



Midwest Cogeneration Association

P.O. Box 87374
Carol Stream, IL 60188
(630) 323-7909
info@cogeneration.org

SUBMITTED VIA EMAIL
cip.contract@state.mn.us

Jessica A. Burdette
Supervisor
Conservation Improvement Program
Minnesota Department of Commerce
Suite 500
85 7th Place East
Saint Paul, MN 55101
Jessica.Burdette@state.mn.us

October 10, 2014

**Re: Interim Comments of the Midwest Cogeneration Association;
Department of Commerce Combined Heat and Power Meetings**

Dear Ms. Burdette:

The Midwest Cogeneration Association (MCA) and a number of its individual members have been participating in the series of workshops and stakeholder meetings on policy options for Minnesota Combined Heat and Power (CHP¹) programs which the Department of Commerce (DOC) has been holding in St. Paul this fall. We commend the DOC for sponsoring these very informative proceedings and appreciate this opportunity to respond to the DOC request for interim comments on proposals and issues raised in the first two meetings. We understand that the Department is requesting stakeholders' views at this point to better focus further discussion in the remaining two workshop/meetings.

¹ As used in these Comments, "combined heat and power" and "CHP" refer to both topping and bottoming (or "waste-heat-to-power") cycle cogeneration systems, unless otherwise noted. We understand that the DOC is using this term to include both of these technologies as well.

Below we are providing a summary of our recommendations for various program elements which we believe merit further discussion. Rather than provide full argument and documentation supporting our recommendations at this interim point, we request that the Department provide an additional comment period at the end of this series of workshop/meetings and also provide an opportunity to comment on a draft of the anticipated Action Plan before it is finalized.

A. KEY POLICY BARRIERS

We believe the following current policies or practices in Minnesota act as barriers to entry for CHP projects:

1. STANDBY RATES CHARGED BY UTILITIES

See MCA's Comments to the DOC on Standby Rates submitted on October 1, 2014. (Attached)

2. LOW AVOIDED COST CALCULATION BY UTILITIES

Minnesota utility power buyback tariffs are often based on marginal generation costs. This does not reflect the true higher avoided costs of future generation. Rates that are improperly based on marginal costs are insufficient to incentivize distributed generation projects of the future. As a result of low avoided cost rates of payment, CHP projects are often sized only to offset a facility's own electricity consumption without sales back to the grid. In some instances, this is a less cost effective and less efficient use of a valuable distributed generation resource.

3. LIMITS ON THIRD PARTY SALES

Minnesota currently allows only very limited sales of electricity or thermal energy except by utilities. This acts as a barrier for good CHP projects because commercial and industrial facilities are often reluctant to fund and operate their own electricity production projects. In many other states, experienced CHP project developers enter into contractual relationships with commercial and industrial facilities to design, finance, own and operate CHP systems at a host facilities and sell the thermal and electric power back to the host facility and/or sell excess power to neighboring facilities. Under current Minnesota policies, third party project developers cannot do this.

RECOMMENDATION FOR FURTHER DISCUSSION:

While Standby Rate charges have been studied and discussed in the DOC's proceedings this fall, Avoided Cost Calculation and limits on Third Party Sales have not been studied or discussed. We recommend that Avoided Cost Calculation and limits on Third Party Sales be the subject of further study and discussion by the DOC, either in the remaining workshop/meetings this fall or in a separate proceeding.

B. PROGRAMS TO ENCOURAGE CHP DEPLOYMENT

We believe the following programs and program elements are likely to have the greatest positive impact on CHP project development in Minnesota. Consideration of some of these programs or elements of these programs would benefit from additional discussion in the upcoming meetings or separate proceedings.

1. **INTEGRATED RESOURCE PLANNING:** Require consideration of CHP as an energy resource in utility Integrated Resource Plans (as proposed by FVB Energy). MCA supports this proposal. Minnesota utilities currently do not consider CHP in their planning for generation to meet future demand. Further, they have no incentive to include third party owned generation in their portfolios or plans. FVB's proposed legislation would remedy this discrimination against CHP projects, including third party owned distributed generation, and ensure Minnesota ratepayers are paying for the most cost efficient new generation by requiring that utility Integrated Resource Plans must review the availability, costs and benefits of industrial and commercial CHP compared to that of other new generation before investing in other resources.
 - b. MCA also supports utilities, including co-ops and municipal power producers, being able to recover the cost of CHP investments through the rate base. We recommend further discussion in the upcoming meetings of any issues pertaining to including CHP in utility Integrated Resource Plans, as proposed by FVB, and rate base recovery for utility owned or jointly owned CHP energy resources or acquiring CHP credits for third party owned CHP energy resources. We are particularly interested in hearing from the utilities as to what concerns they may have about these proposals.
2. **CHP PORTFOLIO STANDARD:** Create a CHP Portfolio Standard for CHP energy resources with a specific target percent of the portfolio and an opportunity to trade CHP credits (as proposed by FVB Energy). MCA generally supports the FVB proposed program, but believes the following elements of the program and suggested additions to the program should be considered.
 - a. **CIP Or Alternative Portfolio Program:** MCA has no opinion on whether this program is best located within the Conservation Improvement Program (CIP) or an Alternative Standard Program, but we would appreciate the opportunity to hear further discussion of the pro's and con's of these options in the upcoming workshop/meetings.
 - b. **Incentive Program Structure:** We believe the level of incentive offered in this program and when the incentive is paid are both important to successfully incentivizing CHP projects which, by nature, have high

upfront costs. We recommend that the structure of FVB’s proposed incentive program be discussed further in the upcoming workshops/meetings.

c. **Bonus Incentives:** We suggest this Portfolio Standard program also include bonus incentives for CHP projects located in grid-challenged areas of the state and projects that can be dispatched to take load off the grid during peak times and seasons. This will encourage projects that help Minnesota address its power resiliency issues. We recommend that bonus incentives be discussed in the upcoming workshops/meetings.

d. **Calculation of Energy Savings from CHP Projects:** FVB has proposed using the NRDC methodology for calculating energy savings from topping cycle CHP projects² to be credited under the Portfolio Standard and incentive program. FVB also recommends “tiering” of the amount of credit provided based on the efficiency of the CHP system. MCA disagrees with this approach and believes it does not fully and properly credit CHP energy savings.³ We recommend that FVB’s proposed energy savings methodology and “tiering” of energy savings credit, as well as other accepted methodologies and approaches to crediting CHP energy savings, be the subject of further discussion in the upcoming workshops/meetings.

² Note that the energy savings attributable to bottoming cycle CHP or “waste heat-to-power” projects need not be subject an energy savings calculation because it is generated from waste heat which is captured from fuel combustion serving a production process. As such, it’s energy output is considered to be 100% excess energy.

³ In a nutshell, our concerns with FVB’s energy savings methodology are as follows: FVB admits that its proposed savings methodology is less generous to CHP than other valid methods, but justifies using the NRDC method based on its simplicity. While MCA agrees that simplicity is always a factor to be considered, it should not be “the tail that wags the dog.” As CHP projects are generally “custom” projects, the energy savings achieved by each project is individually evaluated by energy efficiency experts anyway. Therefore, we suggest the better savings methodology is the more accurate SWEEP method which considers thermal output and inputs and grid electric and thermal displacement, a modified version of which is used by in the Illinois DCEO Public Sector Pilot CHP Program.

Further, we don’t agree with the “tiering” of energy savings credits used in the NRDC method and proposed by FVB. Their “tiering” approach would arbitrarily reduce the savings credit for CHP projects that are less than 80% efficient for non-renewable CHP and less than 70% efficient for renewable CHP. If a simplistic electricity output methodology is to be used, MCA objects to any method that fails to credit a CHP system with 100% of its electricity output. If savings are measured simply by electricity output, a less efficient system will earn less credit simply by virtue of the fact that it produces less electricity. It should not get an additional percentage reduction in its energy savings credit. While “tiering” based on efficiency may sound as though it will encourage greater efficiency, in fact, it doesn’t work that way. CHP systems are generally designed for specific thermal hosts and the efficiencies that CHP systems are capable of achieving are dictated by site-specific characteristics. Some applications will never be able to achieve efficiencies of 70-80%. Nonetheless, those CHP systems are achieving dramatic energy savings when compared to separate heating and electric systems and deserve to be credited for 100% of those savings. Furthermore, CHP system owners and operators are already incentivized to maximize CHP system efficiency to maximize their rate of return on an expensive investment.

e. **Unbundle Tradable CHP Credits:** We support a system of tradable credits to allow utilities to meet their CHP Portfolio target and to encourage third party development of CHP projects. However, we suggest that the emission reduction credit (ERC) be unbundled from the tradable credit, allowing the utility and the CHP power producer to negotiate contractually for the sale of the ERC. This is necessary because some industrial facilities may need to retain their ERC for compliance with air regulations (GHG and/or criteria pollutants), while other industrial and large commercial facilities may not need or be able to capture credit for the emission reductions their CHP projects create. As the trading program proposed by FVB has not been thoroughly discussed in the meetings to date, we recommend further discussion of that program as a whole and how ERCs would be treated.

3. PROGRAMS TO ENCOURAGE UTILITY OWNERSHIP OF CHP:

MCA supports the development of programs that encourage utilities, including co-ops and municipal power producers, that own or invest in CHP projects to participate in the portfolio program and obtain rate-based recovery for CHP investments. We recommend that the Minnesota CHP Portfolio Standard be structured to:

- a. Allow IOU, co-op and municipal power producer-owned CHP projects to count toward their CHP Portfolio Standard Target.
- b. Allow utilities, co-ops and municipal power producers to obtain rate-based cost recovery for investments in CHP projects as they would for other generation resources in their portfolios.

As mentioned above, we recommend that questions and concerns pertaining to utilities obtaining ratebase recovery for utility-owned or co-owned CHP projects co-located on or dependent on a third party host facility be subject to further discussion in the upcoming meetings.

4. PROGRAMS TO ENCOURAGE COMMERCIAL AND INDUSTRIAL CUSTOMER ENERGY EFFICIENCY PROJECTS:

We understand that many Minnesota commercial and industrial customers, particularly large electricity customers, are likely to opt-out of the CIP program. Therefore, we suggest that the DOC consider programs to encourage those customers to participate in CIP programs.

- a. **Self-Direct Energy Efficiency Programs:** Many large C&I customers opt-out of state run energy efficiency programs because they find they are paying more into the program than they get out and because the programs are inflexible and cumbersome. MCA has heard from large C & I customers that they would participate in state energy efficiency programs that allow them to obtain streamlined approval for custom energy efficiency projects, including CHP projects. Commonwealth Edison in Illinois has recently adopted such a program. We recommend that the DOC consider parameters for stream-lined Self-Direct Energy Efficiency Programs for large C & I customers, e.g. 10+ MW customers, that would encourage those customers to take part in and benefit from the proposed incentive programs for CHP projects.

- b. **On-Bill Financing for CHP:** The high up-front capital costs for CHP systems coupled with the high cost of capital for private sector businesses are a major deterrent to the installation of CHP systems that have very good long-term energy and money savings potential. On-Bill Financing through the utilities, which have a lower cost of capital, is a means of defraying the up-front costs and allowing the customer to repay through energy savings accrued during operation of the CHP systems. Making On-Bill Financing available for utility customers that participate in the Minnesota CIP programs, such as the CHP Portfolio Standard programs may encourage those customers to stay in the program. We recommend that the DOC consider this option in the package of recommendations it makes for encouraging CHP development in Minnesota. We would be particularly interested in hearing the utilities' point of view about On-Bill Financing for CHP projects.

C. PROCEDURAL QUESTIONS TO BE CONSIDERED:

1. GENERAL PROCEDURAL QUESTIONS:

- a. What are the next steps in this proceeding? How will the anticipated Action Plan be used?

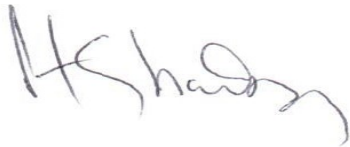
- b. Which aspects of the issues and programs discussed in these workshops/meetings require legislation? Which can be addressed by DOC rulemaking? Which can and should be addressed by a Public Utility Commission (PUC) generic order or PUC rulemaking?

2. **SPECIFIC PROCEDURAL QUESTION:** While standby rates are expected to be addressed by the PUC in a generic proceeding, if the PUC decides not to open a generic docket, does the DOC have the authority to address these issues? Is legislation necessary? Do FVB's proposed

legislative guidelines for standby rates go far enough? How does that legislative proposal mesh with the prospect of a PUC generic docket?

Once again, MCA appreciates this opportunity to provide interim feedback on the issues and options presented in the DOC's meetings to date. We look forward to continuing to work with the DOC and other stakeholders in this proceeding.

Sincerely,

A handwritten signature in black ink, appearing to read "P. Sharkey". The signature is fluid and cursive, with a long horizontal stroke at the end.

Patricia F. Sharkey
Policy Director
Midwest Cogeneration Association