

**Midwest CHP Initiative
Semi-Annual Report – September 2002**

Attachment

Meeting Notes:

January 15, 2001 through July 16, 2002

**Midwest CHP Initiative
January 15, 2002 Projects Meeting Notes and Actions**

The following is a brief summary of notes from the meeting and agreed to actions, from the subject meeting that took place at the U.S. Environmental Protection Agency's Region 5 offices in Chicago, Illinois.

Attendees

Bob Anderson, People's Energy
Wendy Bensley, Midwest Energy Efficiency Alliance
Tim Brown, Delta Institute
Ted Bronson, GTI
John Cuttica, UIC, Energy Resources Center
Leslie Farrar, UIC, Energy Resources Center
John F. Kelly, GTI
John J. Kelly, U.S. EPA, Region V
David Kramer, Illinois Department of Commerce and Community Affairs
John Moore, Environmental Law and Policy Center
Steffen Mueller, UIC, Energy Resources Center
Gary Nowakowski, DOE Chicago Regional Office
Art Smith, NiSource
Tom Stanton, Michigan Public Service Commission
Luis Troche, U.S. EPA, Headquarters

PURPOSE / INTRODUCTION / OPENING STATEMENTS

Mr. Bronson welcomed everyone and noted that the sole purpose of this meeting was to review and address the four major short term projects that the initiative is currently undertaking: 1) The Midwest PUC Interconnect Workshop on February 12, 2002; 2) The meeting with the Illinois Commerce Commission, 3) the Permitting Guideline, and; 4) comments on a draft emissions standard guideline developed by the Regulatory Assistance Project.

MIDWEST INTERCONNECT WORKSHOP

Mr. Cuttica stated the purpose of the workshop as providing a forum for representatives from the 8 Midwest states to do the following: share lessons learned, identify common regional elements, build relationships between state policymakers, and provide perspectives of nationally recognized leaders in the field of interconnect, including the sponsors of the National Interconnect Standard (IEEE 1547). The tentative date was noted as February 12, 2002, at UIC. It was noted that Mr. Joe Galdo, DOE, Office of Distributed Energy Resources, Mr. Dick DeBlasio, National Renewable Energy Laboratory (IEEE 1547 Chair), and Mr. Ed Ethridge, Texas Public Utility Commission, have committed to speak at the workshop. It was noted that this workshop is being sponsored jointly by the MW CHP Initiative and the MW CHP Application Center.

Mr. Cuttica noted that a letter has been sent to the Commission chair of each state, with copies provided to interconnect working group members, and their supervisors, as well as the state energy office contacts. A complete distribution list has been provided with the letter, in order to generate enthusiasm for each state to attend. To date, Mr. Cuttica noted that he has received a positive response from 6 of 8 states invited.

It was noted that though Mr. Stanton is planning to attend, the Michigan PUC lead for Interconnection is not planning on attending. It was suggested a letter be sent to the commissioner, indicating the positive response to the conference received from other states. Mr. Cuttica agreed to take this action.

Current near term actions being executed by UIC includes: finalizing the agenda, sending out confirmation letter to attendees, final confirmation of presenters, and coordination of final logistics. It was noted that as of this date, Mi

Mr. Stanton noted that the Regulatory Assistance Project is developing a model rule for Interconnection standards and that he (Mr. Stanton) is involved in this project. He agreed to provide a summary of this project at the workshop.

A short discussion was held concerning the attendance of utility personnel at the workshop. It was agreed by all that since this may be of concern to the PUCs involved that no utility members of the initiative would attend the workshop. It was noted that the meeting should encourage open communication.

Mr. Cuttica and Steffen Mueller were commended on their fine effort in putting together the workshop.

MEETING WITH THE ILLINOIS COMMERCE COMMISSION

Mr. Moore stated that the purpose of the meeting with the ICC's Electricity Policy Committee is to discuss benefits, issues and specific barriers related to CHP in Illinois. Specifically, the presentation will be geared to kick start the ICC with actions regarding interconnection and tariffs relating to CHP.

Mr. Moore has spoken with Harry Stoller and Terry Harvil's assistant, Ms. Katie Papadimitriou, and he indicated that both are interested in moving forward with the meeting. Mr. Moore will therefore coordinate this meeting within the next few weeks, targeting the week of February 25th. An outline for the presentation was passed out and discussed. A draft presentation will be developed by Mr. Moore, Mr. Bronson, and Mr. Nowakowski, and Mr. Cuttica and submitted to the group for review.

Mr. Bronson stated that, as part of the presentation to the ICC, that we are working to provide a specific list of Illinois CHP projects that have been stopped due to standby charges and re-negotiated rates. Mr. Anderson committed to provide examples of Illinois projects stopped under similar circumstances to Mr. Bronson and Mr. Moore prior to the ICC meeting.

PERMITTING GUIDELINE

John Cuttica provided a handout and updated the group on status of the Permitting Guideline Project, a DOE sponsored project through Illinois Department of Commerce and Community Affairs. He noted that the focus of the project is to assess and provide guidance on the permitting process with respect to implementing CHP in Illinois. It will then be determined how to apply the Illinois permitting conclusions to other Midwest states.

Mr. John J. Kelly (EPA) noted that in his opinion this issue may be more of a Regulatory issue than a permitting issue, due to the many siting and zoning issues involved, and suggested a Regulatory Guidebook.

Mr. Cuttica noted that the next steps are to prepare a detailed project plan, milestone schedule, and detailed outline, with a meeting to be held in early March. After completion of this task, and discussion with the project advisory group, he will decide if any changes need to be made to the direction of the project. Mr. Kelly urged that Chris Romaine and Dick Lawler be on project advisory group. Also, Mr. Anderson to provide Mr. Mueller with technical contact from Peoples Energy.

DRAFT STATE EMISSION GUIDELINES, REGULATORY ASSISTANCE PROJECT

Mr. John Kelly (GTI) briefly discussed this document and provided the group copies of GTI's comments. He noted that comments were originally requested to be submitted by the end of the year, however, it appears that this may be extended until February. He noted that the document and submitted comments can be found on the web at www.rapmaine.org. Mr. Kelly noted that while the document provides a good framework for regulation, in GTI's opinion, a basis was lacking for many of the key recommendations provided in the document, and that overall, if adopted, could prove to be a major detriment to DER and CHP.

Mr. Cuttica noted that in his review that it did not appear an economic tradeoff analysis was performed, and that this analysis is performed with typical government regulations projects. It was suggested that the document's approach to recommend that each state adopt this exact criteria is risky and may not prove credible.

A discussion ensued on Best Achievable Control Technology for DG. Mr. John J. Kelly (EPA) noted that BACT is an emission rate and not a technology. He agreed to provide the group information on EPA's guidelines for BACT.

Mr. Kelly noted that a workshop may be held in the near future to further discuss comments. The group took an action to review GTI's comments (noting that these are from GTI's perspective representing the gas industry) as a possible starting point for development of comments by the MWCHP Initiative. Mr. Brown noted that the group should address comments from the perspective of the MW CHP Initiative and our mission.

MISCELLANEOUS NOTES AND ANNOUNCEMENTS

Mr. Nowakowski noted that DOE's FEMP is willing to sponsor a workshop in June or July on Distributed Energy Resources.

Mr. Cuttica noted that the State of Illinois and the City of Chicago have signed up as partners with EPA's CHP Partnership. He noted that they are looking at holding a CHP workshop in the Chicago Area for Illinois, and a committee is being formulated to develop this. He noted that a site should be selected in two weeks.

It was noted that a Federal Reserve Meeting on Electricity Policy is being held January 17th in Chicago by invitation only. It was noted that Bob Dixon, DOE, Office of Power Technology will be speaking at the event.

Mr. Bronson noted that on February 25th, the second meeting of the Northeast CHP Initiative will be held and that a conference is being planned for February 20th and 21st to establish a similar Mid-Atlantic effort.

Mr. John J. Kelly noted that in EPA's involvement with the MW CHP Initiative, due to the nature of their organization, they will not be involved in any comments submitted on behalf of the group, and should not be represented as such.

ACTIONS

- 1) John Cuttica to send letter to Michigan PUC indicating positive response to the event, and requesting their attendance. Letter to be sent to Commissioner Chapelle, and copying William Cellio and Paul Carlson.
- 2) Tom Stanton to provide overview of RAP interconnect project at MW Interconnect workshop.
- 3) Mr. Moore to set date with ICC for MW CHP Initiative presentation, targeting the week of February 25th.
- 4) Mr. Moore, with Ms. Bronson, Nowakowski, and Cuttica, to develop ICC presentation and submit to group for review.
- 5) Mr. Anderson to provide Mr. Bronson and Mr. Moore with examples of projects stopped by utility barriers to CHP in Illinois.
- 6) John J. Kelly to provide group with EPA guidelines on Best Achievable Control Technology (BACT)
- 7) Group to review GTI's comments on RAP's draft emission guideline from the perspective of the MW CHP Initiative and its mission.
- 8) John Cuttica / Steffen Mueller to discuss status of Permitting Guideline at next meeting.
- 9) Mr. Anderson to provide Mr. Mueller with People's technical contact for Permitting Guideline project advisory group.

MEETING CLOSEOUT

It was determined that the next meeting would be tentatively scheduled to be held the week of March 5, 2002, at the U.S. Environmental Protection Agency, Region 5 Headquarters, Chicago, Illinois.

Mr. Bronson thanked everyone for their participation, and the meeting was adjourned.

Regards,

Ted Bronson
Associate Director, Distributed Energy
GTI
847-768-0637

Midwest CHP Initiative
March 19, 2002 Central Committee Meeting Notes and Actions

The following is a summary of notes from the meeting and agreed to actions, from the subject meeting that took place at the U.S. Environmental Protection Agency's Region V offices in Chicago, Illinois.

Attendees

Bob Andersen, People's Energy
Beth Burka, Laclede Gas Company
Jim Bodensteiner, Iowa Department of Natural Resources
Ted Bronson, GTI
Leslie Farrar, UIC, Energy Resources Center
John J. Kelly, U.S. EPA, Region V
Una McGeough, GTI
Steffen Mueller, UIC, Energy Resources Center
Gary Nowakowski, DOE Chicago Regional Office
Mike Revello, People's Energy
Ethan Rogers, Indiana Department of Commerce
Art Smith, NiSource
Tom Stanton, Michigan Public Service Commission
Luis Troche, U.S. EPA, Headquarters

PURPOSE / INTRODUCTION / OPENING STATEMENTS

Mr. Bronson welcomed everyone and reiterated the mission of the MW CHP Initiative: 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. It was also noted that, overall, we are here 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.

Membership Discussion

It was noted that this group is action-oriented with current membership including personnel from key organizations which are advocates of CHP in the Midwest, and that could be effective in building a plan and executing the organization's mission. Group members were asked whether they had any additional candidates for membership to propose.

Mr. Nowakowski said that he had invited Midwest state energy offices to participate in the Initiative, but there had been no response to date. Mr. Revello suggested that Steve Walter of the City of Chicago Department of the Environment could be a good fit. Mr. Revello additionally suggested that David Weiss from the Industrial Center (a spinoff of the American Gas

Association) might also be a good candidate for the group. He described the Industrial Center's mission as being to encourage the use of natural gas, particularly for power generation and steam production.

Mr. Bronson told the group that Tom Reimers, President of the Midwest Cogeneration Association, a networking group, was being kept apprised of the Initiative's activities, although he has chosen not participate in meetings.

Mr. Bronson also informed the group that the Midwest CHP Initiative had been awarded a grant from the Illinois Clean Energy Community Foundation (ICECF). The award is for \$86,000 over 2 years, and Bob Romo of ICECF is the project manager. The grant is primarily intended to support specific initiative activities in Illinois such as the permitting guidelines, developing of a PUC educational tool, meeting / presentation to the Illinois Commerce Commission, and a communications plan.

Status of Actions from Previous Meetings

Mr. Bronson noted that all actions from the January projects meeting were completed. He then reviewed some actions from the November 20th meeting (see November 20th Meeting Notes and Actions). These items and their status are detailed below:

- Mr. John J. Kelly has provided the state-by-state list of proposed turbine projects to the group.
- Ms. Farrar had no further developments to report regarding the Regulatory Initiatives subgroup for the Troy, Michigan "Microgeneration to Power Parks" conference. Mr. Stanton noted that the next conference would take place from September 22-26, 2002, in Detroit, and was being organized by the Great Lakes Renewable Energy Association. Mr. Bronson stated that he had offered to speak at the conference on behalf of this group.
- Mr. Nowakowski confirmed that he had coordinated group comments on the EPA Baseline Study. He further noted that he recommended the study address building applications for CHP, and in general, have a broader scope, as the study appeared to focus on boilers. Mr. Troche also mentioned that EPA was considering redoing the study with Nexus, who has a better database.
- Mr. Stanton noted that the Tax Policy for CHP/Energy Systems had been submitted to the group, and that Mr. Moore is to review it.
- Mr. Bronson stated that the group did not meet the deadline to provide comments on the draft Michigan Interconnect Standard. Mr. Stanton said he would look at the comments nonetheless and could still consider them for the next iteration of the standards. Mr. Stanton also noted that NARUC may support a DOE effort to establish a model interconnect rule. If the funding is approved, Mr. Stanton will be the chair for NARUC. The model standard would address issues such as contracts, tariffs, etc, not technical issues such as those addressed by IEEE.
- Ms. Farrar stated that she would send the MWCHP Application Center's Michigan Baseline Assessment to Mr. Nowakowski for inclusion in the marketing plan. With respect to the Baseline Assessments, she said that Mr. Mueller developed the information

and identified facilities, and noted that it was difficult to find facilities under 1 MW, because no permit is required. In Michigan, many installations were found at landfills and schools, while in Illinois they were found in hospitals and universities. Generally speaking, there were a large number of in-state suppliers in Michigan, because Detroit Edison's policies appear to be relatively favorable to CHP. In contrast, Mr. Nowakowski noted that the biggest barrier to CHP in Illinois is Commonwealth Edison, because of their standby rates and renegotiated rates. Ms. Burka also noted that she had heard of a utility in St. Louis which was also presenting significant impediments to CHP.

- The action item was reiterated for all subcommittee leads to draft a "end of year report" which Mr. Bronson would assemble into a group year-end report. All agreed that it was a valuable plan, as long as it was kept short.
- With respect to the brainstorming session at the November meeting, Mr. Bronson said the group would review these ideas later in the meeting.

MAJOR ACTIONS

Midwest Interconnect Workshop - Agenda Item 2.1

Mr. Mueller reported on the workshop, which was intended to bring state Public Utility Commission working groups on interconnection together to discuss approaches and to hear from industry leaders on the status of national and other state interconnect activities. He distributed a 1-page summary with an attendee list, and agreed to forward this information to Suzanne Watson so it could be included on the USCHPA website. Mr. Joe Galdo, US DOE, and Mr. Dick DeBlasio, NREL, set the stage by providing the group the status of national interconnection standard activities. Ms. Terri Eaton, from the Texas PUC, provided an overview of the approach to interconnection in Texas, where there interconnection regulations have been in place since 1999, and have been deemed a model for providing open access to DG interconnection. Seven states attended the workshop, and they provided overviews of activities in their states, followed by general discussion. Evaluation forms were distributed; all attendees identified the workshop as either "useful" or "very useful."

Regarding the IEEE national interconnection standard, Mr. DeBlasio stated that they had yet to obtain the 75% approval by membership required to finalize it, and it was intended to simplify the standard in order to achieve this, by putting the complexities in an addendum of Guidelines.

Mr. Smith noted that the Indiana Public utilities Commission had just received comments on interconnect and other DG issues, including comments from NiSource. Mr. Smith suggested that NiSource provides a balanced viewpoint, addressing the perspectives of the utility, customers, and the unregulated DG company. He is currently using this to prepare a position paper.

Meeting with the Illinois Commerce Commission - Agenda Item 2.2

Mr. Bronson informed the group that the letter to the Illinois Commerce Commission from Mr. Moore and Mr. Bronson had been well received, and that Mr. Moore was following up to

set up a meeting for the end of April. Together they are working on a presentation to the Commission.

Illinois Permitting Guidelines – Agenda Item 2.3

Mr. Mueller distributed a copy of the table of contents for the Illinois CHP/BCHP Environmental Permitting Guidebook. It is being funded by DOE and the Illinois Department of Commerce and Consumer Affairs (DCCA). He said the document is intended to serve a roadmapping and permitting purpose. The goal is for the document to be a “living” document, easy to update when necessary, and as a model to implement in other states in the Midwest. Mr. Mueller reviewed the table of contents in detail, leaving opportunity for questions and comments from the group.

Mr. Troche noted that he was concerned about section A.2.1.4, Air Permitting Exemptions, because of the current uncertainty regarding New Source Review provisions and pending power plant lawsuits.

Mr. Mueller informed the group that section B, Permitting Issues and Streamlining Potential was being formulated via a survey to cogeneration users regarding their perceptions about the Illinois permitting process. Upon receipt of those results, they will talk to Illinois EPA about the results, and this will form the basis of developing the section on permitting issues and streamlining potential.

Mr. Troche suggested that: (1) the document distinguish early on between requirements for major and minor sources; (2) the RAP model emissions guidelines be downplayed; and (3) section B evaluate the reality of the permitting process.

Midwest Application Center Website

Ms. Farrar reported to the group on the status of the Midwest Applications Center website at <http://www.chpcentermw.org/mac>. She noted that it is currently a beta site, and she asked for comments from everyone in the group. The plan is to launch the site after receipt of comments from Oak Ridge National Laboratory, and she is interested in getting information about other CHP websites with their URL's, in order to include them in links on this website. Ms. Farrar gave an in-depth description of the website's unique, interactive database, and other features and goals of the website.

Mr. Nowakowski inquired whether the MW CHP Initiative had a presence on the website, and Ms. Farrar responded that it does not, yet. She and Mr. Bronson agreed to formulate a plan for doing this. The group also discussed suggestions for additional groups to link to the site, including architectural groups, and the Department of Commerce. Mr. Bronson suggested that the Equipment Intelligence Report GTI is currently preparing is a good source of information for CHP applications less than 500 kW.

Mr. Troche separately suggested that a meeting to look at all studies, reports, and other activities addressing CHP members of the group are engaged in would be helpful to eliminate

redundancies and share information and resources. The rest of the group agreed, and Mr. Troche agreed to coordinate such a meeting, which would include Mr. Nowakowski, Mr. Mueller, Mr. Moore, Ms. Farrar, Mr. Bronson, Mr. Smith, and Ms. Watson. Mr. Bronson also suggested that Peter Carroll of ARES, who coordinates industry input to DOE, would be valuable.

RAP Emission Standard Development - Agenda Item 2.4

Mr. Bronson gave an overview of the model emission guidelines developed by the Regulatory Assistance Project. He said the guidelines were developed using the South Coast Air Quality Management District as the basis for nationwide standards, which in GTI's opinion, was not appropriate, as it could eliminate some highly efficient technologies that burn cleaner than the grid average from DG portfolios. He stated that the process included environmental and utility regulators, EPA, Natural Resources Defense Council, but had very limited industry input. GTI, Nisource and others are currently participating in a national DER collaborative to provide more detailed industry input to the development of the standard. As a result, Mr. John F. Kelly, GTI and Mr. Tim French, Engine Manufacturers Association, have been added to the RAP workgroup. So far, they have provided comments and additions to the principles and draft standards, using the West Texas standards as a guide for attainment areas, and some less stringent level than the SCAQMD for nonattainment areas.

Mr. John J. Kelly (EPA) noted that most nonattainment areas are going away, and states are developing redesignation plans. For this reason, he is not sure it makes sense to have different standards on this basis. If industry can achieve a certain standard, he said, then it should be achieved everywhere. He inquired how long the existing standards have been in effect, and whether they are working. Mr. Bronson responded that it is unclear whether the standards are achievable economically by existing technologies, and without the help of existing technologies, it would be difficult to break down industry barriers and reduce end costs for emerging technologies such as fuel cells and microturbines.

Mr. Troche offered several comments. He noted that New Source Review applies to sources that are 10 MW and larger; thus, the RAP standards would apply only to small DG less than this. He noted that EPA defines DG as up to 50 MW. Furthermore, he pointed out that the RAP standards carry no legal or regulatory weight; they may only influence states as they develop standards. Finally, he noted that though there were efforts to influence the process now, and that even if it did not work at this stage, there would be a later opportunity to exert influence when individual states undertake standards development.

Mr. Smith noted that the model guidelines run the risk of allowing the fear of dirty diesels to drive the rest of the DG market out of business. Mr. Bronson concluded by saying that the intent of the document was excellent, but the proposed numbers do not accomplish the stated goals.

IURC Request for Information - Agenda Item 2.5

Mr. Rogers informed the group that: (1) the Indiana Utility Regulatory Commission issued an aggressive request for feedback regarding rules for DG (available on its website); and (2) on March 22, results from a marketing study on DG/CHP by Caterpillar would be presented and discussed. Mr. Rogers agreed to send Mr. Nowakowski a copy of this report. Mr. Bronson will investigate the IURC request and determine whether other information is needed. He also agreed to send the group the website for submitting comments to the IURC, which is as follows: (http://www.state.in.us/iurc/energy/distribute/distribute_index.html <<Indiana Utility Regulatory Commission - Distributed Resources Workgroup.url>>)

Iowa CHP Marketing Initiatives - Agenda Item 2.6

Mr. Bodensteiner presented information to the group about 2 initiatives in Iowa. The first project is funded through Special Energy Projects funding from DOE, and consists of establishing streamlined siting and permitting for 11 MW of CHP at state facilities. The plan is currently under review by the state Air Quality Board; once review is complete, requests for proposals will be issued. It was recommended that Jim coordinate with Steffen Mueller, who, as discussed above, is leading a similar effort for Illinois.

The second project is not yet underway and consists of a proposal to DOE to establish CHP systems in a brownfields redevelopment area. The proposed project is for an 1100-acre facility. It would be a \$420 million project, creating 6500 jobs, and could serve as a model for replication in other areas. Mr. Troche was interested in the project and he and Mr. Bodensteiner agreed to discuss it further.

EPA's CHP Partnerships

Mr. Troche described EPA's CHP Partnerships program which was launched in October 2001. He stated that there has been lots of activity in the Midwest, and that there will be a conference on July 9. They are launching a website, which will describe the environmental, economic, and energy benefits of CHP, and also highlight the work of partners. The email address to contact the CHP group and Mr. Troche is chpteam@epa.gov. Mr. Troche explained that partners may be from industry (e.g. manufacturers, financial institutions, users, academics) or government (e.g. states, cities). Within the government sector, different offices may be partners; similarly, within the industry sector, different subsidiaries of the same parent company may be partners. Mr. Troche agreed to send the group a partnership agreement and fact sheet.

Other Regional Initiatives – Agenda Item 2.7

Mr. Bronson briefly described other CHP initiatives underway throughout the country. The Southeast, he said, is in the early stages of forming a group, and has held a DG conference, put on by Global Energy Systems.

The Northwest held a planning meeting a couple of months ago, which included the Oregon state energy office, the Seattle DOE, and the EPA regional office. Mr. Bronson noted that the

issues are different there because there is a lot of hydropower. The Northwest is focusing on (1) markets and (2) education and outreach.

The Northeast has held 2 meetings in the last 4 months. Mr. Bronson noted that there is a good group of stakeholders, including environmental groups, gas utilities, and the New York State Energy Research and Development Association (NYSERDA). The group is currently seeking an industry person to lead it. Mr. Smith said he might know someone from Bay State Gas who would be appropriate, and he agreed to pursue the matter.

MARKETING PLAN DISCUSSION (Section 3.0)

In this section of the meeting, Mr. Nowakowski presented his marketing information and research to the group, and solicited questions and discussion on various related issues. He first pointed out that the context for the marketing strategy was to understand the Midwest market and to develop a regional strategy. He inquired whether there was interest by the group in a future meeting with other regional leaders (e.g. about 50 key organizations/individuals) to develop a regional strategy. After some discussion, the group agreed that there was some concern about reopening the debate about strategy, and that they were interested rather in getting agreement by other leaders to the existing strategy. Mr. Bronson mentioned that there had been a regional strategy process in 1999, and that it would be a good idea for the group to revisit that strategy.

Mr. Smith noted that one of the gaps is identifying where the economic development niches are, and whether CHP is included in the planning process as a part of sustainable economic growth. He suggested that the issue be connected to economic development in the context of an energy transition. Mr. Bronson mentioned the “Energizing America’s Cities” conference that GTI is organizing as an example of such an integrated approach.

Mr. Nowakowski distributed several articles and reports to the group, including a report on the Market and Technical Potential for CHP in the Commercial/Institutional Sector and a tabular summary of the potential markets for CHP, and he summarized the information in these reports. He indicated that he thought there might a lot of false promise in the DG market, as manifested by a lot of emphasis on fuel cells and microturbines, when the economic and technical reality of the market is that reciprocating engines and turbines are the practical technology today. He stated that he wants the marketing strategy to be realistic, and to recognize that right now, clean DG means natural gas-fired reciprocating engines and turbines.

Mr. Bronson noted that the marketing strategy must address 2 issues: (1) what is available now; and (2) what is available in 5 to 10 years. Mr. Nowakowski agreed that the marketing strategy requires short, mid, and long-term components to be successful and effective. Furthermore, for CHP to work, states must fully understand the benefits thereof, and these benefits need to be quantified.

Ms. Farrar noted that the initial costs posed by utility barriers are the biggest problem, especially for small installations, and Mr. Nowakowski agreed that the economics of size play a significant role.

Mr. Revello further noted that operation and maintenance problems with CHP systems such as microturbines discourage customers, and that performance contracts can help that issue. Ms. Farrar noted that many marketing studies have already been done (e.g. Capstone), and that perhaps the group could draw from these. Mr. Bronson suggested that the long term goal of having a targeted workshop, for example, on office building CHP, would be valuable. The group agreed that inviting different manufacturers to attend a MWCHP Initiative meeting for the purpose of discussing their marketing strategy would be very helpful to the group.

To follow up on the marketing discussion, Mr. Bronson will provide Mr. Nowakowski with the 1999 Midwest Roadmap report, and Mr. Nowakowski will report to the group on this report at the next meeting.

Upcoming Events

The following upcoming meetings were mentioned:

Reciprocating engine peer review (Chicago, IL)	April 23-24
USCHPA Policy Day (Washington, DC)	May 8-9th
Chicago DOE/FEMP meeting (Chicago, IL)	June 25-26
MicroGeneration to PowerParks Conference (Detroit, MI)	September 22-25

MW CHP Initiative 2002 Plan

Mr. Bronson distributed the MWCHP Initiative plans for 2002 (developed at the November meeting) to the group. He noted we will discuss this in more detail at the next meeting.

Miscellaneous

Mr. Kelly mentioned that he has been involved in permitting for several projects that indicate that coal is making a rebound. These include new coal-fired projects in Illinois and Kentucky. In both cases, 2 new 1500 MW boilers are being installed.

ACTIONS

1. Mr. Revello will contact David Weiss of the Industrial Center regarding membership in the MWCHP Initiative.
2. Mr. Bronson will contact Steve Walter of the City of Chicago Department of the Environment regarding membership in the MWCHP Initiative.
3. Mr. Bronson will consolidate comments on the draft Michigan Interconnect Standards to use for the next iteration of the draft, and provide these to Mr. Stanton.
4. The subcommittee leads will draft brief end-of-year reports on subcommittee activities, and submit them to the group for review.

5. Ms. Burka will investigate the St. Louis utility acting to discourage CHP and report to the group on her findings.
6. Mr. Mueller will forward the summary, attendee list and feedback from the Midwest Interconnect workshop to Suzanne Watson for posting on the U.S. CHPA website.
7. Mr. Bronson will provide the group with the IURC website information for the purposes of submitting comments on DG.
8. Mr. Bronson will investigate the IURC request for ideas and determine whether other information should be submitted.
9. Mr. Rogers will send Mr. Nowakowski a copy of the Indiana marketing study on DG and CHP.
10. Mr. Nowakowski and Mr. Mueller will collaborate to develop a matrix of state positions/activities on DG regulation.
11. Everyone will review the Midwest Applications Center website and provide Ms. Farrar with comments as soon as possible.
12. Mr. Bronson and Ms. Farrar will discuss how to put the MWCHP Initiative on the Midwest Applications Center website.
13. Mr. Troche will coordinate a conference call to discuss ongoing research, reports, and other activities in order to share resources and avoid duplication.
14. Mr. Troche will distribute to the group a copy of the EPA CHP Partnership agreement and a fact sheet for the program.
15. Mr. Smith will contact Scott Hutchins of the Northeast CHP Initiative regarding his potential contact at Bay State Gas for leading that Initiative.
16. Mr. Nowakowski will distribute the marketing materials he handed out during the meeting to those participating in the meeting by phone.
17. Mr. Bronson will provide Mr. Nowakowski the 1999 Midwest Roadmap for CHP.
18. Mr. Nowakowski will report on the 1999 Midwest Roadmap for CHP at the next MWCHP Initiative.

MEETING CLOSEOUT

The next meeting was scheduled for May 14, 2002, at the U.S. DOE's offices in Chicago, Illinois.

Mr. Bronson thanked everyone for their participation, and the meeting was adjourned.

Regards,

Ted Bronson
Associate Director, Distributed Energy
GTI
847-768-0637

Midwest CHP Initiative May 14, 2002 Central Committee Meeting Notes and Actions

The following is a summary of notes from the meeting and agreed to actions, from the subject meeting that took place at the Department of Energy, Chicago Regional Office.

Attendees

Robert Andersen, People's Energy
Michael Bednarz, DOE Chicago Regional Office
Beth Burka, Laclede Gas Company
Jim Bodensteiner, Iowa Department of Natural Resources
Theodore Bronson, GTI
John Cuttica, UIC, Energy Resources Center
Amy Flom, GTI
John Kelly, GTI
David Kramer, Illinois Dept. of Commerce and Community Affairs
John Moore, Environmental Law and Policy
Steffen Mueller, UIC, Energy Resources Center
Gary Nowakowski, DOE Chicago Regional Office

Guest Speakers

Dave McShane, Captstone
Roman Grosman, Capstone
R. Neal Elliott, American Council for an Energy-Efficient Economy

1.0 PURPOSE / INTRODUCTION

1.1 – 1.3 Opening Statements/Purpose of Meeting/Introductions

Mr. Bronson welcomed everyone and reiterated the mission of the MW CHP Initiative: 1) lead the region in encouraging the use and 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. It was also noted that, overall, we are here 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.

1.4 Membership Discussion

The Midwest CHP is an action-oriented group with members from key organizations that advocate CHP, and that could be instrumental in executing the organization's mission. The following list identifies candidates recommended for membership, as well as lists the current members responsible for recruitment.

Candidates Recommended for Membership

Midwest State Energy Offices

Recruitment By

Gary Nowakowski

Mr. David Weiss/Richard Biljetina
Industrial Center (spin-off – American Gas Assoc.)

Ted Bronson

Mr. Steve Walters/Ms. Antonia Ornelas, City of Chicago
Department of Environment

Ted Bronson

Mr. Mark Pruitt, Nicor Solutions

John Cuttica

Mr. Bob Romo, Illinois Clean Energy Community Foundation

Ted Bronson

Mr. John Cuttica informed the group that through the MWCHP Application Center he has been trying to connect with the ComEds' pro-cogeneration group. The ComEd group is currently looking for cogeneration sites and doing a cogeneration assessment for Northwestern University in Evanston. The MWCHP group discussed whether or not ComEd should be invited to participate in the Initiative. Mr. Bronson noted that he has recently interfaced with ComEd and that they have not been particularly responsive but that an effort should be made to continue to engage ComEd in MWCHP Initiative activities, and to better understand what types of projects they have installed and what they see as the barriers to further expansion of CHP. Mr. John Cuttica will continue to monitor ComEd's potential involvement in the MWCHP Initiative.

1.5 Status of Actions from Previous Meetings

Old action items were discussed. Please see the attached Action Item List for a complete description of all old action items.

2.0 MAJOR ACTIONS/EMERGING ISSUES

2.1 Impact of Upcoming Changes at the ICC

Mr. Moore provided an update on the upcoming changes at the ICC. He noted that Mr. Kevin Wright, from ComEd, might take over, however, he is unsure given potential administrative changes in 2003. Mr. Moore also noted that Mr. Terry Harvill's term ends January 2003, and that DG friendly rules need to be expedited. Pending staff changes could present future challenges to successfully passing "friendly" DG policies and rules.

2.2 July 9th Chicago CHP Workshop

Mr. Cuttica provided an overview of the July 9th Chicago CHP Workshop. The program is being marketed to commercial, institutional and industrial facility managers and A&E firms. The workshop will provide practical information on how new energy technologies such as CHP can

reduce costs and improve reliability. Mr. Cuttica indicated that they expect a turnout of approximately 200 – 250 people. The cost of the program is \$90 dollars. Mr. Cuttica noted that they were able to keep costs low given the financial support provided by DOE, City of Chicago, Illinois Department of Commerce and Community Affairs, and EPA's CHP Partnership.

Mr. Cuttica hopes to have the agenda for the July 9th CHP workshop finalized by the week of May 20th. He also hopes to mail both the agenda and the brochure to prospective participants during the week of May 20th. The status of each workshop session was discussed.

Mr. Cuttica noted that a cogeneration conference is being planned for the Chicago area by the Center for Business Intelligence on Cogeneration. This conference is striving to attract participants from all over the county and will charge between approximately \$1500 dollars. Both Mr. Cuttica and Mr. Anderson will be speaking at this conference.

ACTION BY: Mr. Bob Anderson agreed to assist with the Industrial Session and will help identify three appropriate industrial CHP case studies. Mr. Ted Bronson agreed to moderate the Micro-Generation Session and will also assist Mr. Cuttica in finding appropriate case studies for this session.

2.3 Federal Energy Management Program (FEMP) Workshop – June 25th -26th

Mr. Gary Nowakowski provided an overview of the planned FEMP Workshop that will focus on distributed energy resources at Federal facilities. The cost of the program is \$95 dollars. The same program will be held in four different metropolitan locations: Atlanta, Chicago, Los Angeles, and Boston. The Chicago program will be held on June 25th and 26th, and, as with all other planned locations, will focus on:

- Promoting the use of distributed energy resources at Federal facilities, and
- Assisting Federal agencies address their energy management issues.

ACTION BY: Mr. Bob Anderson agreed to assist with the City of Chicago Office Building Tour for the program.

2.4 USCHPA Policy Day Overview

Mr. Bronson provided an overview of the 3rd Annual USCHPA Policy Day Annual Conference held on May 8th at the Georgetown University Conference Center. Mr. Bronson mentioned that Mr. Art Smith from Nicor is the new USCHPA chairman. Mr. Bronson also noted that many of the presentations are now available on the USCHPA web site. Mr. Bronson called attention to Mr. Gary Nakarado's presentation as providing one of the best graphic overviews of DG/CHP opportunities. Mr. Nakarado is a former Colorado Utility Commissioner, and currently works for the National Renewable Energy Laboratory in Denver.

Mr. Bronson noted that Mr. Nakarado's presentation provided a good overview of a ten-point plan to "getting CHP off the ground", including the adoption of state rules to help move towards national consistency.

Also at the conference Allison Silverstein of FERC discussed the NOPR on grid interconnect – Section 14 written for DER<20MW. She noted that the DG community did not have much input and the document is weak with respect to DG. Process was driven by utilities. FERC is asserting jurisdiction over the DG wholesale distribution market. She advised the industry to provide comments by the deadline. Art Smith noted that NISOURCE is providing CHP comments.

2.5 RAP Emissions Standard Development Status

Mr. Bronson noted that the RAP Emissions Standard as currently defined could present challenges to the DG industry as a whole. He reiterated that it could be economically difficult for existing DG technologies to achieve the proposed standards, particularly within nonattainment areas. GTI, USCHPA, (Nisource), Peter Carroll, Fuel Cell Associations, Gas Turbine Association, Engine Manufacturers Association, American Gas Association, and others are participating in a national DER collaborative to provide more detailed industry input into the development of the emissions standard.

To date, the industry group has had 5 teleconferences and has 3 more planned in May. The group plans to send a document to DOE summarizing all comments by early June, and then plans to schedule a meeting with DOE at the end of June.

2.6 MWCHP Initiative Plans for 2002

The concept of a DER Road Show was discussed. The Road Show is currently being offered in several cities around the country by Ann Marie Borbely-Bartis of DOE. It was agreed that the concept of going mobile with a trailer that housed DER equipment was a good idea. The road show would provide city and code officials with the opportunity to see DER equipment first hand, learn about the technologies, and see how they work.

Within Illinois, the following dates have been noted as possible road show dates: September 9th, 11th, and 13th. The Illinois road shows are still in need of a sponsor and a facility. In addition, it was noted that individual states should be contacted to serve as sponsors for road shows within their respective states.

Another potential challenge to the success of the road show program is the ability to market the event directly to city code officials. Apparently code officials are not members of any one organization or association, thus, making it difficult to easily obtain a list of such individuals.

ACTION BY: Mr. Nowakowski is currently addressing sponsorship issues and establishing dates for the DOE Road shows.

3.0 SUBCOMMITTEE BREAKOUT SESSIONS

3.1 Education and Outreach

Educational Activities: Mr. John Cuttica provided an overview of ongoing educational activities at the MWCHP Application Center, these include:

1. Web Site – serving as a central repository for case studies and fact sheets, and well as industry presentations
2. CHP Permitting Guidebook – Complete and Available
3. CHP Resource Guidebook that will be complete in July and will serve as a checklist for helping businesses decide if DER/CHP is the appropriate technology for their particular situation. The Center plans to complete the guidebook in time for the July 9th Workshop. The Center also plans to share the guidebook with other Technical/Industrial Assessment Centers in other states to help facilitate similar documents and activities.
4. CHP course to be offered by UIC Application Center. The course would be marketed to other industrial assessment centers and serve as an opportunity to learn about UIC's DER/CHP technical assistance program and resource guidebook.
5. CHP Workshop to be held on July 9th

ACTION BY: Mr. Steffen Mueller requested that members of the group review the CHP Resource Guidebook and provide comments. Mr. Mueller's goal is to have the document published and available prior to the July 9th CHP Workshop.

Tariff Meeting: Also on the educational front, Mr. Gary Nowakowski noted that an additional one-day meeting on tariffs would be beneficial for both utility and commission people. Mr. John Cuttica offered to again host the meeting and set a tentative date of November. Mr. John Moore noted that because the previous meeting on tariffs was a closed session, people felt comfortable sharing perhaps more than they would have had it been an open session. The downside of the closed session is that a summary of the meeting could not be documented or circulated.

Other meeting ideas were also discussed on topics such as emissions and interconnection issues. An emissions meeting would be helpful to state air board representatives. There was consensus among meeting attendees that the educational process is going well and that it's now time to begin translating the increased awareness of DG benefits into tax credits.

ACTION BY: Mr. John Cuttica and Mr. John Moore will have a conference call to begin planning the November tariff workshop.

3.2 Policy - CHP Tax Credits – Midwest Applicability

Mr. Neal Elliott provided an overview of the current CHP tax incentives being considering in the federal energy bill. He indicated that the tax incentives could be categorized as follows:

1. Accelerated depreciation
2. Production credit for kw's produced
3. Investment tax credit against taxes or against CHP capital investment

He also indicated that there is a 100% chance that the tax credits will be included in the energy bill and an estimated 60% chance of the credits becoming law.

ACTION BY: Policy Subcommittee to create a future action item for addressing and implementing CHP tax credits on the state level that are similar to the credits currently being considered in the federal energy bill. Also need to investigate measures by which to correct depreciation schedules to accommodate industrial uses.

4.0 MARKET DEVELOPMENT SUBCOMMITTEE

4.1 Capstone Presentation

Mr. Dave McShane and Mr. Roman Grosman of Capstone provided the group with an overview of the Capstone Microturbine and its applications for CHP. Mr. Grosman provided the group with a PowerPoint presentation.

4.2 Discussion on Marketing Approach for Micro-power

Highlights from the presentation that can be used to better understand how to approach and grow the micro-power market include:

- Maximizing efficiency (units capable of utilizing both heat and power, with a maximum fuel efficiency of 70-80% and in some cases 90%) will allow for the market to expand and include small-scale loads that were previously not economical.
- Increased feedstock flexibility (units capable of operating on diverse gaseous fuels, including natural gas, propane, and bio-gas with energy content as low as 350 BTU/cf) will allow for the market to expand and include an increased number of applications, particularly in the agricultural and landfill industries.
- Operational flexibility (units capable of operating in parallel with the grid, load following, peak shaving, time of use, or completely separate from the grid, as well as capable of multiple unit systems) will allow for the market to expand and serve a greater number of energy applications.

5.0 MEETING CLOSEOUT

5.1 Review Actions

See attached list for a comprehensive listing of all action items.

5.2 Upcoming Events

The following upcoming meetings were mentioned:

Chicago DOE/FEMP meeting (Chicago, IL) June 25-26th
Combined Heat and Power Conference for Illinois Businesses July 9th
MicroGeneration to PowerParks Conference (Detroit, MI) September 22-25

5.3 Next Meeting Date

There was agreement to hold the next MWCHP Initiative meeting in Madison, Wisconsin. The meeting will be held on July 16, 2002. Mr. Ted Bronson, Mr. Gary Nowakowski, and Ms. Amy Flom will participate in a conference call on Thursday, May 23rd, at 2pm to strategize on the meeting agenda and coordination efforts. The July meeting will serve as an opportunity to involve several individuals from Wisconsin, these people include:

- Mr. Patrick Meier – Wisconsin Department of Energy
- Mr. Paul Helgeson – Public Service Commission
- Mr. Preston Schutt – Wisconsin Department of Energy
- Mr. Jerry Aue – Energy Center of Wisconsin

5.5 Closing Comments and Adjourn

Mr. Bronson thanked everyone for their participation, and the meeting was adjourned.

Regards,

Ted Bronson
Associate Director, Distributed Energy
GTI
847-768-0637

Midwest CHP Initiative July 16, 2002 Central Committee Meeting Notes and Actions

The following is a summary of notes from the meeting and agreed to actions, from the subject meeting that took place on July 16, 2002, and hosted by the Wisconsin Department of Administration in Madison Wisconsin.

Attendees

Jerry Aue, Energy Center of Wisconsin
Michael Bednarz, DOE Chicago Regional Office
Ann Marie Borbely-Bartis, DOE
Jim Bodensteiner Iowa Department of Natural Resources
Theodore Bronson, GTI
Beth Burka, Laclede Gas Company
John Cuttica, UIC, Energy Resources Center
Alex DePillis, Wisconsin DOA, Division of Energy
Michele Dybel, GTI
Leslie Farrar, UIC/ERC/MAC
Amy Flom, ELF/GTI
Jeffrey Haase, MN Department of Commerce
John Helbling, Alliant Energy
Paul Helgeson, Wisconsin Public Service Commission
John Katers, STS Consultants/UW-Green Bay
Jason Kratochwill, Wisconsin, DOE
John Kelly, USEPA – Region 5, Chicago
Fred Kuzel, Great Lakes Regional Biomass Energy Program
Dan LaFevers, GTI
Steffen Mueller, UIC, Energy Resources Center
John Noller Missouri Department of Natural Resources
Gary Nowakowski, DOE Chicago Regional Office
Preston Schutt, Wisconsin DOA, Division of Energy
Tom Stanton, Michigan Public Services Commission
Suzanne Watson, NE/MW Institute

1.0 PURPOSE/INTRODUCTIONS

Mr. Bronson welcomed everyone and noted that the objective of this particular meeting is to focus on CHP issues relative to Wisconsin and develop CHP action items that are specific to Wisconsin.

1.1 – 1.2 Opening Statements/Introductions – Ted Bronson

Mr. Bronson reiterated the mission of the MWCHP Initiative: 1) lead the region in encouraging the use and 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 actions of the Initiative are intended to help implement an energy mix that will

improve the environment, electric power reliability and security, energy efficiency, and reduce end user costs and risks. All of these steps are needed to help meet the electricity requirements of the new digital economy.

1.3 Status of Action Items from Last Meeting – Ted Bronson

Given the meeting's specific focus on Wisconsin; only select outstanding action items were discussed. See the attached "Action Item List" for a complete summary of all outstanding action items.

Status of NARUC Draft DG Interconnection Procedures

Mr. Tom Stanton provided an overview of the NARUC Model DG Interconnection Agreement and Procedures for States documents. These "model interconnection documents" are for voluntary adoption by individual States. To learn more about the NARUC model documents go to: <http://www.naruc.org/Programs/dgia/dgiaip.html>

The documents were developed by a Staff Working Group, with DOE support and direction. The working group consisted of interconnection experts, engineers, attorneys, and state public utility staff from CA, TX, ID, OH, ME, MI, and NY. NARUC intends to have a finalized "merged" document ready for presentation at the NARUC's Summer Meetings.

Mr. Stanton also noted that The National Regulatory Research Institute (NARUC's research arm) has conducted a survey of 24 states regarding the interconnection model. A final report summarizing their responses will be presented at a conference in Portland at the end of July and will be available online at:

<http://www.nrri.ohio-state.edu/programs/electric/DistributedGeneration/main.html>

After this final report is complete it is up to individual states to implement the model. Some states may use this model as a starting point, while others may not. For some states, it may be too late, as the state may already have a process underway.

Mr. John Moore has pursued a meeting with the Illinois Commerce Commission to discuss the NARUC Interconnection Procedures and help initiate a State interconnection process and documentation. The meeting is set for September 17, 2002. Both Mr. Moore and Mr. Bronson will attend the meeting.

1.4 Midwest CHP Initiative Overview and Accomplishments – Ted Bronson

Mr. Bronson provided an overview and power point presentation of the MWCHP Initiative. The presentation provided new attendees with an overview of the MWCHP program and accomplishments. The MWCHP Initiative is the first of four regional organizations that have been established to promote the benefits of combined heat and power technologies. The MWCHP Initiative is considered the model for all other CHP Initiatives throughout the country to follow. The Initiative was established in May, 2001 with the mission to double the amount of CHP in the Midwest by 2010, and thus support DOE's goal of doubling the contribution of CHP to the nation's power supply from 48GW in 1998 to 92GW by 2010.

1.5 Midwest CHP Application Center – Ms. Farrar

Leslie Farrar provided a presentation on the University of Illinois CHP Application Center. The Center is the first of ten others centers around the country. The Center is housed at the University of Illinois – Energy Resource Center. The Center is currently developing baseline characteristics for 8 Midwest States. The primary role of the Center is to foster CHP as a viable option.

Ms. Farrar outlined the key accomplishments of the Application Center, these include:

- Completed eight State Interconnection Workshops
- Conducted numerous education outreach programs
- Prepared a CHP Permitting Guide Book
- Provided Input on Illinois's Energy Policy
- Developed interactive web site

Mr. Farrar reiterated that all individuals involved in the MWCHP Initiative were asked to review the Application Center's Web site and submit comments via email.

The Midwest CHP Application Center (MAC) and GTI also recently sponsored a CHP Economic Assessment Training course. Mr. Walt Smith of ETSI Consulting did the training. The training is currently being compiled into a CHP Resource Guide and field application book. The book will include an excel spreadsheet that will help businesses decide if DER/CHP is the appropriate technology for their particular situation. The guidebook is expected out this fall and then a training course will follow. The first course will be offered in Minnesota. The course would be marketed to other assessment centers and serve as an opportunity to learn more about UIC's DER/CHP technical assistance program and resource guidebook.

Ms. Farrar also mentioned that the Application Center is looking for potential partners for pursuing the DOE solicitation that has been issued through the Oak Ridge National Laboratory and is related to CHP. Mr. Bronson volunteered to email the DOE/CHP solicitation to the MWCHP contact list.

Ms. Farrar also noted that in the future the regional CHP efforts needs to work together for the creation of a National CHP Guidebook. Mr. John Cuttica and Gary Nowakowski noted that they will be making presentations to the State Energy Offices in 8 Midwest States.

ACTION BY: Ted Bronson to email the DOE/CHP solicitation, issued through the Oak Ridge National Laboratory, to MWCHP contact list. The closing date for the RFP is August 15, 2002.

1.6 State Energy Awards – Mr. Gary Nowakowski

The following list outlines recent energy awards within the Midwest region. Mr. Nowakowski will be emailing the list of awards to the MWCHP Initiative contact list.

- Illinois: Energy Storage for Transmission
- Indiana: Fairoaks, Anaerobic Digestion and Gas Utilization

- Iowa: A distributed energy resources feasibility study to support brownfield development
- Michigan: A hydrogen based power park producing 500 kwhrs per day, and 5 locations with packaged cogeneration units
- Wisconsin: Alliant's reciprocating engine connecting to the grid – Tripoli connection served as a model.

ACTION BY: Mr. Gary Nowakowski to email the awards list to the MWCHP contact list.

2.0 WISCONSIN EMERGING ISSUES WITH CHP

2.1 Wisconsin DG/CHP Interconnection and Tariff Developments – Mr. Paul Helgeson

Wisconsin Interconnection Collaborative

Mr. Paul Helgeson of the Wisconsin Public Service Commission provided a presentation of Wisconsin's distributed generation interconnection rules. The PSC provided a report to the Legislature in 2000 regarding the current status of DG interconnection rules. The findings noted that existing rules are:

- Complex and add unnecessary time and money
- Inconsistent and create barriers to a successful interconnection
- Require unreasonable insurance
- Restrictive with respect to net energy billing of 20kw

Mr. Helgeson also noted that Wisconsin's 118 service areas further complicate the process of streamlining DG interconnection.

A broad-based Advisory Committee that includes RENEW Wisconsin is putting the final touches on new rules that will establish uniform standards for the interconnection of small, independently owned generating units that will feed power into the electric distribution system. Once adopted, these rules will apply to all public utilities, and to all customer-owned distributed generators, defined as electricity-producing facilities up to 15 MW in size, operating in parallel with the utility.

In addition to crafting rules that will apply to utilities, the Committee is finalizing a guideline document designed for customers interesting in owning a grid-intertied distributed generating (DG) system. Under the new rules, there will be four categories of DG facilities, differentiated by the installation's nameplate capacity.

Category 1 - 20 kW or less

Category 2 - Greater than 20 kW to 200 kW

Category 3 - Greater than 200 kW to 1 MW

Category 4 - Greater than 1 MW to 15 MW

Under the PSC's current work plan, the PSC anticipates submitting draft rules to Legislative Council in August and scheduling a one-day hearing on the proposed rules in September or October. Assuming no significant changes in stakeholder attitudes, the PSC could adopt a final rule as early as November, with an effective date of April 15, 2003.

Wisconsin Power Quality Park Project Update – Mr. Jason Kratochwill

Mr. Jason Kratochwill provided an overview of a feasibility study currently being developed for a Wisconsin Power Park. Weston Solutions is completing the study that is due for completion in October 2002. The study will evaluate potential sites for a power quality park, evaluate barriers to the development of a park and provide case studies of other parks around the county.

2.2 Overview of Focus on Energy – Mr. Preston Schutt

Mr. Preston Schutt provided an overview of the Wisconsin Focus on Energy Program. In October 1999, the Wisconsin Legislature passed Act 9, which assigned the Department of Administration with the task of overseeing and implementing the public benefits program, previously operated by the State utilities. Programs such as benefits to low-income consumers, energy efficiency, renewable energy, and research and development have been transitioned to the DOA.

Funding for these programs is provided by a combination of a nontaxable customer charge on utility bills and the continuation of rate-based funding at the 1998 level. With this funding, DOA has devised a Statewide Public Benefits program called "Wisconsin Focus on Energy."

Wisconsin Focus on Energy is a public-private partnership, made up of the following organizations:

- Wisconsin DOA – Division of Energy
- Wisconsin Energy Conservation Corporation
- Milwaukee School of Engineering
- Energy Center of Wisconsin
- PA Consulting
- Hoffman York

The program is organized such that program administrators are assigned to the following energy sectors; residential, commercial, industrial, institutional, and agricultural. Mr. Schutt noted there is both interest in and opportunity for CHP in the agricultural and industrial sectors. Mr. Schutt also explained that the program has the resources to offer free CHP site assessments.

The overall goals for all of the Focus on Energy sectors include; transforming the energy efficiency market place, increasing reliability, reducing environmental impact of energy use, and promoting rural economic development.

2.3 Role of CHP in Agriculture and Biomass – Mr. Alex DePillis

Mr. Alex DePillis provided an overview of CHP in Wisconsin's agriculture and biomass industries. Mr. DePillis noted several agricultural projects such as Gordendale Farm and Tinedale. He indicated that with both projects there have been more issues on the digester side

then on the CHP side of the project. Potential barriers to greater deployment of CHP in agriculture include; inconsistent feedstock and farms that are too small to justify a system.

Solutions to these barriers may evolve out of any one of the following activities: State of Wisconsin interagency agricultural biogas-working group, data collected at the Tinedale project, and a research effort currently underway that will showcase agricultural biogas facilities throughout the upper Midwest. This research effort is being prepared under the direction of the Great Lakes Regional Biomass Energy Program.

CHP systems in biomass related industries such as wastewater treatment plants are also being evaluated. Mr. DePillis noted that a study currently being prepared for Wisconsin Focus on Energy by McMann & Associates has surveyed several of Wisconsin's wastewater facilities for the current status of biogas utilization.

Mr. DePillis also provided a reference to a current research and development-funding program through Wisconsin's Focus on Energy Renewable Energy Program. The intent of the current solicitation is to support R&D projects that assist in the commercialization of high value, near term (five years or less) renewable energy applications. Eligible R&D projects must meet one or more of the following objectives:

- Create innovative renewable energy products and services
- Enhance renewable energy product reliability
- Reduce the costs of renewable energy products and services
- Accurately assess Wisconsin's renewable energy resources
- Provide renewable energy distributed benefits

The pre-proposal deadline for this solicitation was August 1, 2002. A second solicitation will be issued this fall.

2.4 Great Lakes Regional Biomass Effort – Mr. Fred Kuzel

Mr. Fred Kuzel provided an overview of relevant CHP activities currently underway at the Great Lake Regional Biomass Energy Program (GLRBEP). The Program's primary mission is to help mitigate barriers to greater deployment of bioenergy technologies. The GLRBEP is part of the Council of Great Lakes Governors and has been in existence since 1983. A current project includes updating the On-Farm Biogas Casebook. This publication will provide detailed information on operating agricultural biogas systems in the Great Lakes Region. According to preliminary data there are 19 farms with digesters within the region, nine of which are generating heat and power. According to Mr. Kuzel, projects to date have typically been driven by a need to eliminate odor issues as oppose to a desire to generate power. Of the power generation projects, all are plug flow digesters.

2.4 – 2.5 Farm Bill Overview and Opportunities, Regional Biomass Policy Issues – Mr. John Moore

Mr. John Moore prepared a handout on Biomass CHP Opportunities and Policy in the Midwest, however, he was unable to attend the meeting and present on this topic. Mr. Ted Bronson summarized Mr. Moore's handout. He noted that there are three primary CHP applications for biomass as a fuel source in the Midwest, these include:

- Farm-based anaerobic digesters – A livestock digester/generator can produce 2-3kWh/animal unit/per day of electricity in addition to recoverable heat. Minnesota is among the states most supportive of digesters
- Direct firing of wood waste – Most existing biomass CHP projects are in forest products. *Repowering the Midwest* forecasts a total of 1670 new MWs of CHP in the pulp and paper industry by 2010, and 3530 MW by 2020.
- Direct firing or gasification of food processing and agricultural waste – This process is just beginning to take hold. There are two projects in Minnesota – one is 50MW the other 20MW. There may also be opportunities related utilizing the distiller's grain from ethanol plants.

Mr. Moore's hand out also provided an overview of current Midwest State funding and incentives for biomass energy projects. Clean energy provisions in the 2002 Farm Bill and new Energy and Conservation and Rural Development Titles will provide financial support to farmers for the development of wind power, biomass energy, and energy efficient resources. There is \$405 million of mandatory appropriations over six years in the new Energy Title. The Rural Development Title makes renewable energy sources eligible for hundreds of millions of dollars of funding, and the Conservation Title was amended to allow biomass harvesting on Conservation Reserve Program land.

ACTION BY: Mr. Preston will coordinate with various teams to locate and support funding opportunities related to the farm bill programs. The goal of this action is to have teams in place and ready to respond to solicitations as they become available.

2.6 Alliant's CHP and Biomass Efforts - Mr. John Helbling

Mr. John Helbling of Alliant Energy provided an overview of his company's involvements in CHP and Biomass Energy. Alliant is piloting multiple applications in food processing biomass conversion, wastewater treatment biomass energy generation, livestock waste cogeneration, and landfill gas generation. Alliant is also piloting various business models such as turnkey, DBOO, and tariff based. Highlighted projects included:

- Top Deck Dairy in Westgate, Iowa – installed a anaerobic manure digester with 30kw MicroTurbine and 100kw IC engine;
- Sauk County Landfill in Wisconsin – installed 12 MicroTurbines and is the first application of WI biomass Renewable Energy Distributed Generation Pilot Program;
- Seneca Food in Montgomery, MN - is the nation's largest food processing waste digester will produce 1.6 MW of renewable energy.

2.7 Minergy's Biomass Technologies – Ms. Amy Flom

Ms. Amy Flom, a former employee of Minergy provided an overview of their Glass Aggregate Technology. Minergy Corporation, is a wholly owned subsidiary of Wisconsin Energy. Minergy's Glass Aggregate technology is a vitrification process that recycles paper sludge and wastewater solids into glass aggregate, a glass-like material used for floor tiles, abrasives, roofing shingles granules, and asphalt paving. Minergy's Fox Valley Glass Aggregate Plant receives and processes over 400,000 tons per year of wastewater sludge from twelve (12) local industrial mills into glass aggregate. The available energy in the sludge is recovered from the process and converted into steam, which is sold to P.H. Glatfelter Co., a local paper mill. Excess steam is also used to generate 6.5 MW of renewable energy.

Minergy is also constructing the Clear Horizons Glass Aggregate facility in Detroit, Michigan to recycle 600 dry tons per day of wastewater solids. The Clear Horizons facility will produce approximately 60,000 tons per year of glass aggregate and 30 MW of electricity.

2.8 Building Code Issues/U.S. DOE DER Road Show – Ms. Ann Marie Borbely-Bartis

Ms. Ann Marie Borbely-Bartis provided an overview of the DOE, DER Road Show. She indicated that the road show began with 3 scheduled shows, and a microturbine, and a fuel cell on the back of a truck. She is now booked through the rest of the year and into next year as the program is highly in demand all over the country. The road show is tailored to a particular area's greatest opportunity for CHP. Typically the shows have been marketed to municipal building code officials and fire marshals.

Another objective of the program is to develop a CHP Regulatory Handbook for the seven categories of individuals that interface with CHP, these include:

- Municipal Building Code and Fire Marshals
- Utility Interconnection Officials
- County Zoning Officials
- State EPA Staff
- State PUC/PSC Staff
- RTO/ISO Operators
- FERC/NERC Institute Staff

Ms. Borbely-Bartis indicated that given the demand for the program she is in need of help. Upcoming shows include Chicago on September 11th, and Detroit on September 13th. Wisconsin currently does not have a roadshow scheduled. Wisconsin is on the potential road show list but a host for the event must be found before a date can be scheduled.

ACTION BY: Mr. Schutt and Mr. Helbling have agreed to coordinate with Mr. Gary Nowakowski and Ms. Borbely-Bartis to begin planning efforts to bring the CHP road show to Wisconsin.

2.9 MWCHP Application Center, Wisconsin Baseline Assessment – Mr. Steffen Mueller

Mr. Steffen Mueller provided an overview of the Wisconsin Baseline Assessment currently being prepared by the MWCHP Application Center. The Center has already completed a similar assessment for Michigan and Illinois. The Assessment documents companies within the State who are active in CHP activities, the state's current CHP regulatory environment, the State's CHP economic environment, and current target CHP installations. This information is compiled as a mean by which to better define strategies for CHP outreach within a particular state.

2.10 U.S. EPA Partnership – Mr. John Kelly, USEPA

Mr. John J. Kelly provided an overview of EPA's CHP Partnership Program. The program is voluntary and is designed to partner EPA with the CHP industry, state and local governments, and other stakeholders to help foster the expansion of CHP projects. Partners agree to work with EPA to promote the benefits of CHP and support new project development, in return, EPA agrees to provide a set of tools and services to support the Partner as they investigate new CHP projects. The tools and services fall into five general categories:

- Market development and enhancement
- Public recognition of partners
- Outreach and educational tools and services
- Technical assistance to aid CHP project development
- Assistance with regulatory policies and permitting

2.11 U.S. CHP Outreach Efforts – Ms. Suzanne Watson

Ms. Watson indicated that many of the speaker presentations from last May's Policy day are now available on the USCHPA web site. She also noted that the 3rd Annual National CHP Roadmap Workshop is October 23-25, 2002 in Boston, Massachusetts. The event is teamed with the FEMP-DER Workshop and EPA CHP Partnership Meeting.

Mr. Watson also indicated that the USCHP has written comments on the FERC – NOPR process, and USCHP staff members have been spending a lot of time meeting with legislative staff members in an attempt to incorporate "friendly" CHP provisions into current versions of energy policies and bills.

3.0 ROUNDTALBE DISCUSSION OF WISCONSIN CHP DEPLOYMENT NEEDS AND ACTIONS

Mr. Bronson reiterated that the objective of this particular meeting is to focus on CHP issues relative to Wisconsin and to develop CHP action items that are specific to Wisconsin. Meeting attendees identified the following action items as specific measures by which to increase CHP deployment in Wisconsin.

- *Develop a single (State EPA) point of contact in Wisconsin and other states to help in facilitating faster regulatory approval for CHP projects. ACTION BY:* The MWCHPI permitting subcommittee, headed by John J. Kelly, will contact state EPA officials and begin exploring options by which to streamline the regulatory point of contact for CHP projects.
- *Locate and support funding opportunities. ACTION BY:* Mr. Preston will coordinate with various teams to locate and support funding opportunities related to the farm bill programs. The goal of this action is to have teams in place and ready to respond to solicitations.
- *Influence the market place through conducting market research and generating project leads for private industry. Mr. Cuttica mentioned that a conference may be good option to present case studies, generating project leads, and deliver CHP information such as how to finance and get started to end users. ACTION BY:* The MWCHPI Education Subcommittee to consider a CHP conference in Wisconsin.
- *Bring DOE Road Show to Wisconsin. ACTION BY:* Mr. Gary Nowakowski, Mr. John Helbling, and Mr. Preston Schutt to coordinate with Ann Marie Borbely-Bartis to bring the DOE Road Show to Wisconsin and possibly coordinate shows in Iowa and Minnesota.
- *MWCHPI to work with and support the execution of Wisconsin's State Energy Program – CHP Project. ACTION BY:* Mr. Ted Bronson to work with Mr. Preston Schutt to help support the implementation of Wisconsin's State Energy Program – CHP Project.
- *Reach out to big utility power programs for increased consideration of CHP. Focus on strategies to increase demand and lower costs for customers. ACTION BY:* Mr. Preston Schutt to work with Mr. John Helbling in support of Alliant's efforts to address the barriers to siting CHP in Wisconsin.

4.0 MEETING CLOSEOUT

4.1 Review Actions:

Please see the attached “Action Item List” for a complete overview of all open and ongoing action items.

4.2 Upcoming Events

- September 11th, Chicago, DOE Roadshow
- September 13th, Detroit, DOE Roadshow
- September 19th and 20th, Chicago, Energizing America’s Cities. GTI is sponsoring a two-day conference on the latest clean energy and environmental systems technologies, best management practices, and planning resources for the development of sustainable metropolitan communities.
- September 23rd - 25th, Detroit, MicroGeneration to Power Parks Conference.
- October 23rd - 25th, Boston, USCHP Roadmap Update

4.3 Next Meeting Date

The next meeting will be held in Detroit, Michigan and will be held in conjunction with the MicroGeneration to Power Parks Conference scheduled for September 23rd through the 25th.

ACTION BY: Mr. Ted Bronson to contact Mr. Tom Stanton regarding the coordination for the MWCHP September event.

Mr. Bronson thanked everyone for their participation, and the meeting was adjourned.

Regards,

Ted Bronson
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GTI
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