BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Application of San Diego Gas & Electric Company (U902E) for Authority to Implement Optional Pilot Program to Increase Customer Access to Solar Generated Electricity.	Application 12-01-008 (Filed January 17, 2012)
And Application of Pacific Gas & Electric to Establish a Green Option Tariff.	Application 12-04-020 (Filed April 24, 2012)

CLEAN COALITION'S REPLY COMMENTS TO OPENING COMMENTS AND TESTIMONY BY SAN DIEGO GAS & ELECTRIC COMPANY AND PACIFIC GAS & ELECTRIC COMPANY

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CLEAN COALITION'S REPLY COMMENTS TO OPENING COMMENTS AND TESTIMONY BY SAN DIEGO GAS & ELECTRIC COMPANY AND PACIFIC GAS & ELECTRIC COMPANY

The Clean Coalition is a California-based nonprofit organization whose mission is to accelerate the transition to local energy systems through innovative policies and programs that deliver cost-effective renewable energy, strengthen local economies, foster environmental sustainability, and provide energy resilience. To achieve this mission, the Clean Coalition promotes proven best practices, including the expansion of Wholesale Distributed Generation (WDG) connected to the distribution grid and serving local load. The Clean Coalition drives policy innovation to remove barriers to the procurement and interconnection of WDG projects, integrated with Intelligent Grid (IG) solutions such as demand response, energy storage, and advanced inverters. The Clean Coalition is active in numerous proceedings before the California Public Utilities Commission, the California Energy Commission, and other state and federal agencies throughout the United States. The Clean Coalition also designs and implements WDG and IG programs for utilities and state and local governments.

The Clean Coalition makes the following comments in response to the opening comments and testimony of Pacific Gas & Electric Company (PG&E) and San Diego Gas & Electric Company (SDG&E):

- In addition to protecting nonparticipating ratepayers from cost-shifting, the legislature intended for GTSR participants to "access the benefits of onsite generation". These benefits should include the direct financial value of onsite generation, such as long-term price certainty benefits of

GTSR renewable generation contracts and the locational value of distributed generation projects.

- The Clean Coalition recommends that utility methodologies for selecting and valuing projects explicitly include the locational value of projects, which will help utilities maintain the balance between their requirements to procure energy from projects located near enrolled participants and in disadvantaged communities with their need to keep program portfolio costs at levels low enough to attract high customer participation.
- The Clean Coalition urges PG&E to provide more information through this proceeding about its GTSR program procurement processes, including its methodology for selecting projects.
- The Clean Coalition agrees with Vote Solar that this proceeding should include the development and approval of a community renewables program for each participating utility to ensure that each utility meets statutory requirements.

In addition to protecting nonparticipating ratepayers from cost-shifting, the legislature intended for GTSR participants to "access the benefits of onsite generation"[1]. These benefits should include the direct financial benefits of onsite generation, not just the environmental benefits. In addition to the specific requirements of SB 43 with respect to bill credits and debits to achieve nonparticipant ratepayer indifference, the statute also provides, "A participating customer's rates shall be debited or credited with any other commission-approved costs or values applicable to the eligible renewable energy resources contained in a participating utility's green tariff shared renewables program's portfolio."[2]

[1] Public Utilities Code Chapter 7.6, Section 2831(b)
[2] Public Utilities Code Chapter 7.6, Section 2831(m)

In collaboration with Pacific Gas & Electric, the Clean Coalition is currently performing a detailed analysis of the economic and environmental impacts of a high distributed generation and intelligent grid project for the underserved Bayview-Hunters Point area of San Francisco. The Hunters Point Project, named after the substation that serves both the Bayview and Hunters Point areas, will demonstrate that clean local energy can fulfill at least 25% of total electric energy consumption in the area. The Hunters Point Project will advance the distribution power grid to dynamically support large amounts of clean local energy while maintaining or improving power quality, security, and reliability.

As part of the Hunters Point Project Analysis,[3] the Clean Coalition found that the wholesale contract cost of electricity from 500 kW commercial scale distributed solar photovoltaic systems (PV) is at parity with new combined cycle natural gas (CCNG) plants when costs are analyzed based upon the adopted California Energy Commission Cost of Generation model for systems commencing delivery to the area in 2015.[4]

[3] The Clean Coalition's Hunters Point Project Benefits Analysis is available at http://www.clean-coalition.org/site/wp-content/uploads/2013/12/HPP-Benefits-Analysis-19_jb-20-Dec-2013.pdf.

[4] The Clean Coalition's Hunters Point Project Benefits Analysis

Table 1: Levelized Cost of Energy Comparison of Generators Commencing Delivery in 2015

LCOE Cost Comparison[5]		
Levelized Cost of Energy	**CCNG**	**Photovoltaic**
	$155/MWh (15.5¢/kWh)	**$154/MWh** (15.4¢/kWh)

Summary of Levelized Cost Components				
Combined Cycle - 2 CTs With Duct Firing 550 MW			**Photovoltaic**	
Merchant Fossil	**Mid-Cost Case**		**Mid-Cost Case**	
Start Year = 2015 (2015 Dollars)	$/kW-Yr	$/MWh	$/kW-Yr	$/MWh
Capital & Financing - Construction	$121.98	$26.38	$274.77	$205.78
Insurance	$8.20	$1.77	$13.17	$9.86
Ad Valorem Costs	$11.94	$2.58	$3.89	$2.92
Fixed O&M	$45.31	$9.80	$37.01	$27.71
Corporate Taxes (w/Credits)	$40.25	$8.70	($123.16)	($92.24)
Fixed Costs	**$227.69**	**$49.23**	**$205.69**	**$154.05**
Fuel & GHG Emissions Costs	$343.09	$74.19	$0.00	$0.00
Variable O&M	$3.93	$0.85	$0.00	$0.00
Variable Costs	**$347.02**	**$75.04**	**$0.00**	**$0.00**
Total Levelized Costs w/o Transmission	**$574.71**	**$124.27**	**$205.69**	**$154.05**
Transmission Service Costs	$142.00	$30.70	$0.00	$0.00
Total Levelized Costs with Transmission	**$716.71**	**$154.97**	**$205.69**	**$154.05**

Source: Clean Coalition, 2013

I. LONG-TERM PRICE CERTAINTY BENEFITS OF GTSR CONTRACTS

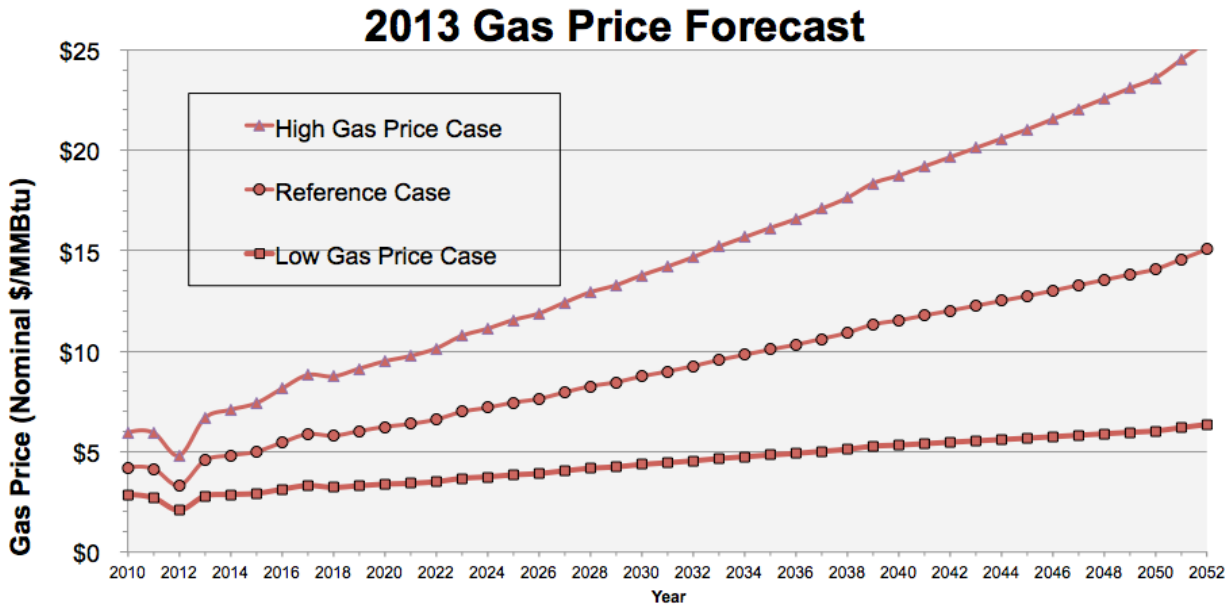
Program participant bill accounting should reflect the price certainty benefits of a long-term contract for renewable energy. SB 43 explicitly includes "energy independence"[6] as a benefit of onsite generation, which in the context of California electricity resources implies avoided exposure to projected increases in natural gas prices and greenhouse gas (GHG) emissions costs. As the Hunters

[5] CEC 2013 Cost of Generation Model v.3.91 Reference case (mid price) inputs: Merchant Plant, CCNG 550 MW (w/duct firing), PG&E gas price forecast, BAAQMD and GHG emissions price included, Bay Area average transmission charges and losses to Substation.

[6] Public Utilities Code Chapter 7.6, Section 2831(e)

Point Analysis chart above shows, fuel and emissions costs represent 50% of the levelized delivered cost of energy from new conventional facilities, and would comprise a large share of future costs from existing facilities. The chart below shows that the California Energy Commission projects that gas prices are expected to double between 2015 and 2035. In this context, it is important to compare the cost to ratepayers of GSTR and non-GTSR participants based on the levelized cost over comparable applicable contract periods, which are typically 20 years for solar PPAs, and to include appropriate price hedge value realized through such long term fixed price contracts.

Figure 1: California Gas Price Forecast



Source: California Energy Commission Integrated Energy Policy Report 2013

II. LOCATIONAL VALUE OF DISTRIBUTED GENERATION PROJECTS

a. Assessing Locational Value of Projects

Assembly Bill (AB) 327, signed in 2013, requires the investor owned utilities to "submit a distributed resources plan proposal to identify optimal locations for the deployment of distributed resources" by July 1, 2015. In developing these plans, the utilities are required to "evaluate locational benefits and costs of distributed resources located on the distribution system. This evaluation shall be based on reductions or increases in local generation capacity needs, avoided or increased investments in distribution infrastructure, safety benefits, reliability benefits, and any other savings the distributed resources provides to the electric grid or costs to ratepayers of the electrical corporation."[7]

Distributed generation has significant locational value to ratepayers, including avoided transmission costs, avoided line losses, and avoided transmission and distribution upgrade costs. For example, the Long Island Power Authority (LIPA) has recently proposed offering a 7¢/kWh premium to 40 MW of appropriately sited solar DG facilities to encourage locational capacity sufficient to avoid $84,000,000 in new transmission costs that would otherwise be incurred, resulting in a net savings of $60,000,000. LIPA's guidance states: "The rate will be a fixed price expressed in $/kWh to the nearest $0.0000 for 20 years applicable to all projects as determined by the bidding process defined below, plus a premium of $0.070 per kWh paid to projects connected to substations east of the Canal Substation on the South Fork of Long Island."[8] As part of the Hunters Point Project Analysis,[9] the Clean Coalition found that over the course of 20 years, each additional 10 MW of local distributed generation will avoid $6,100,000 in new transmission capacity costs, $7,580,000 in Transmission Access Charges, and $2,367,000 in line losses.

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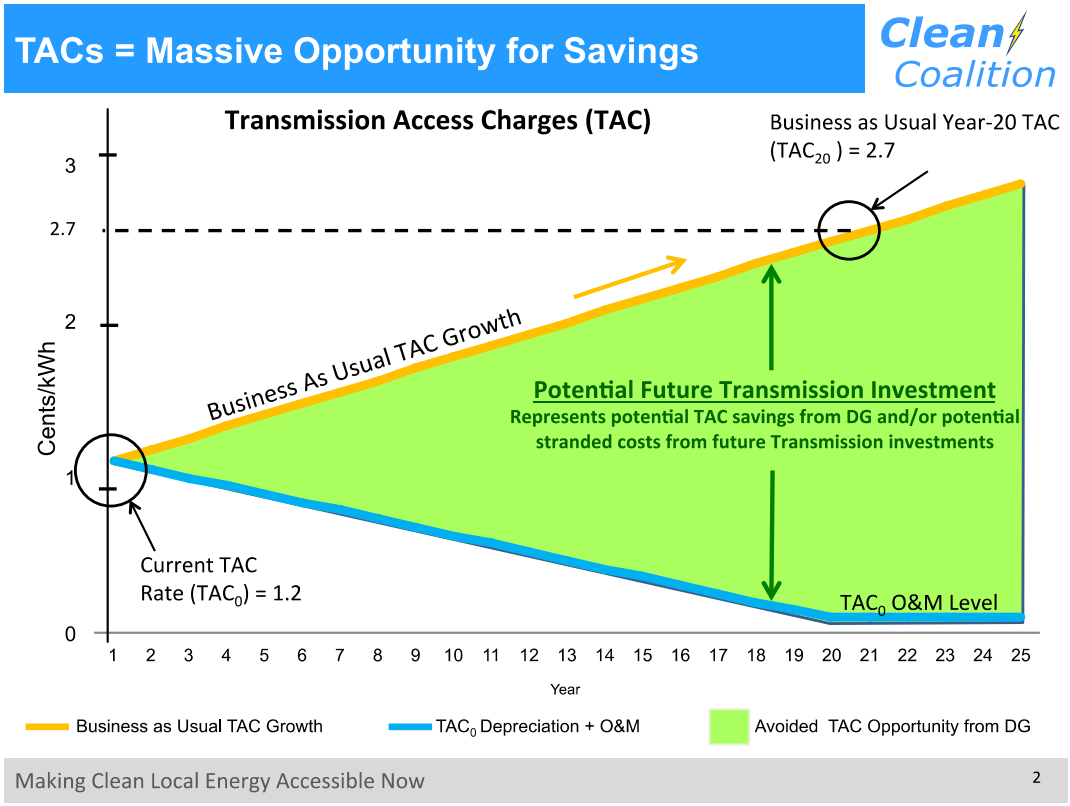
[7] Public Utilities Code, Section 769, as amended by AB 327 (2013)
[8] Proposal Concerning Modifications to LIPA's Tariff for Electric Service, available at http://www.lipower.org/pdfs/company/tariff/proposals-FIT070113.pdf

[9] The Clean Coalition's Hunters Point Project Benefits Analysis

Transmission related costs of delivering energy from remote generation are often combined into costs that are charged by the transmission operators. In California, these costs are called Transmission Access Charges (TACs). This is a flat "postage stamp" fee for every kWh delivered to the distribution system from the transmission grid. TACs are avoided when energy is delivered directly to the distribution system to serve loads on the same substation.

TAC rates have increased at an annualized rate exceeding 15% since 2005 as new transmission dependent generation has been approved, and new transmission capacity is far more costly than maintaining existing capacity. Deploying a distributed generation project avoids needs to increase transmission capacity, which allows existing transmission investments to depreciate and preempts future investments in transmission – both of which reduce TACs, as reflected in the below diagram.

Figure 2: Clean Coalition estimate of TACs



The orange "Business as Usual" line represents the expected growth in TACs as more investment is made in the transmission system to accommodate additional remote generation. The blue line represents the decrease in TACs that is possible if that remote generation was entirely replaced with distributed resources (the down ramp is based on a 40-year average depreciation schedule for TACs-related assets like transmission lines). Thus, the green wedge represents the potential cost savings achieved with distributed resources.

b. Selecting and Valuing GTSR Projects Based on Locational Value

The Clean Coalition recommends that utility methodologies for selecting and valuing projects explicitly include the locational value of projects, which will help utilities maintain the balance between their requirements to procure energy from projects located near enrolled participants and in disadvantaged communities with their need to keep program portfolio costs at levels low enough to attract high customer participation. By reflecting the higher locational value to ratepayers of projects located in and near customer loads, utilities can include more of these types of projects in a portfolio while maintaining reasonable costs for the portfolio.

Before AB 327 is implemented, the Clean Coalition recommends using simple tests to reflect locational value in selection and avoided cost methodologies. For example, projects that would interconnect to the distribution grid (rather than the transmission grid) should be attributed with associated savings from avoided Transmission Access Charge costs that would otherwise be required for conventional generation.

After AB 327 is implemented, GTSR participants should receive bill credits to reflect locational value savings attributable to participating projects. SB 43 requires a participating customer's rates to be "debited or credited with any other commission-approved costs or values applicable to the eligible renewable energy resources contained in a participating utility's green tariff shared renewables program's portfolio." Since SB 43 further provides that these "additional costs or values shall be applied to new customers when they initially subscribe after the cost or value has been approved by the commission,"[10] it is clear that the legislature intended for values that were not defined at the time of program launch to apply to future customer bills.

[10] Public Utilities Code Chapter 7.6, Section 2831(m)

III. PROCUREMENT PROCESS

To create "a large, sustainable market" for offsite renewable generation, GTSR programs must have transparent and effective procurement processes. Project developers need sufficient information, before making heavy investments in projects, to determine whether they are likely to obtain a financeable contract and interconnect their project to the grid at a reasonable cost. The Clean Coalition urges PG&E to provide more information through this proceeding about the GTSR program procurement processes, including its methodology for selecting projects.

IV. COMMUNITY RENEWABLES PROGRAM

The Clean Coalition agrees with Vote Solar that this proceeding should include the development and approval of a community renewables program for each participating utility to ensure that each utility meets statutory requirement to "provide support for enhanced community renewables programs to facilitate development of eligible renewable energy resource projects located close to the source of demand."[11]

The Clean Coalition appreciates the opportunity to provide these comments. We urge the Commission to adopt the recommendations herein, and look forward to working with the Commission and other parties to this proceeding.

[11] Public Utilities Code Chapter 7.6, Section 2831(o)

Respectfully submitted,

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