RED RecycledEnergy Development

the new green

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10 November 2009

Ms. Linda Kelly
Electricity Analysis Office
1516 Ninth Street, MS #20
Sacramento, CA 95814

Re: Combined Heat and Power Technical Guidelines
Docket No. 08-WHCE-1

Dear Ms. Kelly:

Recycled Energy Development, LLC (RED) appreciates the opportunity to submit comments regarding the Combined Heat and Power (CHP) Guidelines to the California Energy Commission (CEC). RED's mission is to profitably reduce greenhouse-gas emissions through the development and ownership of energy recycling facilities. RED's principals have developed more than 250 CHP and waste energy recovery projects, with a total investment of more than $2 billion. Currently, RED is evaluating several potential projects in California.

RED applauds the CEC's efforts and its recognition in the draft guidelines of the important role of bottoming-cycle CHP. We particularly commend the CEC for recognizing that bottoming-cycle systems not using supplemental firing do not need to meet the 60-percent efficiency standard because of the inherent efficiency associated with recovering waste energy.

These comments address two related issues:

- First, CHP systems that utilize waste heat recovery, or bottoming cycle, should not be required to meet the eligible customer-generator's thermal load because not all industrials have thermal demand.

- Second, the guidelines for bottoming-cycle CHP within the proposed *Thermal Energy Utilization Standard* are ambiguous and could be streamlined.

More detail is provided on both of these points below.

1. **A bottoming cycle CHP system need not be sized to meet the eligible customer-generator's thermal load.**

Bottoming-cycle CHP systems should not be required to meet the eligible customer-generator's thermal load. Rather than supplying thermal demand, these systems capture and utilize the

industrial's waste heat. Just because a tremendous amount of waste heat comes off a process does not necessarily mean that the process requires thermal energy. In addition to cement, other industrials facilities with waste heat opportunities but little to no thermal demand include: metals processing (i.e. silicon), carbon black, and glass manufacturing. We encourage the California rule to acknowledge that most of the opportunities for bottoming-cycle CHP occur at facilities with little or no thermal demand.

2. **The guidelines for bottoming cycle CHP under the *Thermal Heat Utilization Standard* are unclear.**

RED appreciates the CEC's desire to ensure that bottoming-cycle CHP units are as efficient as possible. Yet almost all bottoming-cycle applications have no need for the thermal energy that comes from the CHP system. Industrial processes, of course, often require thermal energy, but in the case of bottoming-cycles, the CHP unit captures the wasted thermal energy in order to generate power.

These observations, of course, make it difficult to craft a simple thermal heat utilization standard for bottoming-cycle CHP. At a minimum, RED encourages the CEC to eliminate the unclear element in the current definition that "thermal energy must be used to maximize process efficient in the facility." We do hope, however, that the definition acknowledges that some of the greatest opportunities for waste heat recovery occur at industrial facilities with little or no thermal demand.

RED respectfully requests the CEC incorporate these comments in adopting the Final Guidelines for Certification of CHP Systems. The CEC is working under a tight timetable, and we thank you for the opportunity to comment and participate in this important process.

Thank you for your consideration.

Sincerely,

Melissa Mullarkey
Policy Analyst