

Initial Reactions to PG&E Letter Regarding Draft Marin CCA Business Plan

PG&E makes the following general points in its comments on the draft Business Plan (Plan)

- The CCA would have higher rates than PG&E
- The CCA effort would not reduce GHG relative to PG&E service
- Renewable energy is in short supply and is more expensive than indicated in the Plan
- PG&E's rates will be lower than the projections in the Plan
- The Plan's conclusions are not supported with adequate analysis

NCI project staff have reviewed PG&E's comments and provide the following responses to the issues raised by PG&E.

1.a. Availability of Renewable Resources

A panel of experts assembled to address the issue of resource availability for a Marin CCA concluded that sufficient renewable resources are available to meet Marin's goals. Market response to renewable solicitations suggests that resources are available. A case in point: over 1,400 MW of resources were offered to the CCA program in the San Joaquin Valley Program in response to an RFP for up to 400 MW issued in April 2007. Further, none of the electric suppliers that have expressed an interest in serving a renewable-focused CCA have identified resource availability as an impediment to successful program implementation. PG&E's own renewable solicitations appear to attract strong response from renewable developers. According to the CPUC, the renewable market's response to the 2007 utility solicitations far outstrip every previous RPS solicitation with "a huge response from solar and wind developers".¹ We are not persuaded by PG&E's arguments that Marin would be unable to secure renewable resources called for in the Plan.

1.b. Cost of Renewables

The base case cost of wind plant used in the business plan (\$1,488/kW in 2013) is based on PG&E's own estimate from an April 2007 study: "Wind power capital costs are expected to decline from \$1,680/kW in 2007 to \$1,300/kW in 2015, the Frontier Line study year, due to efficiency improvements, manufacturing economies, easing of the turbines supply shortage and stabilization of commodity prices."² The estimated costs of purchasing renewable energy from the market (about 9.5 cents per kWh) that were used in the Plan are higher than the figures cited by PG&E in Table 1 (8.9 cents per kWh). We agree that renewable prices have been increasing rapidly, and the final draft of the

¹ CPUC, *Progress of the California Renewable Portfolio Standard as Required by the Supplemental Report of the 2006 Budget Act*, July 2007, page 3.

² Western Regional Transmission Expansion Partnership Economic Analysis Subcommittee, *Benefit-Cost Analysis of Frontier Line Possibilities*, Draft Report 23 April 2007, page 18. PG&E representatives were members of the Economic Analysis Subcommittee that drafted this report.

business plan will include updated cost assumptions where appropriate and will examine sensitivities around the base case values.

1.c. Procurement Costs

Procurement costs are estimated based on information provided by experienced energy suppliers as of February 2007 for the energy services described in the Plan. These are costs are indicative of what the market would charge to supply the program.

1.d. Gas Price Risk vs. PG&E Gas Portfolio Exposure

A third party energy supplier has not been selected, and it is premature for PG&E to draw conclusions regarding the terms and conditions of a contract that does not yet exist. The Plan recommends that price stability can be achieved by contractually transferring price risk to the third party supplier. This business model contrasts with PG&E's where price risk is borne by ratepayers as PG&E's rates fluctuate with changes in the market.

1.e. Tax-Exempt Financing

Although the cost of renewable projects varies on a case-by-case basis, tax-exempt financing generally provides a cost advantage to the CCA. PG&E notes that private developers receive production tax credits and investment tax credits. The CCA can obtain the equivalent of the production tax credit for a wind facility through the federal government's renewable energy production incentive, which would maintain the cost advantage of the CCA for wind generation relative to a private developer.

PG&E mitigates customer migration risk by charging an exit fee (Cost Responsibility Surcharge), and the CCA program could use the same approach to secure credit for the program.

2. Estimated Cost of Power from a Proposed MPA

PG&E's figures in Table 1 c present PG&E's estimates of CCA costs and PG&E rates. PG&E compares the cost of power averaged over a 20-year period with PG&E's current (2008) generation rates. PG&E is comparing an annual cost (its 2008 expected rate) to a levelized cost. This comparison and PG&E's conclusion that CCA rates will be higher than PG&E's appears to be premised on the assumption that PG&E's rates will not increase over the next 20 years. This assumption is highly unrealistic, considering that historically, PG&E rates have increased by approximately 3% to 4% annually.

The CEC report cited by PG&E for the estimated cost of renewable energy also shows the cost advantages enjoyed by municipal utilities which provides additional support for the Plan's conclusion that the Marin CCA could provide renewable energy more cheaply

than can PG&E³. Note the lower costs in the excerpted table below for municipal utilities relative to merchant developers and the investor owned utilities for the same resource.

Table 2: Summary of Levelized Costs

In-Service Year =2007 (Nominal 2007\$)	Size	Merchant		IOU		Muni	
	MW	\$/kW-Yr	\$/MWh	\$/kW-Yr	\$/MWh	\$/kW-Yr	\$/MWh
Conventional Combined Cycle (CC)	500	514.56	101.35	476.31	93.97	443.68	87.79
Conventional CC - Duct Fired	550	521.49	102.72	482.14	95.12	448.59	88.77
Advanced Combined Cycle	800	485.30	95.59	447.16	88.22	413.91	81.90
Conventional Simple Cycle	100	250.81	586.36	196.68	460.01	133.90	313.42
Small Simple Cycle	50	270.85	633.21	213.36	499.02	147.98	346.37
Advanced Simple Cycle	200	205.06	479.40	160.83	376.17	106.18	248.52
Integrated Gasification Combined Cycle (IGCC)	575	678.11	131.66	492.79	95.68	384.74	74.70
Advanced Nuclear	1000	728.50	99.86	538.03	73.75	488.88	67.01
Biomass - AD Dairy	0.25	937.69	145.65	723.65	112.41	636.95	98.94
Biomass - AD Food	2	323.64	50.27	80.72	12.54	-51.00	-7.92
Biomass Combustion - Fluidized Bed Boiler	25	915.59	125.49	793.72	108.78	855.28	117.22
Biomass Combustion - Stoker Boiler	25	854.32	117.09	745.23	102.14	814.95	111.69
Biomass - IGCC	21.25	929.64	127.41	781.13	107.06	771.37	105.72
Biomass - LFG	2	370.07	54.49	294.14	43.66	317.72	47.86
Biomass - WWTP	0.5	458.23	87.35	361.82	70.59	296.38	60.36
Fuel Cell - Molten Carbonate	2	933.83	120.84	774.10	100.17	672.03	86.96
Fuel Cell - Proton Exchange	0.03	1289.91	166.91	1026.94	132.89	858.56	111.10
Fuel Cell - Solid Oxide	0.25	776.26	100.45	615.21	79.61	531.28	68.75
Geothermal - Binary	50	573.15	91.82	400.34	66.10	384.60	67.18
Geothermal - Dual Flash	50	542.03	88.67	383.07	64.58	375.70	67.01
Hydro - In Conduit	1	256.67	63.36	183.90	46.09	185.71	48.01
Hydro - Small Scale	10	700.93	171.03	480.62	119.06	338.23	86.43
Ocean - Wave	0.75	1440.72	1201.48	1006.79	846.40	716.79	611.59
Solar - Concentrating PV	15	495.96	271.96	334.48	185.55	204.88	116.23
Solar - Parabolic Trough	63.5	671.03	294.54	497.90	219.23	349.47	154.86
Solar - PV	1	1117.12	608.42	723.14	396.30	461.81	256.29
Solar - Stirling Dish	15	1121.75	544.27	859.49	417.02	643.25	312.10
Wind - Class 5	50	289.10	99.03	195.24	66.88	177.44	60.78

Source: Energy Commission

The IOU plants are less expensive than the merchant facilities due to lower financing costs. This is in marked contrast to the 2003 *IEPR* when merchant financing costs were at least comparable to those for the IOUs. The change is a reflection of the outcome from the 2000—2001 energy crisis. The publicly owned plants are the least expensive due to lower financing costs and freedom from taxes.

At page 11, PG&E implies that the company has continued to buy power at above market costs since 2004, and that some of these costs would be charged to CCA customers as additional exit fees. Marin ratepayers are already paying \$6.5 million annually to PG&E to support its exit from the 2002 bankruptcy, and it appears that the liabilities associated with remaining a PG&E generation customer are continuing to accumulate. If it is true that PG&E is consistently buying electricity at above market rates, then there should be additional opportunities, not quantified in the Plan, for cost efficiencies that a CCA could exploit.

3.a. PG&E's GHG Portfolio

³ California Energy Commission, *Comparative Costs of California Central Station Electricity Generation Technologies*, June 2007 Draft Staff Report

The Plan quantifies the impact on GHG emissions of Marin moving to a 50% renewable supply as approximately 174,000 to 308,000 metric tons/year. Greater GHG reductions would result by moving to 100% renewable power, which is the ultimate goal for the Marin CCA. This reduction comes about due to the fact that Marin would cause more renewable plants to be built that would substitute for natural gas-fired plants that would otherwise be built. PG&E's existing nuclear and hydro-electric resources would continue to operate in much the same way as they do today; the difference will be a reduction in use of natural gas. The Plan does not include use of coal based resources, and we would expect the Marin CCA to prohibit suppliers from using coal.

The Plan starts Marin on the path towards a achieving a sustainable electric production system based on 21st century technologies, with wind, solar, geothermal, biomass and other renewable energy technologies as the cornerstone. PG&E appears to be promoting use of nuclear and large hydro-electric resources to reduce GHG emissions. These technologies were not selected for inclusion in the Plan, and there are significant negative environmental attributes associated with these technologies. The problem with disposal of nuclear waste has still not been resolved. Current law prohibits construction of new nuclear facilities in California until the issue of waste disposal is resolved. In addition uranium mining activities have negative environmental impacts and produce GHG emissions. Large-scale hydro-electric plants require construction of massive dams on rivers with devastating impacts to entire eco-systems. It is our understanding that nuclear and large hydro resources would not be acceptable supply options for the people of Marin County.

3.b. Renewable Energy Credits (RECs)

RECs are a widely accepted industry practice for procuring renewable energy without the need to closely match hour-by-hour changes in loads and renewable energy production. The recently completed Western Renewable Energy Generation Information System (WREGIS) was built to appropriately track renewable energy and prevent the double counting problems that PG&E references. The CPUC is continuing to investigate use of RECs for RPS compliance.

PG&E appears to suggest an alternative, non-CCA program where RECs could be used to "green" the PG&E portfolio. It is not clear from PG&E's comments how it envisions such a program being funded (shareholders, ratepayers, local governments?) or if PG&E would structure such a program as an opt-out or opt-in style program. Further, PG&E's reported difficulty in contracting for renewable energy sufficient to meet the minimum 20% RPS leaves doubt as to how it could earmark certain renewable energy purchases for Marin County. While PG&E asserts that this option would "produce greater results" and would be "much less risky", additional information from PG&E about how such a program would work is needed in order to evaluate and compare it to the CCA Plan.

4.a. Bureaucracy and Scale

The Plan outlines a strategy to competitively solicit the majority of functions needed for program operations. It does not recommend creating a large organization, identifying an initial staffing level of only four full-time equivalents. Through competition, the Program would be able to select the organizations that are best in class at performing the various functions needed for the Program. Staff additions over time would be made at the discretion of the Program's Executive Director and Governing Board, presumably only if building an internally staffed organization offers advantages to the services available in the market.

4.b. Misinformed Statements About Solar

PG&E dismisses a CCA's ability to promote greater use of Solar in Marin County. The Plan identifies a goal of causing an additional 14 MW of solar through providing unbiased consumer information, creating networks of pre-qualified vendors and potentially providing direct financial incentives through Program revenues or rate designs (e.g., time of use rates) that are designed to maximize net energy metering benefits. One of the intangible benefits of forming a CCA is that it creates an organization with a focus on regional energy issues which can develop innovative programs to meet local needs. We believe the Marin CCA would have a demonstrable impact on solar adoption in the County.

4.c. Impact on Energy Efficiency Programs

PG&E similarly dismisses a CCA's ability to effectively design and implement energy efficiency programs. Energy efficiency is now a major profit generator for PG&E, and it is not surprising that PG&E would defend its market share in that sector. However, third party administration of energy efficiency programs has been successful, and the CCA would have a right to apply for program funding. The plan calls for initially developing new programs to supplement the existing energy efficiency programs. Over time it may make sense for the CCA to administer all energy efficiency programs within its jurisdiction.

4.d. CCA Program Termination

Liability for costs associated with returning customers to the utility if the program terminates is an issue that is evolving and under consideration by the California Public Utilities Commission. The San Joaquin Valley Power Authority is in discussions with the CPUC and utility staff to clarify the bonding/insurance requirements that must be met by a CCA. This section of the Plan will be updated if the issues have been resolved by the end of the year. Other potential liabilities associated with power supply agreements and generation investments would be addressed in the terms and conditions associated with those agreements.

4.e. Ratemaking Risks

Under the status quo, rates are determined through a CPUC process where the people of Marin have effectively no input. The current inability to control rates is the primary risk under the status quo. PG&E rates have increased by 43% since 2000 and are scheduled to increase again in 2008. Under a CCA, the program governing board comprised of elected leaders with support from an appointed energy commission would exercise local control over CCA program rates. Further, CCA rates can be stabilized by shifting responsibility for managing commodity price volatility to the Program's third party electric supplier.

Conclusion

PG&E concludes with the suggestion that there are a number of important partnership opportunities that could help Marin achieve its goals without the more costly and risky approach described by the Report. It is impossible to evaluate such a statement unless and until PG&E provides detailed plans for how the utility would meet Marin's goals. The County has a detailed business plan for CCA, but to our knowledge no similarly detailed plan has been presented to the County regarding the opportunities PG&E is willing to offer. Without any such detail, it is not possible to conclude that the undefined partnership opportunities could help Marin achieve its goals at a lower cost and/or with less risk than the CCA plan.