

## *Event Summary*

### **Global CHP/DHC Best Practices: A Policy Maker's Roundtable Sponsored by the IEA's International CHP/DHC Collaborative 10-11 October 2007**

#### **BACKGROUND**

On 10-11 October 2007, the IEA hosted a Policy Makers' Roundtable for Combined Heat and Power (CHP) and District Heating and Cooling (DHC). CHP and DHC are important, mature clean energy technologies offering increased energy conversion efficiency, associated greenhouse gas emissions reductions, and opportunities for enhanced energy system security and stability. This Roundtable was the second hosted by the IEA's International CHP/DHC Collaborative, following on the kickoff meeting held in March 2007.

Deputy Director Ramsay and Tom Kerr and Matt Gray of the Energy Technology Office welcomed over 70 participants from 20 countries. The purpose of the meeting was to discuss and document global best practice policies to advance CHP and DHC as efficient energy supply and climate change solutions. Types of policies discussed included power system requirements to purchase CHP output, taxes, integration of CHP and DHC into greenhouse gas emissions trading schemes, power and heat market planning, and local financing options. Workshop results will be documented in a forthcoming IEA publication next spring, with a view toward contributing to the IEA's climate change and clean energy Programme of Work for the G8 Ministers.

#### **MEETING OUTCOMES**

The first day of the Roundtable focused on lessons learned in more developed CHP/DHC markets, while the second day concentrated on more emerging markets. Following is a list of lessons learned and areas of general consensus stemming from the Roundtable:

##### *General Findings*

- CHP is a proven technology with real energy and cost savings, but sometimes the economic benefits are not realized due to market barriers and regulatory issues. Policies are needed to eliminate these barriers and issues to enable CHP/DHC to reach its economic potential in liberalised markets.
- The most successful CHP/DHC policies combine both planning and market-based support mechanisms.
- CHP/DHC policies must be as simple as possible because more complicated solutions are difficult for policy makers and the public to understand, making them difficult to implement and sustain. Many policies for CHP/DHC to date have suffered from this problem.
- Policy makers find it difficult to engage with CHP/DHC, because they span the electricity and heat sectors, and do not fit the standard policy 'silos'. Consequently, CHP/DHC is often inadequately addressed in energy policy.
- CHP/DHC depend on a well-functioning heat (and cooling) markets, but these are necessarily local. Local initiatives are therefore important, and municipal authorities have a key role to play in developing policies and infrastructure development programs for urban DHC/CHP. Great diversity in local conditions and approaches

means there is no single model for market planning and operation, but the most successful approaches have involved regulatory planning measures.

- Unlike some industrial companies, utilities are used to dealing with fuel-price risks, and so can be attractive partners for such companies. However, there is currently a mismatch in expectations between utilities and CHP developers, which needs to be addressed to encourage more partnerships.
- Cities, such as New York City and London, are pursuing leadership roles with respect to energy infrastructure and policy initiatives on a local level because of the important role energy plays in security and public health and safety. CHP and DHC are important options that can take cities a large part of the way toward solving their energy problems and meeting their GHG reduction goals. London, which has an aggressive GHG goal, is concerned largely with scaling up smaller-sized on-site generation, energy efficiency in buildings, and the regulatory environment.
- Third-party ownership models can make more CHP/DHC projects economically viable.
- There is strong policy momentum on GHG reductions and decisions are being made now, so it is essential to act during this ‘window of opportunity’ to make sure CHP and DHC are being taken into account.
  - The current EU ETS does not create a level playing field, due to the difficulty of capturing the benefits of CHP and DHC in the market. Any actions taken now to smooth out the imperfections for CHP will not be felt until the third commitment period begins in 2012; so in the meantime CHP must be supported by other policy measures. The CHP/DHC community must organize to develop alternative proposals that lead to more equal and consistent evaluations of CHP and DHC along with other energy options.
- For many countries, such as China and Russia, the lack of information about consumption patterns and heating requirements represent a substantial barrier to further CHP/DHC development. Improved data and metering are key to understanding DH demand and identifying opportunities for the expanded use of DHC systems. Without improved metering it will be difficult to expand efficient DH as a clean energy strategy.

#### *General success factors for CHP policy:*

- Only efficient CHP/DHC that makes economic sense should be encouraged; these technologies do not necessarily need financial incentives but rather removal of barriers to succeed;
- Policies must be comprehensive and integrated between departments (including clear goals, understanding of governmental roles & responsibilities, standardisation of definitions and guidelines, adequate financial support, and monitoring of results);
- Policies should focus on creating a market structure which encourages electric utilities to develop CHP and cooperate with industry and other users;
- There is a need for improved data and information about installed CHP/DHC capacity in order to improve modeling and analysis of benefits; and
- In some countries, taxation policies can be used effectively to remove market barriers.

#### *Report Suggestions*

- Summarise results in an easy-to-digest version, with references to more detailed information;
- Simplify and shorten the section on CHP/DHC technologies;

- Emphasize that CHP/DHC is a cost-effective measure for reducing CO2 emissions, including its comparison to other GHG reduction options;
- Appreciate the roles and responsibilities of government authorities at different levels;
- Best-practice policy case studies need to be simple for policy makers that are not CHP/DHC experts to understand what these technologies can offer them in solving the problems they face;
- Case studies should include strategies for working with incumbent utilities and energy suppliers in general; and
- Be sure that the intended audience (policy makers) is involved in reviewing the report before it is finalized, so that it meets their needs.

The agenda, participant's list, and presentations from the Roundtable can be downloaded at: [http://www.iea.org/Textbase/work/workshopdetail.asp?WS\\_ID=324](http://www.iea.org/Textbase/work/workshopdetail.asp?WS_ID=324)

## **NEXT STEPS**

### *Funding*

The IEA will continue to recruit additional voluntary contributions (VCs) to fund the second year of this effort. Please contact Tom Kerr ([tom.kerr@iea.org](mailto:tom.kerr@iea.org)) if you are interested in becoming a Partner.

### *Data Collection and Modelling*

The current phase of data collection has almost been completed with 43 countries in the CHP database and 30 in the DHC database.

### *Report*

The Report's working title is 'Global CHP/DHC Potential and Models for Success'. Participants will be updated on progress and invited to contribute at various stages of report development. A best practice policy template is available for those Collaborators interested in submitting a 1-2 page case study for potential inclusion in the report.

### *Outreach*

Outreach will be directed primarily at policy makers, and will kick off through the G8 process leading to the Hokkaido Summit in July 2008. The outreach strategy is in the beginning stages of development. Participants are encouraged to offer ideas on outreach venues and messages; and will be updated on progress regarding the outreach strategy.