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Midwest CHP Initiative Semi-Annual Report September 2002


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Executive Summary

Though CHP is recognized as a major element of the National Energy Policy, it is not expected that the rate of deployment will change until regulatory and institutional changes are developed and implemented on the State level. Over the past two years, the Midwest CHP Initiative and the Midwest CHP Application Center have been actively pursuing activities to reduce and eliminate barriers to CHP. Their actions have been cited by several sources as the model for the country in building industry – government partnerships to support DOE’s CHP Challenge goal of doubling CHP in the U.S by 2010.

This document, being the first semi-annual report (presented after almost two years of the Initiative’s existence) presents the overall background and origins of the Midwest CHP initiative, its organization, key accomplishments, and plans for the future.



The mission of the MW CHP Initiative is as follows: 1) lead the region in encouraging the use of and in implementation of CHP technologies; 2) drive CHP roadmap action items for the Midwest Region in support of DOE’s goal of doubling CHP use by 2010, and; 3) provide a central point for coordination and communications among the various stakeholder organizations in the region. The group also noted that we are acting to promote CHP in the region to help implement an energy mix that will build the bridge to the new economy electricity requirement that will improve the environment, improve electric power reliability and security, improve energy efficiency, and reduce end user costs and risks.

The thinking, planning and actions provided by the diverse membership of the Initiative, combined with the focused resources of the Application Center, have resulted in the completion of several key actions, discussed fully in the report. Some of these accomplishments include the following:

- 7-State PUC Work Group Interconnection Workshop-
- Engaging State Public Utility Commissions / Development of PUC Educational Tool
- Illinois CHP Workshop
- DER Road Show Coordination
- Chicago Energy Plan Implementation Program
- Illinois Permitting Guideline
- Input to Illinois Energy Policy

- Wisconsin Development Plan
- Michigan Development Plan
- Education and Outreach Presentations

Based on the positive response received for our efforts, the Initiative and Application Center have been contacted and become instrumental in the startup of other Regional Initiatives through our support of U.S. DOE's Regional Offices. These initiatives include the Northeast CHP Initiative, the Northwest CHP Initiative, and the Southeast CHP Initiative.

The Midwest CHP Initiative plans on continuing its efforts over the long term. For the next 6 months, the following key activities are being planned"

- Meeting with the Illinois Commerce Commission
- State PUC Tariff Workshop
- Establish National Initiative Steering Committee to coordinate efforts between centers
- DER Roadshow Coordination
- Continue State Specific Planning Efforts
- Execute Michigan and Wisconsin Development Plans.



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Attachment: *Meeting Notes from January 15, 2001 through July 16, 2002*

1. Introduction

Over the past two years, the Midwest CHP Initiative and the Midwest CHP Application Center have been cited by several sources as the model for the country in building industry – government partnerships to support DOE’s CHP Challenge goal of doubling CHP in the U.S by 2010. Together with strong support from U.S. DOE’s Chicago Regional Office (Nowakowski), the GTI/UIC team who chair the Midwest CHP Initiative (GTI – Bronson), and direct the Midwest CHP Application Center (UIC - Cuttica) have presented our successes and actions for the future at numerous conferences, including:

- U.S. DOE’s Peer Review Conference “Power to Choose”, November 2001
- U.S. CHPA’, U.S. DOE, and U.S. DOE’s CHP Roadmap Workshops – 1 year later, October, 2001

This document, being the first semi-annual report (presented after almost two years of the Initiative’s existence) presents the overall background and origins of the Midwest CHP initiative, its organization, key accomplishments, and plans for the future.

1.1 Background

In December 1998, the Assistant Secretary for Energy Efficiency and Renewable Energy issued a CHP Challenge calling on industry and government to work together to double the capacity of CHP in the United States by 2010. The initial steps taken by U.S. DOE to implement this challenge were the holding of several regional and national workshops to develop the “Roadmap” to meet the goal of the CHP Challenge. One of the first regional meetings, the Lake Michigan Regional CHP Roadmap Workshop was held in Chicago, IL in November 1999. The results of the workshop were captured in a Roadmap document, issued in March of 2000. Over 40 organizations were represented:

Lake Michigan CHP Roadmap Participants, November 1999

ACEEE	Johnson Boiler Company
ABN-AMRO	Michigan Public Service Commission, Electric Div.
AED	Midwest Cogeneration Association
Argonne National Laboratory	Missouri Dept. of Natural Resources-Division of Energy
Baker & McKenzie	Nisource
Ballard Engineering Inc	Northern Indiana Public Service Company
City of Chicago, Dept. of Environment	Onsite Sycom Energy Corporation
ComEd	O’Shea and Associates
Delta Institute	Peoples Energy Corporation
Encorp, Inc	Primary Energy
Energetics, Inc	Richard Oliver International
Energy Center of Wisconsin	Rolls-Royce

Energy Masters International, Inc	Sieben Energy
Environmental Law and Policy Center	Sonnenschien Nath & Rosenthal
GRI	South Cook Environmental Action
Illinois Dept. of Commerce & Community Affairs	Turthill Corp.
Illinois EPA	US Department of Energy, Office of Energy Efficiency and Renewable Energy
Indiana Dept. of Commerce	U.S. Department of Energy Chicago Regional Office
Indiana Office of Air Management	U.S. Environmental Protection Agency, Region V
Institute of Gas Technology	US EPA - Office of Atmospheric Programs
Intl. Union of Oper. Engineers, Local 99	Wisconsin Electric
Jenbacher Energiesysteme,	Wisconsin Energy Bureau

In October 2000, U.S. DOE sponsored the first National CHP Roadmap Session in Baltimore, MD. As part of this session, regional updates were provided, however, it appeared that little had been done as far as implementing the regional roadmaps. At the conference, five Midwest companies had lunch and discussed their disappointment with the lack of progress on the regional roadmap. These organizations committed to getting together with U.S. DOE's Chicago Regional Office to develop a plan for implementing these roadmap actions, and promoting the implementation of CHP in the region. As such, the Midwest CHP Initiative was born. After a few initial planning meetings, this group evolved into the Midwest CHP Initiative – an ad-hoc consortium of over 20 regional industrial, government, educational, and environmental organizations committed to spearheading the deployment of CHP in the region. The initial activities of the Initiative were focused on Illinois, Indiana, Michigan, and Wisconsin, and recently the initiative has included participation from Minnesota, Missouri, and Iowa.

With the introduction of the Midwest CHP Application Center in the Spring of 2001, both organizations have worked hand in hand to own the action items from the Roadmap sessions and promote CHP in the region.

1.2 Mission

At the first organizational meeting, the mission of the MW CHP Initiative was established as follows: 1) lead the region in encouraging the use of and in implementation of CHP technologies; 2) drive CHP roadmap action items for the Midwest Region in support of DOE's goal of doubling CHP use by 2010, and 3) provide a central point for coordination and communications among the various stakeholder organizations in the region. The group also noted that we are acting to promote CHP in the region to help implement an energy mix that will build the bridge to the new economy electricity requirement that will improve the environment, improve electric power reliability and security, improve energy efficiency, and reduce end user costs and risks.

2. Organization

2.1 Chair and Subcommittees

As one of its first tasks, the Midwest CHP Initiative reviewed the actions of the two roadmap sessions and determined they fell into what was termed five key elements of CHP deployment: Policy, Interconnection, Market Development, Education, and Outreach and Permitting. The Initiative is organized around these five key elements with a Chair, and Subcommittee Chairman for each of the key elements. The current chairs are as follows:

Midwest CHP Initiative Chair:	Ted Bronson, GTI
Subcommittees:	
Education and Outreach	John Cuttica, UIC, Energy Resources Center
Market Development	Gary Nowakowski, U.S. DOE Chicago RO
Policy	John Moore, Environmental Law and Policy Center
Interconnection	Art Smith, NiSource
Permitting:	John J. Kelly, U.S. EPA, Region V

As noted above the Midwest CHP Initiative is closely integrated with the Midwest CHP Application Center. Please note that the Chair of the Education and Outreach Subcommittee is the Executive Director of the Application Center, and that the Chair of the Initiative, is GTI's Project Manager for its support of the Application Center.

2.2 Participants

The Midwest CHP Initiative is an ad-hoc consortium of over 20 regional industrial, government, educational, and environmental organizations committed to spearheading the deployment of CHP in the region. The initial activities of the Initiative were focused on Illinois, Indiana, Michigan, and Wisconsin, and recently the initiative has included participation from Minnesota, Missouri, and Iowa. Because of legal reasons, many companies and government organizations cannot be "members" of the Initiative, and as such, those who have attended and provided input to meetings are classified as participants. Existing participants are listed as follows:

Midwest CHP Initiative Participant List

BOMA, Chicago	Midwest Energy Efficiency Alliance
Capstone Turbine Corp	Minnesota Department of Commerce
Delta Institute	Missouri Department of Natural Resources
Environmental Law and Policy Center	NiSource
Gas Technology Institute	Northeast-Midwest Institute
Illinois Clean Energy Community Foundation	Peoples Energy

Illinois Department of Commerce and Community Affairs	University of Illinois at Chicago, Energy Resources Center
Indiana Department of Commerce	U.S DOE, Chicago Regional Office
Iowa Department of Natural Resources	U.S. EPA (Headquarters and Region 5)
Laclede Gas Company	Wisconsin Bureau of Energy
Michigan Department of Commerce	Wisconsin Energy Center
Michigan Public Service Commission	Wisconsin Public Service Commission

2.3 Meetings

Currently, the Midwest CHP Initiative meets approximately every two months. Typical meetings consist of a morning session on emerging issues, and an afternoon session focusing on subcommittee breakout session. Recently, the Initiative is taking a more direct approach at addressing specific state concerns, with meeting held to develop specific plans and actions for Wisconsin and Michigan.

Meetings notes from the various meetings are in attachment to this document.

3. Key Accomplishments

The thinking, planning and actions provided by the diverse membership of the Initiative, combined with the focused resources of the Application Center, resulted in the completion of several key actions that served to raise CHP awareness, begin the process towards eliminating regulatory, institutional and technical barriers and develop CHP markets. Key accomplishments are as follows:

3.1 Midwest

Interconnection Workshop - This workshop brought together Public Utility Commission working groups from seven states with industry experts on interconnection (Joe Galdo, U.S. DOE, Dick DeBlasio, NREL, and Terri Eaton, Texas Public Utility Commission). The purpose of the workshop was to share lessons learned from interconnect activities within the Midwest States; identify elements from State activities that might be applied consistently across the Midwest and provide expert insights from a national perspective. Feedback from attendees indicated the meeting was a success, as relationships develop this should provide for a more consistent Interconnection platform from Midwestern States. A subsequent workshop on tariff issues is being scheduled for the first quarter of 2003.

Engaging State Public Utility Commissions / Development of PUC Educational Tool / Meeting with Illinois Commerce Commission – As part of our Policy Subcommittee, the Initiative and Application Center are planning to engage with Public Utility Commissions in the Midwest to educate them on the benefits and barriers of CHP, as well as state specific examples of CHP successes, and where CHP was thwarted by barriers. This educational tool is currently being developed, and a meeting has been scheduled to present this tool to the Illinois Commerce Commission on October 1st, 2002. After this initial presentation, the subcommittee will develop plans for approaching other utility commissions in the Midwest.

Illinois CHP Workshop- This workshop was sponsored by the State of Illinois, EPA, and US DOE, with planning efforts chaired by John Cuttica of the Midwest CHP Initiative and Application Center. This conference focused on prospective end users as real life case studies of CHP installations were shared with the attendees. The majority of the speakers and breakout session leaders were resources of the Initiative and the Application Center.

DER Road Show Coordination: The Initiative (including the U.S. DOE Chicago Regional Office) and Application Center are working with US DOE headquarters to coordinate this activity to educate local building and code authorities throughout the Midwest.

Chicago Energy Plan Implementation Program – GTI was contracted by the City of Chicago to develop its implementation program for the CHP and DE portions of its Energy Program. GTI developed an initial report: “Implementing Chicago’s Energy Plan: Market Opportunities and Barriers”, and called on the resources of the Initiative

and Application Center for an expert panel meeting to develop specific action plans for implementation of the plan and removal of barriers.

Illinois Permitting Guideline: One of the Initiative's first efforts, this action is being led by UIC's Energy Resource Center through a DOE and State of Illinois grant. UIC has engaged the participants of the Initiative, including those of regional EPA, GTI, and ELPC to develop this guideline to streamline the permitting process in Illinois. After its completion, it is planned to develop similar guidelines for other Midwest States

Input to Illinois Energy Policy: Early in its existence, the Initiative, as well as the Application Center provided direct comments to influence the Illinois Energy Policy, issued in late 2001. Due to Initiative participant's involvement in the development of this document, supporting the Midwest CHP Initiative is a line item in the governor's policy.

Market Development Plan: This is a work in progress being led by DOE's Chicago Regional Office to develop a plan to further deployment of three distinct size ranges of CHP in the Midwest: micropower (<500 kWe), mid- power (500-2000 kWe), and large CHP (>2000 kWe).

Wisconsin Development Plan: This past July, the Initiative held a meeting at the Wisconsin Department of Administration Offices to plan a state specific strategy to further CHP in Wisconsin. Several Wisconsin organizations participated with a focus on Wisconsin Specific CHP issues such as biomass, the farm bill, new interconnection regulations, and market plans from one of its key electric utilities, Alliant Energy. The initial plan and a summary of the meeting are provided in the Attachment on the July 2002 meeting minutes.

Michigan Development Plan: This September, the Initiative and Application Center held a meeting at Michigan's Microgeneration to Power Parks Conference (September 23rd) to develop a CHP implementation plan for Michigan. Several Michigan organizations were represented. The meeting summary and development plan are currently being written as the meeting took place late in September. One key action will be to develop a Michigan specific conference on CHP steered towards potential end users.

Education and Outreach Presentations

The Initiative and Application Center have made numerous presentations on CHP and the Application Center at both local and national conferences to further the development of the CHP market. Some of these presentations include:

U.S. DOE's DER Power to Choose Peer Review, November 2001, Regional CHP Activities: Midwest Initiative and Application Center for CHP, Ted Bronson

U.S. CHPA', U.S. DOE, and U.S. DOE's CHP Roadmap Workshops – 1 year later, October, 2001, Regional CHP Activities: Midwest Initiative and Application Center for CHP, Ted Bronson and John Cuttica

Midwest Cogeneration Association Meeting, November 28th, 2001, National CHP Roadmap: Implementation Activities in the Midwest", Ted Bronson

DOE Reciprocating Engine Peer Review, April 22nd, 2002: "The Role of Reciprocating Engines in the Distributed Energy Market: Market Forces and Opportunities", Ted Bronson

FEMP DER Workshop, June 25th 2002 "Grid Interconnection/ Utility Tariffs: Issues and Solutions", Ted Bronson

NYSERDA DER Conference, June 21st, 2002 "CHP Economics and Evaluation Tools", John Kelly

Illinois Energy Stakeholders Meeting, August 14th, 2002 "Strategies to Promote Retail Competition", John Kelly

Michigan Microgeneration to Power Parks Conference, September 23rd, 2002, Combined Heat and Power:

These and numerous other presentations made by the Application Center can be found on the Application Center website (www.CHPCenterMW.org)

3.2 Support of other Regions

Over the past two years, the Midwest CHP Initiative and the Midwest CHP Application Center have been cited by several sources as the model for the country in building industry – government partnerships to support DOE’s CHP Challenge goal of doubling CHP in the U.S by 2020. Initiative participants and Application Center members have presented our successes and actions for the future at numerous conferences, which has sparked significant interest in the startup of initiative and application centers in other regions.

Based on the positive response received for our efforts, the Initiative and Application Center has been contacted and become instrumental in the startup of other Regional Initiatives, most notably the Northeast CHP Initiative, the Northwest CHP Initiative, and the Southeast CHP Initiative through our support of U.S. DOE’s Regional Offices. The Initiative and Application Center have provided substantial support to these regions by providing guidance and structure to the development of these Initiatives, helping identify participants, meeting planning, and meeting support. It is noted that many of these initiatives have similar organizations to that of the Midwest CHP Initiative, with Steering Committees established for the key elements of CHP deployment. At this point in time, each of these initiatives is a voluntary ad-hoc group, working to develop plans and take action. Some Initiatives are currently developing proposals to U.S. DOE for Application Centers.

4. Next Steps

The Midwest CHP Initiative plans on continuing its efforts over the long term. For the next 6 months, the following key activities are being planned”

Meeting with the Illinois Commerce Commission: Scheduled for October 1st, 2002. Please see above.

State PUC Tariff Workshop: Based on the success of the Interconnection workshop, Initiative and Application Center personnel are beginning to construct initial plans for this workshop to take place in the 1st quarter of 2003.

Establish National Initiative Steering Committee to Coordinate efforts between centers: With the development of new regional initiatives a need has arose for a strong, organized support network that can serve to coordinate efforts and provide regions with the support and direction necessary to develop successful government-industry partnerships across the country, where U.S. DOE's resources are maximized in providing efficient and effective startup of Regional Initiatives and Application Centers, as well as providing a means of communication and information sharing between these organizations. GTI and UIC have responded to a U.S. DOE solicitation to provide this coordination and support to other regions.

DER Roadshow Coordination: Participants of the Initiative are working to coordinate DER roadshows to take place in the next six months in Illinois, Wisconsin, Iowa, and Minnesota.

State Specific Planning Efforts: The Initiative will work to develop at least one additional State specific planning effort in the next six months, as well as work to begin to execute those plans developed for Wisconsin and Michigan.

Midwest CHP Initiative Meetings – Hold approximately three meetings over the next six months to further planning and activity execution efforts.