

Combined Heat and Power Stakeholder Meeting #2 (of 4)

Convened 09/24/2014

Meeting Summary Report Prepared For:
Minnesota Department of Commerce - Division of Energy Resources

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Background

In late 2013, as part of the Energy Savings Goal Study required by the state legislature, the Minnesota Department of Commerce (“Commerce”) conducted a series of stakeholder meetings on industrial energy efficiency and combined heat and power (CHP) – including two technical work group meetings focused specifically on CHP – and delivered a report on findings and recommendations to the legislature.

In 2014, Commerce funded two CHP research projects that are specific to Minnesota. One study evaluates CHP regulatory issues and policies and develops an up-to-date analysis of CHP technical and economic potential; another study examines the effects of existing standby rates and net metering rules on CHP and waste heat to power projects.

To continue to build on Commerce’s past and current CHP work, and to focus on more specific policy details and recommendations, Commerce was awarded a U.S. Department of Energy grant to carry out a strategic stakeholder engagement process and develop an Action Plan. As part of the project’s scope of work, Commerce is convening a series of stakeholder engagement meetings to provide information and facilitate discussion on CHP issues involving Minnesota’s regulatory framework, technical/economic potential, and education/training needs. These meetings are intended to achieve several primary objectives:

- Inform stakeholders of current efforts underway to increase CHP implementation
- Facilitate discussion regarding the opportunities and barriers to greater CHP deployment
- Solicit ideas for possible solutions to these barriers
- Provide information in the development of an Action Plan, which will act as a roadmap to facilitate greater implementation of CHP projects throughout the state

Meeting Overview

The second CHP Stakeholder Meeting: “Overview and Comparison of State CHP Policies and Programs, Standby Rates, and Net Metering,” convened on Sept. 24, 2014, from 1:00 p.m. to 4:30 p.m., at the Wilder Center (451 Lexington Parkway N., St. Paul, Minnesota). The meeting was attended by 65 people. The primary goals of the meeting were to present information regarding various state policies and utility strategies regarding CHP deployment, as well as information about Minnesota’s standby rates and net-metering tariffs as they pertain to CHP facilities. An additional goal was to address questions among stakeholders and facilitate discussion about the topics presented. The

meeting was divided into two presentation sections, with two moderated Q&A sessions providing opportunities for feedback and questions (*Appendix A*).

The meeting began with an introduction by Jessica Burdette of the Minnesota Department of Commerce, Division of Energy Resources, who welcomed attendees and explained how the CHP Stakeholder Engagement meetings are intended to serve Minnesota's statewide energy policy objectives. Next, Michael Burr of Microgrid Institute presented an overview of discussion topics and outcomes from CHP Stakeholder Meeting #1, which convened on Sept. 3, 2014. The remainder of Meeting #2 consisted of presentations by Cliff Haefke of the U.S. Department of Energy CHP Technical Assistance Partnership – Midwest; Ahmad Faruqui of The Brattle Group (who participated via Internet video conference); Lise Trudeau of the Department of Commerce; and Graeme Miller of the Energy Resources Center at the University of Illinois-Chicago.

Haefke's presentation¹ focused on the U.S. national and state policy context for CHP policies. He discussed emerging drivers for CHP in North America generally, and reviewed President Obama's Aug. 30, 2012 executive order establishing national goals for CHP development as part of national energy efficiency investment initiatives. He explained how some states include CHP in clean energy portfolio standards – including:

- Renewable portfolio standards (RPS) (*CO, CT, HI, ME, NV, and NC*);
- Energy efficiency resource standards (EERS) (*MA, OH, IL, and MD*); and
- Alternative portfolio standards (APS) (*MA*).

Additionally, Haefke described various states approaches to CHP eligibility requirements, minimum efficiency requirements, performance-based metrics, and CHP targets. He provided detailed discussion of programs in Massachusetts (Mass SAVE and APS programs) and Illinois (Energy Efficiency Portfolio Standard).

Following Haefke's presentation, Dr. Faruqui in his presentation² addressed three types of strategic approaches that utilities are taking toward CHP:

- Type I: Blocking CHP
- Type II: Accommodating CHP
- Type III: Pursuing CHP as an Opportunity

Faruqui explained that some utilities that seek to block CHP apply several approaches to discourage customers from adopting CHP, including for example: discounted pricing,

¹ Presentation: U.S. Department of Energy CHP Technical Assistance Partnership – Midwest
<http://mn.gov/commerce/energy/images/DOEPresentation2.pdf>

² Presentation: The Brattle Group
<http://mn.gov/commerce/energy/images/BrattlePresentation2.pdf>

ratcheted demand charges, exit fees, and discriminatory standby service tariffs. Utilities that seek to accommodate CHP, however, work with customers to take advantage of CHP and other alternative technologies without exiting the grid. Utilities that pursue CHP as an opportunity provide interruptible rates and dispatch schedules, and consider investing in CHP at customer sites.

A question-and-answer (Q&A) period followed Faruqui's presentation, during which participants raised questions and offered comments on issues discussed by both Haefke and Faruqui. (*See Moderated Q&A Discussion Summary*).

After a short break, the meeting re-convened with presentations by Trudeau and Miller. Trudeau discussed a parallel process at the Department of Commerce focusing on standby rates for distributed generation generally, pursuant to a Minnesota Public Utilities Commission order on Jan. 27, 2014. Trudeau's presentation³ summarized a Sept. 11, 2014 meeting the Department convened as part of that process, addressing the methodology for setting standby rates in Minnesota, the appropriateness of those rates, how they should be applied for various customers, and their terms and conditions.

Following Trudeau's presentation, Miller⁴ provided the Energy Resource Center's (ERC) analysis of Minnesota standby rates and net metering policies as they pertain to CHP opportunities in the state. Miller defined the characteristics and purposes of standby service generally, and discussed ERC's analysis of standby rate principles, based on the work of several organizations.⁵ These principles include three criteria for comparison:

- *Transparency*: Clear, unbundled pricing;
- *Flexibility*: Treatment of varying customer load requirements, availability factors, system benefits, and regional market purchases;
- *Economically Efficient Consumption*: Peak-sensitive pricing and structures that allow economic demand management by customers.

³ Presentation: Department of Commerce

<http://mn.gov/commerce/energy/images/CommercePresentation2.pdf>

⁴ Presentation: Energy Resources Center

<http://mn.gov/commerce/energy/images/EnergyResourcePresentation2.pdf>

⁵ SEEACTION Policy Guide (2013), U.S. Department of Energy

https://www4.eere.energy.gov/seeaction/system/files/documents/see_action_chp_policies_guide.pdf

NRRI: Electric Utility Standby Rates

<http://www.nrri.org/documents/317330/94c186ab-4f16-4a69-8e8c-ece658e752b1>

EPA, ICF, RAP: Standby Rates for Customer Sited Resources

http://www.epa.gov/chp/documents/standby_rates.pdf

RAP: Standby Rates for Combined Heat and Power Systems

www.raponline.org/document/download/id/7020

Miller then explained the metrics ERC used in the analysis (avoided rate modeling methodology⁶), and discussed the results of the analysis as applied to three of the state's utilities (Xcel, Minnesota Power, and Otter Tail Power). He continued with a discussion of net metering policies and how they interact with other utility policies. Miller discussed how net metering applies to CHP in Minnesota as well as in several other states, and provided recommendations based on ERC's analysis of state practices.

Moderated Q&A and Discussion Summary

Participants in CHP Stakeholder Meeting #2 raised a variety of questions for all three presenters, and they also offered comments on several topics, focusing on ideas and issues involving potential utility investment in CHP, potential interaction of prospective CHP goals and other state policy strategies, and standby rate design considerations and their effects on CHP.

(Note: The paraphrased questions and answers summarized below are drawn from remarks and discussion among numerous participants at the meeting, and therefore they do not represent direct quotes from participants or official guidance from the Minnesota Department of Commerce.)

Q: What examples illustrate the Type III utilities discussed by Dr. Faruqui – i.e., those that pursue CHP investments as a rate-base asset?

A: Some utilities privately are exploring this option but haven't yet brought proposals for consideration. A small number of utilities in the Southeastern United States own or operate CHP facilities.

Q: What characteristics are shared among Type III utilities?

A: Type III utilities tend to view distributed generation as an increasingly substantial factor in the industry. Additionally, their state utility regulators share that outlook and treat such investments accordingly.

Q: What makes CHP different from other utility rate-base assets in terms of cost recovery?

A: A CHP plant's economic performance depends on a stable market for its output, especially thermal energy. If a CHP plant's host ceases using heat, the CHP investment could become a stranded asset affecting customer rates.

Q: Given the potentially larger size of CHP facilities and their longer development lead time, how should policies prevent CHP from crowding out other efficiency and clean energy resource options?

A: Several options could be considered, including establishing dedicated CHP tiers, program adjustment processes, or separate programs. Additionally minimum efficiency

⁶ EPA, *Op cit.*: http://www.epa.gov/chp/documents/standby_rates.pdf

standards could provide parameters that would serve to manage differences among options, including scale and also development time frame.

Q: Please clarify the DOE CHP TAP's recommendation that standby tariffs shouldn't seek to recover capacity costs otherwise recovered in regular rates.

A: If the utility would collect enough from a CHP customer in regular rates to recover the costs of providing that customer's standby services, then that customer shouldn't be subject to standby rates.

Q: How do utility standby rates accommodate customers with varying loads?

A: Supplemental power rate structures and other tariffs can be designed to serve customers with those characteristics.

Conclusion: Areas for Further Discussion

Discussion among participants during CHP Stakeholder Meeting #2 yielded a few key issues for future consideration and clarification:

- Cost-benefit characteristics of CHP versus other energy options serving similar objectives;
- Challenges that some potential hosts face in raising affordable capital for CHP projects with payback exceeding just one or two years; and
- Policy options for prospective CHP plants built larger than required to serve host site requirements to capture greater scale economics.

Meeting #3 in the Minnesota CHP Stakeholder Engagement series is scheduled for Oct. 15, 2014, at the Wilder Center in St. Paul. The meeting will be comprised primarily of two panel sessions during which CHP stakeholders will present views and discuss Minnesota's CHP potential and outlook, and proposed policy options and alternatives for facilitating CHP deployment. Additionally it will include a synthesis of comments received during the comment period convened by DER from Sept. 24 through Oct. 10, 2014. Summary reports and other materials related to the CHP Stakeholder Engagement process are publicly accessible at the DER website:

<http://mn.gov/commerce/energy/topics/clean-energy/distributed-generation/2014-workshops/chp-meetings.jsp>

Appendix A:

Agenda

Minnesota CHP Stakeholder Meeting #2 (9/24/2014)

- 1:00 - 1:15 Introduction (Commerce)
- 1:15 - 1:30 Review Meeting #1 highlights and proposals (Microgrid Institute)
- 1:30 - 2:00 CHP policy context – state and federal (DOE Midwest CHP TAP)
- 2:00 - 2:30 Strategies for engaging utilities in CHP (The Brattle Group)
- 2:30 - 3:00 Moderated Q&A
- 3:00 - 3:15 BREAK
- 3:15 - 3:30 Summary of Generic Standby Rates proceeding (Commerce)
- 3:30 - 4:00 Standby rates – barriers to CHP and recommendations (ERC)
- 4:00 - 4:30 Moderated discussion (MGI)