

**BEFORE THE ENERGY COMMISSION
OF THE STATE OF CALIFORNIA**

California Energy Commission

DOCKETED

14-CHP-1

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In the matter of:

A New Generation of Combined Heat and
Power: Policy Planning for 2030

Docket No. 14-CHP-1

Comments on Staff Paper

June 19, 2015

**COMMENTS OF THE CALIFORNIA CLEAN DG COALITION
REGARDING STAFF PAPER: PROPOSED NEAR-TERM METHOD
FOR ESTIMATING GENERATION FUEL DISPLACED BY
AVOIDED USE OF GRID ELECTRICITY**

The California Clean DG Coalition (“CCDC”) appreciates the opportunity to submit these Comments on the California Energy Commission (“CEC”) Staff Paper, *Proposed Near-Term Method for Estimating Generation Fuel Displaced by Avoided Use of Grid Electricity*. CCDC is an ad hoc group interested in promoting the ability of distributed generation (“DG”) system manufacturers, distributors, marketers and investors, and electric customers, to deploy DG. Its members represent a variety of DG technologies, including combined heat and power (“CHP”), renewables, gas turbines, microturbines, reciprocating engines, and storage.¹ CCDC appreciates the consideration given by CEC staff and the Commission to its comments and recommendations.

- We are currently skeptical of “a uniform method appropriate for evaluating emissions displacement factors over a long-term planning horizon”. The implementation trajectories for various low and zero GHG technologies and energy storage are still very uncertain. Making planning assumptions today is dangerous and risks prematurely going down a less than optimal or overly aggressive path. As the road to 2050 becomes clearer, a longer-term method may become more practical.

¹ CCDC is currently comprised of Capstone Turbine Corporation, Caterpillar, Inc., Cummins Inc., DE Solutions, Inc., Etagen, GE Water & Power, Hawthorne Power Systems, Holt of California, NRG Energy, Penn Power Systems, Peterson Power Systems, Regatta Solutions, Solar Turbines, Inc., and Tecogen, Inc.

- The methodology developed to “calculate the avoided grid generation for ... combined heat and power” is reasonable. For CHP in particular, the assumptions to be used are site specific, dependent on the amount of export and the operating strategy/flexibility, among others. The proposed near-term method is practical and reasonable for use in the near-term (next 5 years) but likely breaks down as renewables approach over-generation during appreciable time periods on an annual basis. With renewable resources, like wind and solar, offering variable availability, most utility scale combined cycle plants will also be forced to operate in a variable fashion due to over-supply conditions. If the CO2 calculations are based on 100% load point, their actual average load will be lower than 100% and presumably less efficient. In contrast, CHP resources are typically baseload. Therefore, while we agree with the reasonableness of your heat rate projections in the near-term, we question the validity of the regression analysis depicted in Table 8 when load following plants will likely be cycling more to firm up renewable power. In Tables 2 and 19 of the report, it is recommended that staff check the numbers or the column headings as the math does not appear to tally up.
- “The treatment of onsite generation and associated electric grid displacement is appropriate” for the near-term. For CHP, it should be noted that CHP GHG emissions are the total generation emissions net of avoided natural gas boiler emissions, and should be contrasted against the grid emission displacement factor. It would also help if the author made very clear in the report that the example “avoided carbon intensity” shown in Tables 2 and 19, were avoided grid emissions that CHP would displace and are not representative of emissions from CHP facilities net thermal fuel avoidance.
- Until the future track for California’s GHG reduction initiative becomes much clearer, the proposed methodology for “program planning and comparison” is a prudent benchmarking tool and should be updated periodically.
- It would not be appropriate to use this exact methodology for a situation where renewables risk over-generation a significant portion of the year.
- “The approach ... will” result in a reasonable estimate of “grid displacement” in the near-term.

- “The appropriate level of granularity” should be at the macro-level for the foreseeable future. A state average is reasonable for now and can be narrowed down to regional or utility districts should significant differences exist.

CCDC does not view CHP and renewable energy as an either/or solution, but instead as complementary approaches toward a low-carbon future for California. Both renewables and CHP are supported by state goals and programs and both have a role in the delivery of clean, reliable power within our State. Accordingly, it is imperative that avoided GHG emissions be accurately represented for CHP applications, recognizing that each case is unique may require something beyond a standardized approach. CCDC looks forward to working with the CEC and other stakeholders on ensuring fuel displacement by CHP is accurately represented. To that end, CCDC appreciates the CEC’s consideration of these comments and recommendations.

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