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## QUESTIONS AND ANSWERS

### Bryan P. Franey, Manko, Gold, Katcher and Fox, LLP New Incentives Spark Combined Heat and Power Resurgence

Although solar panels and wind farms dominate the headlines, energy efficiency technologies such as combined heat and power systems (“CHP”) hold significant near-term potential for “greening” industrial, commercial, and institutional facilities. For these facilities, now may be the best time to evaluate or re-evaluate an on-site CHP system as an alternative to current electricity and steam sources. At both federal and state levels, a series of significant funding opportunities and policy initiatives have been established to encourage CHP as a means of reducing inefficiencies and emissions associated with traditional electricity generation and transmission.

#### What is CHP?

Under the conventional model, an industrial/commercial facility usually purchases its electricity from the local utility and then separately generates thermal energy for heating or cooling by burning fuel in a furnace or boiler. CHP, or “co-generation,” collapses these two processes into a single step. CHP systems simultaneously generate both thermal energy and



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electricity using a single fuel source such as natural gas, biomass (landfill gas, wood/crop wastes, municipal solid waste), or even industrial process wastes (coke, textile waste, tire-derived fuel). CHP systems can increase overall efficiencies by more than 30 percent, thereby saving money, reducing emissions of greenhouse gases and pollutants such as NO<sub>x</sub>, SO<sub>x</sub> and mercury, avoiding transmission congestion, and minimizing price variability. Unlike solar and wind, CHP is generally available all day, every day.

#### Which facilities may be appropriate for CHP?

Facilities with electric and thermal loads through-

out the year may be candidates for CHP. EPA identified the following types of facilities as potential CHP candidates: industrial manufacturers (chemical, refining, pulp and paper, food processing), institutions, schools (colleges, universities, hospitals), commercial buildings (hotels, office buildings, data centers), wastewater treatment plants, and multi-family or planned residential communities. CHP systems can be designed to the specific needs of a facility, and where appropriate, can be designed to facilitate off-site sale of excess electricity or steam.

#### What financial incentives are available?

The Department of Energy as well as several states have recently announced significant funding opportunities for CHP designed to encourage CHP deployment by mitigating the up-front capital costs. For example, in New Jersey, at least three separate programs provide grants and/or loans to industrial/commercial facilities for CHP projects. The New Jersey CHP Program, funded by the Retail Margin Fund, will be distributing \$60 million in

grants for the installation of CHP systems. The size of the grant will be based on the performance of the system on an annual basis. Applications are due by September 14, 2009. In addition to state funding, CHP systems may qualify for certain state and federal tax incentives, including a federal investment tax credit for 10 percent of expenditures depending on the size and efficiency of the system.

#### How to proceed?

The decision to pursue funding for a CHP system will depend on an evaluation of various factors, including the legal, regulatory, technical, and economic feasibility of the project. Several websites, including the EPA's, offer free online tools designed to assist in a preliminary assessment of feasibility. Beyond this initial screening, industrial and commercial entities considering CHP should contact their legal and technical experts to appropriately design a system and/or apply for public funding.

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