redacted, and the product development of this proposed Green Option.

Q 3 Please summarize your educational and professional background.

A 3 I received a bachelor of science degree in business administration from Redacted and a master of business administration degree from the Redacted. From Redacted, I worked in marketing and product management roles in the wireless telecommunications industry: from Redacted, as a marketing manager for Redacted; from Redacted, as a senior product manager for Redacted; and from Redacted, as director of partner programs for Redacted. From Redacted, I was a partner in a sustainability consulting firm called Redacted. I joined PG&E in Redac as a principal product manager.

From Redacted I served as the communications manager for the northern California chapter of the Redacted Redacted

Q 4 What is the purpose of your testimony?

A 4 I am sponsoring the following testimony submitted in support of the Application of PG&E to Establish a Green Option Tariff:

- Chapter 2, "Program Description":
  - Sections A, B, C.1-3, C.4b, C.6, D.1-2, E, F, and G.

Q 5 Does this conclude your statement of qualifications?

A 5 Yes, it does.

PACIFIC GAS AND ELECTRIC COMPANY
STATEMENT OF QUALIFICATIONS OF STEVEN MALNIGHT

Q 1 Please state your name and business address.

A 1 My name is Steven Malnight, and my business address is Pacific Gas and Electric Company, 245 Market Street, San Francisco, California.

Q 2 Briefly describe your responsibilities at Pacific Gas and Electric Company (PG&E).

A 2 I am the Vice President responsible for PG&E's expanding portfolio of demand-side customer solution offerings, which encompass energy efficiency, demand response, time-variable electric pricing options, automated energy management, electric vehicles and on-site customer generation.

Q 3 Please summarize your educational and professional background.

A 3 I graduated from University of Notre Dame in 1994 with a bachelor of science degree in chemical engineering and from the Tuck School of Business at Dartmouth in 2002 with a master of business administration.

From 1994 to 2000, I held various positions in engineering, procurement, and sales with Air Products and Chemicals, Inc. I began to work with PG&E in 2002 as a member of the company's MBA Leadership Program. Since then, I have held various leadership roles at the director level in the company's Customer Care and Finance functions and as special assistant to the Chairman and CEO. In 2009, I joined Energy Procurement as Vice President of Renewable Energy, and in August 2010, I joined Customer Care as Vice President of Customer Energy Solutions.

Q 4 What is the purpose of your testimony?

A 4 I am sponsoring the following testimony submitted in support of the Application of PG&E to Establish a Green Option Tariff:

- Chapter 1, "Introduction and Policy."

Q 5 Does this conclude your statement of qualifications?

A 5 Yes, it does.

PACIFIC GAS AND ELECTRIC COMPANY
STATEMENT OF QUALIFICATIONS OF Redacted

Q 1 Please state your name and business address.

A 1 My name is Redacted and my business address is Pacific Gas and Electric Company, 245 Market Street, San Francisco, California.

Q 2 Briefly describe your responsibilities at Pacific Gas and Electric Company (PG&E).

A 2 I am a principal in PG&E's Redacted Redacted organization, which procures forward power and resource development contracts on behalf of PG&E's retail load. I am responsible for energy procurement policy for renewable energy resources and have extensive experience in the CPUC proceeding implementing Renewable Energy Credits for the Renewable Portfolio Standard. In addition, I have served for the past Re years, including as chair for the first Red years, on the governing body of the Redacted Redacted, during which time I have worked on numerous policy matters through many stages of Redacted development from its pre-operational phase to its current state of operations supporting renewable energy tracking throughout the western grid.

Q 3 Please summarize your educational and professional background.

A 3 I earned a bachelor of science degree in mechanical engineering from Redacted. I earned a master's degree in business administration from Redacted. I joined PG&E in Redac, gaining increasing responsibility on matters relating to qualifying facilities and renewable energy resources.

Q 4 What is the purpose of your testimony?

A 4 I am sponsoring the following testimony submitted in support of the Application of PG&E to Establish a Green Option Tariff:

- Chapter 2, "Program Description":
  - Sections C.4a, C.5 and D.3-8.

Q 5 Does this conclude your statement of qualifications?

A 5 Yes, it does.