

GHG Regulation for Combined Heat and Power



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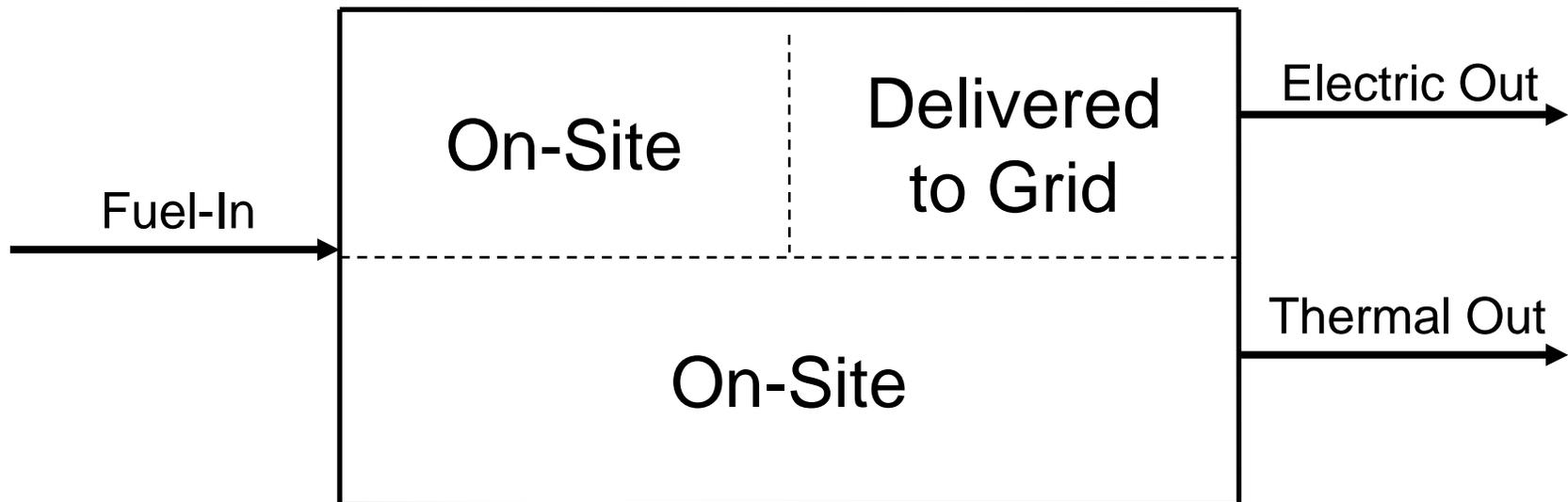
May 2, 2008

What is Combined Heat and Power

- A technological process where both electricity and heat are created from a single fuel source.
- Heat and Power are “co-generated”
- Efficiency gains possible when compared to generating heat and power separately
- Potential emissions reduction strategy as a result

Generic Representation

CHP Unit



Even though there are multiple different iterations of this basic process, we can still think about this as one piece of technology for the purposes of GHG regulation

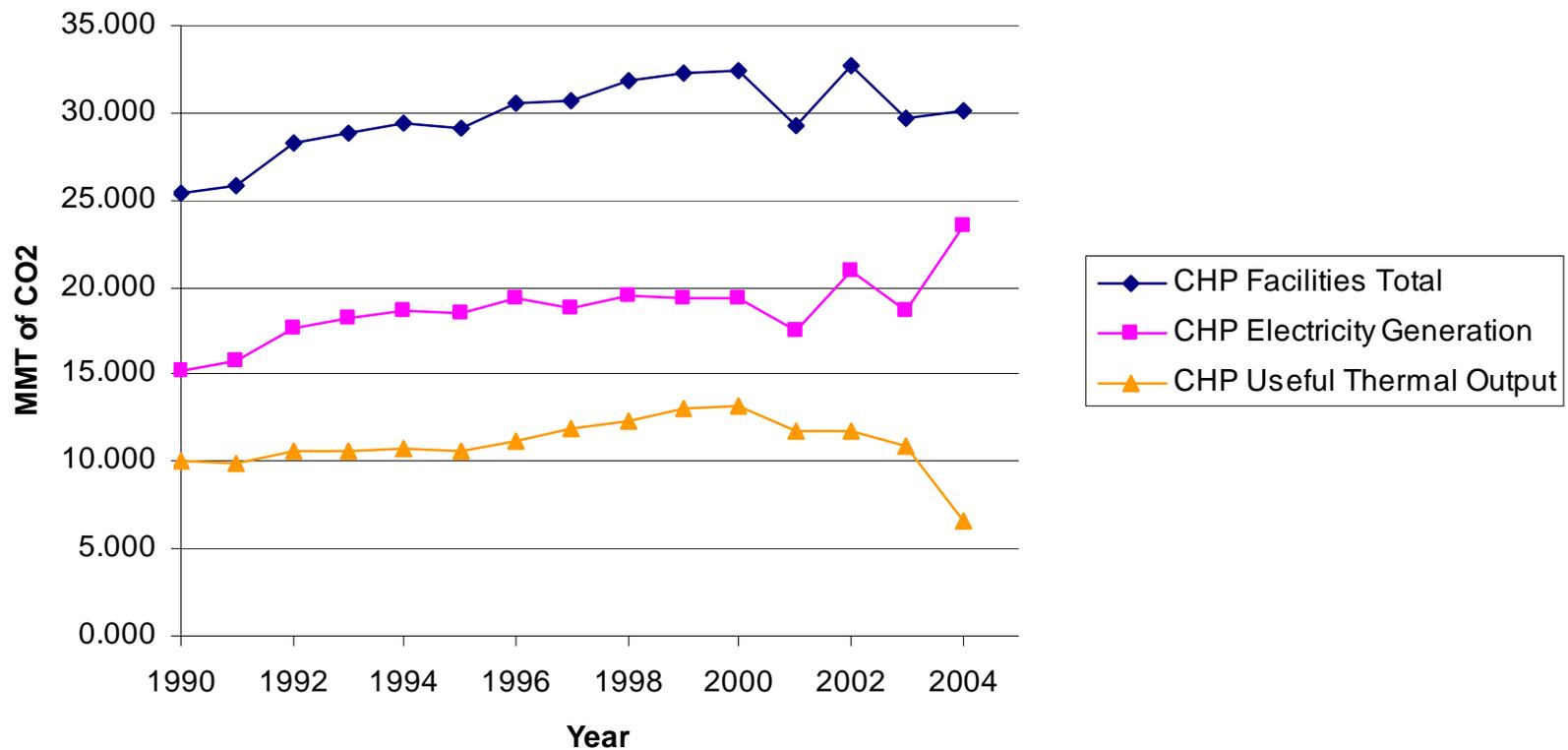
Basic CHP Info in California

- Approximately 940 CHP units in operation
- Capacity of +9,000 MW

Size Threshold	MW Capacity	% of Total MW	Number of Plants	% of Total Plants
< 5 MW	380	4%	727	77%
≥ 5 MW	8,848	96%	213	23%
<i>Total</i>	9,228	-	940	-

Source: Energy and Environmental Analysis Database, 2006 Data

GHG from CHP in CA



- Approximately 6-7% of CA's total GHG emissions during the 1990-2004 time period
 - Source: ARB 2007 Inventory

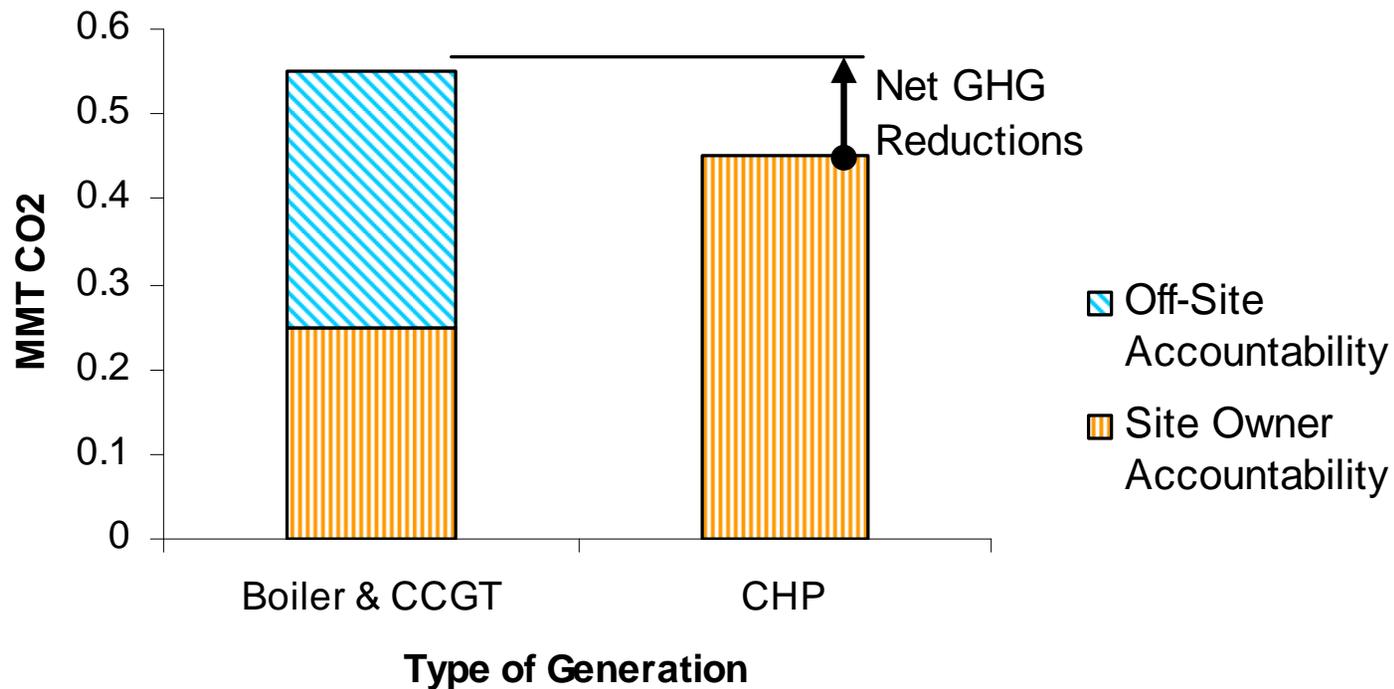
Existing CHP policies in CA

- Self Generation Incentive Program (SGIP)/ AB 2778 (up to 1 MW)
 - Recent legislation removes incentives for technologies combusting natural gas
- AB 1613
 - Incentives for CHP up to 20 MW
 - Commission in process of drafting OIR
- Qualifying Facility Program
 - New decision released in September 2007
 - New standard contracts being drafted

CPUC/CEC Joint Proceeding

- R 06-04-009
- CHP staff paper issued informally. Presents basic information and asks questions to develop record
 - Comments May 27; Reply Comments on June 10
- Proposed Decision in mid-July
- Commissions issue decision with recommendations to ARB in August

Emissions Responsibility



Potential for NET decrease but an on-site increase – does this inherently create a disincentive for CHP installation?

Fundamental Questions

- Should GHG emissions from CHP be captured under a cap-and-trade program or not?
- Should GHG emissions from CHP be considered separately or as apart of the electricity, natural or industrial sectors?
- Should CHP be considered an emissions reduction strategy for AB 32 purposes?
 - If so, may need separate forum for policymaking purposes designed to encourage new CHP investment

Further Important Questions

- Is there a rationale for differential treatment of a *topping cycle* vs. a *bottoming cycle* CHP unit?
- Should we differentiate based on capacity size of the CHP unit?

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