BEFORE THE CALIFORNIA ENERGY COMMISSION
OF THE STATE OF CALIFORNIA

In the Matter of:	)	
	)	
Preparation of the	)	Docket No. 11-IEP-1A
2011 Integrated Energy Policy Report	)	
(IEPR)	)	
	)	

Comments of the California Cogeneration Council on the California Clean Energy Future

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On behalf of the
CALIFORNIA COGENERATION COUNCIL

July 20, 2011

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The California Energy Commission (CEC), California Environmental Protection Agency, (CalEPA), California Air Resources Board (CARB), California Public Utilities Commission (CPUC), and the California System Operator Corporation (California ISO) are working together to update the *California Clean Energy Future* (CCEF), which was first released in September 2010. In accordance with the Integrated Energy Policy Report (IEPR) Committee Workshop Notice of June 23, 2011, the California Cogeneration Council (CCC)[1] provides comments on two matters: (1) the updating of the CCEF to reflect the goals of Governor Brown's energy vision, specifically the combined heat and power (CHP)[2] goal, and (2) the related metrics required for measuring progress on the initiatives to reach this goal. The CCC appreciates the opportunity to submit these comments on these important topics.[3]

1. CHP Goal to develop 6,500 MW over next 20 years

California derives substantial benefits from installed CHP, beyond the electric capacity and energy that these projects sell to the utilities. These benefits include:

- Efficiency, through natural gas savings;
- Environmental, through lower air emissions from the production of power and steam sequentially rather than if both forms of energy were produced separately;

[1] The CCC is an *ad hoc* association of natural gas-fired combined heat and power (CHP) facilities located throughout California, in the service territories of all three of California's major investor-owned electric utilities (IOUs) – Pacific Gas & Electric Company (PG&E), Southern California Edison Company (Edison), and San Diego Gas & Electric Company (SDG&E). CCC member facilities are certified as qualifying facilities (QFs) pursuant to the Public Utility Regulatory Policies Act of 1978 (PURPA), and CCC is a party to the QF/CHP Settlement that establishes a new state CHP Program. In aggregate, CCC members' more than 30 different CHP projects in California generate 1,250 megawatts (MW) of power, most of which is sold to the IOUs. The CCC represents a significant share of the distributed CHP projects now operating in California.

[2] The CCC uses the terms "CHP" and "cogeneration" synonymously throughout these comments.

[3] In an email dated July 11, 2011, the due date for written comments related to the July 6 Joint Agency IEPR workshop on the California Clean Energy Future was extended by one week to Wednesday, July 20, 2011.

- Economic, by reducing the cost of energy to industry in California, thus helping to maintain the competitiveness of the state's economy in regional, national, and global markets;
- Reliability, by relatively high levels of availability to supply power to California as indicated by IOU performance data for CHP projects;
- Distributed and deliverable generation, by increasing the stability and reliability of the state's electric grid due to the wide geographical distribution of CHP facilities, and specifically the large number of CHP facilities in load centers; and
- Resource diversity, by increasing the diversity of the state's electric supply.

These benefits are the reason that state policy has long supported the development of cogeneration projects in California. For example:

- Section 372(a) of the California Public Utilities Code states: "it is the policy of the state to encourage and support the development of cogeneration technology as an efficient, environmentally beneficial, competitive energy resource that will enhance the reliability of local generation supply, and promote local business growth."

- The Energy Action Plan II states: "The loading order identifies energy efficiency and demand response as the State's preferred means of meeting growing energy needs. After cost effective efficiency and demand response, we rely on renewable sources of power and distributed generation, such as combined heat and power applications. To the extent efficiency, demand response, renewable resources, and distributed generation are unable to satisfy increasing energy and capacity needs, we support clean and efficient fossil-fired generation."

The CARB 2008 Scoping Plan adopted the Combined Heat and Power Recommended Reduction Measure (CARB CHP RRM), stating,

> "The widespread development of efficient CHP systems would help displace the need to develop new, or expand existing, power plants. This measure sets a target of an additional 4,000 MW of installed CHP capacity by 2020, enough to displace approximately 30,000 GWh of demand from other power generation sources."[4]

The QF/CHP Settlement[5] establishes a State CHP Program with the stated purpose, "to encourage the continued operation of the State's Existing CHP Facilities, and the development, installation, and interconnection of new, clean and efficient CHP Facilities, in order to increase the diversity, reliability, and environmental benefits of the energy resources available to the State's electricity customers."[6]

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[4] CARB Scoping Plan, at pages 43-44. http://www.arb.ca.gov/cc/scopinplan/document/adopted_scoping_plan.pdf

[5] Approved by the CPUC in Decision 10-12-035.

[6] §1.2.1.3 of the CHP Program Settlement Agreement Term Sheet, at page 5.

The new State CHP Program, anticipated to begin in July 2011, gives effect to the CARB CHP RRM, by adopting, as one of many goals and objectives, the goal of achieving additional greenhouse gas (GHG) emissions reductions beyond those benefits already provided by the existing CHP fleet, specifically the statewide target goal of 6.7 million metric tons (MMT) from efficient CHP by December 31, 2020. CARB has equated this quantity of GHG emissions to be an additional 4,000 MWs of installed capacity. Rather than set a procurement target of 4,000 MW the Settlement Parties[7] agreed to a statewide emissions reduction goal of 6.7 $MMTCO_2E$ (in addition to maintaining the emission reduction benefits of the existing CHP fleet) by 2020, and established detailed accounting policies and procedures for tracking and reporting progress toward this goal.[8]

Governor Brown's Clean Energy Jobs Plan advocates the goal to "develop 6,500 MW of combined heat and power over the next 20 years." The CCC believes this goal to include the 4,000 MW adopted in CARB's CHP RRM; thus, the Governor's goal can be interpreted as an additional 2,500 MW over an additional 10 year period, from 2021 through the end of 2030. The CCC supports this goal as a complementary measure to the CARB goal, and the goals of the State CHP Program. Adoption of a 2030 CHP goal sends an important signal to the market place that California is committed to the development of clean and efficient CHP over a sufficient time period as to encourage investment and development in new facilities. This recognizes that the installation of new CHP requires a number of years to permit and build before coming online and the benefits being realized.

While the new State CHP Program addresses some of the barriers inhibiting the development of new CHP, further policy progress is needed if this laudable goal is to be achieved. For example, the 6,500 MW goal for 2030 appears to be derived from the "all-in" scenario from the 2009 ICF CHP Market Assessment Report submitted as part of the CEC's 2009 IEPR.[9] This scenario includes carbon pricing assumptions, Self Generation Incentive Program (SGIP) incentives for small CHP, a robust contracting program for large CHP, and pricing for CHP of all sizes that is similar to the Market Price Referent (MPR) and the MPR-based AB 1613 contract. Although the QF CHP Settlement and the state's AB 32 cap & trade program represent progress toward the policy environment contemplated in the ICF "all in" scenario, they do not fully achieve all of these policy goals. The CCC recommends that state agencies and CHP stakeholders convene to identify barriers and develop solutions to ensure progress can be made toward the Governor's CHP goal.

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[7] The QF CHP Settlement Parties are, California Cogeneration Council, Cogeneration Association of California, Energy Producers and Users Coalition, Independent Energy Producers, Pacific Gas and Electric Company, Southern California Edison Company, San Diego Gas and Electric Company, The Utility Reform Network, and Division of Ratepayer Advocates.

[8] Sections 6, 7, and 8 of the QF CHP Settlement Term Sheet, at http://www.pge.com/includes/docs/pdfs/b2b/energysupply/qualifyingfacilities/settlement/final_term_sheet.pdf

[9] CEC-500-2009-094D, ICF International CHP Market Assessment Report, prepared for the CEC.

2. Metrics for Measuring Progress

The Installed Capacity Metrics white paper distributed at the July 6, 2011 workshop appears to rely on MW of installed CHP capacity by fuel type, as the metric for measuring the installation of CHP, pursuant to the Governor's 6,500 MW CHP goal. The CCC recognizes the desire of the staff to strike a balance between providing enough data to be helpful but not so much that the metrics become unwieldy. However, our experience in the QF CHP Settlement process leads us to recommend a different approach. We recommend that new CHP installations be measured by recording and tracking both the MW capacity and the GHG emission reductions achieved.

Several presenters at the July 6, 2011 workshop expressed the view that the 6,500 MW CHP goal needed to include an efficiency factor to ensure only clean and efficient CHP is developed and can count toward the goal. The CCC believes that the design of the new State CHP Program ensures that this will be the case. Section 8 of the QF CHP Settlement Term Sheet describes the content of the new Semi-Annual CHP Program reports that will be published on the CPUC website. Both MW and GHG emission reductions will be calculated according to the rules found in Sections 5, 6, and 7 of the Term Sheet. During the Initial Program Period (48 months from the Settlement Effective Date) GHG emission reduction "credits" and "debits" will be calculated by comparing the CHP facility to a double benchmark of an 8300 BTU/kWh heat rate (for the electricity generated at the busbar and excluding line losses), and a thermal efficiency of 80% of a standard boiler (for the useful thermal energy produced).[10] This double benchmark may change for the second program period, to reflect changes in the system heat rate and boiler technology. Thus, there will be public, transparent metrics for the GHG emission reductions achieved under the new State CHP Program.

Additionally, to be eligible for the AB 1613 tariff, small CHP projects under 20 MW must demonstrate a total efficiency of at least a 62% Higher Heating Value (HHV). This, too, will ensure new installations of CHP are efficient and contribute to the state's GHG emission reduction goals.

The MW goal recognizes installed electric production, and is an important metric to track. However, GHG savings from CHP also must be tracked in order to record overall efficiency. For example, a repower of an existing CHP project may reduce the MW output to the grid, but increase overall GHG emission reductions. Consequently, it is important to track both metrics.

The CCC recommends that CEC and CPUC staff convene a CHP stakeholder working group to understand and perhaps to more fully develop both the MW metrics and the GHG emission reduction metrics for measuring progress toward the CHP goal of installing an additional 6,500 MW of CHP by 2030. This would include a discussion of how to identify and measure CHP installed "behind-the-meter" (i.e. self generation). The goal of the group should be to keep the reporting and the metrics simple, but to be as accurate as possible.

[10] §7.2 of the QF CHP Settlement Term Sheet, at page 35.

3. Conclusion

The CCC is concerned that the recent focus in the Legislature and the state's regulatory agencies on encouraging renewable resource generation has drawn attention away from the important role for efficient new or repowered CHP. California will miss opportunities to realize the environmental, efficiency, reliability, and economic benefits of this resource if it does not provide a long term signal to the market that the state's policies both favor CHP as a resource and will include the practical policies needed to ensure the successful development of new and repowered CHP facilities.

The CCC strongly supports updating the CCEF to include Governor Brown's goal to develop 6,500 MW of CHP over the next 20 years. Establishing this policy goal in the CCEF sends a strong signal to the investment community that clean and efficient CHP is a preferred resource in the state, consistent with the loading order articulated in the state's Energy Action Plan. This will encourage investors to take advantage of the opportunities provided in the new State CHP Program, e.g. new long term utility power purchase agreements. In order to achieve the CHP goal, however, there are still numerous barriers that must be addressed. The CCC recommends that state agencies and CHP stakeholders convene to develop an implementable policy framework to ensure progress can be made toward the Governor's CHP goal.

The CCC also recommends that the metrics to measure progress toward the 6,500 MW CHP goal include both installed capacity in MWs, and GHG emission savings in $MTCO_2E$. The same stakeholder working group could be tasked with developing and agreeing upon these metrics.

The CCC appreciates the opportunity to present these comments.

Respectfully submitted,

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