

# **CHP Stakeholder Comments**

*Comment Period: Sept. 24 through Oct. 10, 2014*

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

Prepared By:



## Contents

<b>Background .....</b>	<b>3</b>
<b>Preliminary Comment Summary .....</b>	<b>3</b>
<i>Policy Options .....</i>	<i>4</i>
<i>Capital Costs and Utility Investment Prospects .....</i>	<i>7</i>
<i>Economic Potential and Value Proposition .....</i>	<i>8</i>
<i>Standby Rates .....</i>	<i>9</i>
<i>Training and Education Needs .....</i>	<i>9</i>
<b>Conclusion: Issues for Consideration .....</b>	<b>10</b>
<b>Appendix A: Comment Period Invitation .....</b>	<b>12</b>

## Background

As part of the 2014 Minnesota CHP Stakeholder Engagement process, the Minnesota Department of Commerce, Division of Energy Resources, arranged a comment period from Sept. 24 through Oct. 10, 2014.<sup>1</sup> Commerce invited stakeholders to submit written comments on issues involving CHP in Minnesota, and specifically on the following:

- FVB Energy's proposed CHP policy options
- CHP finance, policy, technical application, and education and training needs
- Alternative mechanisms and approaches to facilitate economically efficient deployment of CHP in Minnesota
- Current barriers and issues hindering CHP projects
- Resource planning, strategic, and regulatory factors affecting CHP options and potential
- Any other CHP issues on which stakeholders would like to comment

When the comment period closed, Commerce received submissions<sup>2</sup> from the following stakeholder organizations:

*BlueGreen Alliance*  
*CenterPoint Energy*  
*Cummins Power Generation*  
*Fresh Energy*  
*Great Plains Institute*  
*Great River Energy*  
*Minnesota Chamber of Commerce*  
*Minnesota Power*  
*Otter Tail Power*  
*Western Lake Superior Sanitary District*  
*Xcel Energy*

---

<sup>1</sup> Commerce scheduled the comment period to coincide with the three weeks separating CHP Stakeholder Meetings #2 (Sept. 3, 2014) and #3 (Sept. 24, 2014); see Appendix A and Commerce Website. <http://mn.gov/commerce/energy/topics/clean-energy/distributed-generation/2014-workshops/chp-meetings.jsp>

<sup>2</sup> Commerce received two additional comment submissions after Oct. 10, 2014, the official expiration of the comment period. This preliminary report is synthesized from 11 comment submissions.

## Comment Summary

Stakeholders submitted comments addressing numerous issues related to CHP development in Minnesota. The comments can be organized into several interrelated topic areas:

- Policy Options
- Capital Costs and Utility Investment Prospects
- Economic Potential and Value Proposition
- Standby Rates
- Training and Education Needs

*Note:* Copies of all submitted comments are available for public review at the Minnesota Department of Commerce website. This preliminary summary report paraphrases and generalizes comments, and omits figures and citations. Microgrid Institute is solely responsible for any errors or omissions in this summary report.

### ***Policy Options***

Comment submissions express various views on CHP policy options proposed by FVB Energy (*e.g.*, to add CHP provisions to Minnesota’s Conservation Improvement Program (CIP), or to establish goals for CHP deployment as part of the state’s existing renewable portfolio standard (RPS) or as part of a prospective alternative portfolio standard (APS)). Several comments also discuss options to encourage consideration of CHP through utility integrated resource planning (IRP) processes before the Minnesota Public Utilities Commission (PUC).

Some commenters note that various options aren’t necessarily mutually exclusive. CenterPoint Energy states that “maximizing CHP could mean pursuing both approaches simultaneously.” And Fresh Energy notes that utilities’ IRP processes could incorporate CHP analysis at the same time that CIP or other policies encourage CHP: “[W]hile individual proposals may not appear to offer large increases in CHP deployment, a suite of policy options considered together may offer greater potential.” The company cautions against disregarding any policy option based solely on its comparative merits versus other, potentially complementary approaches.

A few commenters express support for the APS policy option. Great Plains Institute notes that the option shows the highest potential for CHP capacity additions but so far has received comparatively little attention during CHP stakeholder discussions. BlueGreen Alliance observes that CIP policy amendments face limitations and challenges involving industrial companies and their trade unions, while the APS option avoids such issues and represents a more direct approach to encouraging CHP adoption.

While CenterPoint’s submitted comments express opposition to APS and RPS carve-outs for CHP, the company states that it is “open to” CIP policy adjustments for CHP – with some caveats. CenterPoint notes the company’s position that CHP projects shouldn’t “benefit one type of energy provider (gas) at

the expense of another (electric).” Also it observes that CHP projects are “unusual and do not occur on a regular basis,” suggesting that setting annual CHP goals might be less practical than “to simply allow CHP savings to count for utilities’ CIP achievements.” Additionally, CenterPoint asserts that capital cost incentives are more appropriate for CHP than operational incentives, but that if operational incentives are deemed necessary, “then CIP is not the proper source of funding for such incentives.” Moreover CenterPoint objects to the incentive levels discussed in FVB Energy’s proposals, stating that the hypothetical \$0.75/MMBtu incentive exceeds the company’s delivery charge (\$0.4929/MMBtu) for the customers CenterPoint says are most likely to install CHP systems.

The electric utility commenters – Great River Energy, Minnesota Power, Otter Tail Power, and Xcel Energy – expressed opposition to all of the FVB Energy proposed policy options.

Generation and transmission cooperative Great River Energy states that “[e]stablishing a formula for incentives for specific technologies is unprecedented and will drive up overall costs,” and that requirements “to derive a specific percentage of energy ‘savings’ from CHP facilities places an unachievable burden on many of GRE’s member cooperatives.” In particular Great River Energy objects to an alternative compliance payment option for utilities that do not meet CHP goals, stating that this “troubling” proposal would, in effect, cause GRE members’ to pay for CHP projects outside their service territories.

The three investor-owned utilities (IOU) note that CIP is designed to encourage conservation and not energy production, and therefore CIP is an inappropriate framework for CHP investments – with the exception of waste heat recovery projects, which already can qualify under CIP. Minnesota Power states that topping-cycle CHP projects can’t be compared with current CIP projects because “[r]educing energy usage is always more cost-effective than adding efficiencies to energy production.” Minnesota Power also argues that savings benefits for CIP projects are calculated on a one-year measurement, while CHP projects produce savings measured over many years.

Otter Tail notes that CIP doesn’t provide specific requirements for any particular energy efficiency measure, and doing so for CHP would be unprecedented. Also the company adds that while it hasn’t included customer CHP projects in CIP, it has provided incentives for waste heat recovery through the separate Custom Grant program for commercial and industrial conservation and efficiency improvements. Otter Tail suggests that a Custom Grant approach “creates a neutral playing field for traditional CIP projects and CHP.”

Additionally, Otter Tail Power specifically disagrees with the FVB Energy proposed formula for calculating CHP incentives, stating that it includes administrative costs that aren’t comparably considered for other CIP program offerings. “Including only incentive costs in the formula makes an apples to apples comparison ... and reduces the incentive amount by half.”

Xcel Energy expresses concern about potential cross-subsidy, stating that including topping-cycle CHP applications in CIP would impose cost burdens on residential customers to subsidize investments that

primarily benefit commercial and industrial customers. Xcel and Otter Tail both identify potential issues accounting for benefits derived from CHP deployment. Xcel suggests that increasing end-use efficiency by adding CHP would displace natural gas purchases, which “makes it complicated to determine whether gas or electric customers should pay for CHP incentives.” CenterPoint states, however, that solutions “are not difficult to imagine,” including a “system-view” approach that evaluates the overall efficiency of energy use at a facility and assigns energy savings to gas and electric utilities on the basis of total energy saved.

Otter Tail notes that using electric utility CIP funds for a natural gas-fired CHP facility would represent “targeted fuel switching” explicitly prohibited by previous Minnesota policies. “If CHP funding in CIP is allowed, then other fuel switching projects need to be considered,” Otter tail states. Moreover, the company asserts that economic CHP potential in its service territory is “virtually non-existent,” plus it opposes the proposed remedy for such market disparities – *e.g.*, a statewide system of tradable CHP credits.

Minnesota Power expresses concern that economic CHP projects “could dwarf existing CIP budgets,” and also that adding a separate tier for CHP within CIP would cause utilities to incur administrative costs even if no projects get built. However, the company suggests that if the state decides to add a new tier to CIP, it should implement that tier as a “generation improvement program,” with evaluation criteria designed specifically for evaluating generation projects.

Further, Minnesota Power notes that CHP projects using renewable fuels currently are eligible for cost recovery by utilities, and the company supports giving “preference to renewable CHP projects” and “expanding cost recovery options for CHP projects which currently do not qualify [to meet RPS mandates], as these projects provide carbon-free efficiency improvements.”

Great Plains Institute suggests that further stakeholder discussion about CHP policy options could be helpful in the context of utility IRP processes. Xcel Energy reports that its next IRP will include analysis of the costs, benefits, and effects of including higher levels of distributed generation, such as CHP and also photovoltaics and other technologies. Minnesota Power, however, recommends against using IRP processes to evaluate CHP projects. “The IRP planning horizon is 15 years and would require highly generalized assumptions for generic CHP projects many years in the future,” the company states.

Finally, the Minnesota Chamber of Commerce observes that no matter what policy options Minnesota might pursue, new fossil fueled CHP plants must be smaller than 50 MW of generating capacity under current law (*Minn. Stat. §216H.03 subd. 3 (2014)*), and that limitation reduces CHP’s potential efficiency benefits in the state. Unless the law is changed to exempt CHP projects, the Chamber of Commerce suggests “the current statute will continue to contradict Minnesota’s nation-leading energy conservation policies and the federal Public Utility Regulatory Policies Act of 1978.”

### ***Capital Costs and Utility Investment Prospects***

Many of submitted comments focus on the potential for utility companies to deploy low-cost capital to install CHP systems at the sites of customers who want CHP and whose thermal loads support the investment.

BlueGreen Alliance identifies “upfront capital cost as the most critical barrier” to CHP expansion. Its comments suggest that third-party ownership models – including utility investment – could help overcome that barrier, and the organization encourages resolving questions involving utility financing and operation of CHP systems located at customer sites. The Minnesota Chamber of Commerce observes that utility rate-base investment in CHP could benefit both utilities and customers by allowing utilities to earn regulated returns on distributed generation assets while host customers gain access to economical thermal energy. This approach, the Chamber says, would avoid load loss for utilities and allow customers to focus on investments in their primary business interests. In its comments, Fresh Energy recommends gaining additional input from prospective CHP host customers to ensure policies would be acceptable and favorable toward implementing CHP projects.

The Western Lake Superior Sanitary District (WLSSD) states that the FVB Energy proposed policy options over-emphasize the economics of IOUs and give utilities too much control over CHP project review, funding, and returns. WLSSD states that many factors influence the way non-IOU organizations evaluate CHP, and suggests that IOUs don’t weigh those factors in the same way. Specifically, WLSSD states that its planned CHP facility could help the organization reduce its carbon footprint, increase its sustainability, and control water treatment costs for customers. Thus WLSSD calls for “a healthy balance” of projects operated by utilities and other organizations. “Policy changes need to provide a satisfactory incentive to encourage both utilities and non-utilities to pursue CHP opportunities,” WLSSD states.

Further, Cummins Power Generation favors policy options that provide flexibility for commercial and industrial energy users to purchase energy from third parties, and for CHP operators to sell their output in energy markets. Cummins suggests greater flexibility would accelerate and expand CHP opportunities by allowing customers to capture CHP benefits “without the burden of high capital expenditures or liability of maintenance and service.”

Utility commenters express general support for the idea of allowing utility investment in CHP facilities at customer sites. Some of their specific comments and suggestions include the following:

- Great River Energy suggests that clarifying how utilities could invest in CHP might result in greater CHP deployment within existing policy frameworks.
- Otter Tail proposes giving utilities the right of first refusal in ownership of CHP facilities, and limiting the size of third-party and customer-owned CHP systems to the capacity requirements of their thermal hosts.

- CenterPoint emphasizes the need to ensure utility investment in CHP doesn't expose ratepayers to inappropriate risks, and to clarify the nature of projects that would be suited for utility investment.
- Minnesota Power states, "For future company owned CHP projects to be successful, the regulatory framework for evaluating these projects will need to give more consideration to factors besides cost." The company cites as recent example the PUC's disapproval of its plan to put an existing CHP facility into its rate base, on the basis that doing so would marginally increase Minnesota Power's regulated operating costs.
- Xcel notes that utilities don't always have the tax liabilities needed to make them eligible to benefit from tax-credit incentives often used to encourage clean energy investments.

Great Plains Institute recommends further examination of the prospects and implications of utility investment in CHP facilities of various sizes and types, and notes that questions involving utility investment in distributed generation are being considered as part of its "e21 Initiative," which seeks to examine alternative regulatory approaches such as performance benchmarks for earning returns.

### ***Economic Potential and Value Proposition***

BlueGreen Alliance asserts that CHP's broad range of benefits justify incentives that appropriately assess the value of its environmental, societal, and system attributes. The Minnesota Chamber of Commerce adds that CHP at high load-factor sites can provide local base-load energy supply that supports grid reliability and reduces the need for transmission investments.

Xcel Energy favors a "holistic and balanced approach" to providing incentives that are intended to serve environmental goals. "It is important that the technology options available for reducing emissions are compared against one another, to provide the maximum environmental benefit for the least customer impact," Xcel states. In addition to cost factors, Xcel recommends that comparisons also should value system factors such as dispatchability.

Otter Tail expresses concern that societal benefits included in CHP valuation are difficult to measure, verify, and quantify. Moreover, the company questions FVB Energy's recommended CO<sub>2</sub> equivalent price of \$25 to \$50 per metric ton, and suggests instead using established CO<sub>2</sub> values of \$9 to \$34 per ton.

Fresh Energy recommends ensuring that policies include measures of CHP value that encourage not only large systems for industrial users, but also smaller units for customers of other sizes. Great Plains Institute encourages more analysis of opportunities at public sector facilities and institutions, including wastewater treatment facilities. Accordingly, WLSSD notes that its planned CHP project would produce a range of benefits, including greenhouse gas reductions and increased use of local renewable energy resources, and suggests that such benefits deserve appropriate valuation when considering economic potential in the context of state policy goals and the interests of Minnesota energy customers.

Advocacy groups Great Plains Institute and BlueGreen Alliance suggest that mapping waste heat sources and “high value” sites in Minnesota could help prioritize CHP development, as well as utility resource planning and environmental compliance planning efforts.

Xcel Energy’s comments refer to a forthcoming study performed by the Electric Power Research Institute estimating the CHP potential in Xcel’s Northern States Power territory. Xcel says the study identifies 305 MW of CHP projects that could achieve payback within six to 10 years. That total, according to Xcel, includes two CHP projects totaling 71 MW now in planning stages, leaving 234 MW of new CHP potential.

Xcel adds that the EPRI study indicates that reducing capital costs by 50 percent increases the total economic CHP potential in the NSP territory by only 15 percent, and that “removing standby rates did not have a huge impact on improving economic potential.”

### ***Standby Rates***

Several commenters refer to a parallel process at the Minnesota Department of Commerce related to the Minnesota PUC’s prospective proceeding on standby rates for distributed generation. Otter Tail Power briefly summarizes its comments to the Department in that process. First, it notes that the PUC’s 2004 order establishing standards for setting standby rates “provides a solid foundation,” and that further standby rate design efforts are unnecessary. Second, the company notes that its standby rate design incorporates many of the attributes recommended by presenters at the Department of Commerce’s Sept. 11, 2014 meeting. Third, it refers to comments from that meeting that suggest that changes to standby rates wouldn’t affect key investment criteria for CHP projects.

Some submitted comments, however, disagree with the assessment that Minnesota’s standby rates are sufficient and effective. Cummins Power Generation states that the current standby rate structure “severely limits” CHP potential for small commercial and industrial facilities, and WLSSD adds that uncertainty about standby rates could prevent its proposed CHP project from proceeding. WLSSD notes that current standby rate structures don’t support customers’ need to anticipate potential standby charges, and they impose fees on the basis of nameplate generating capacity rather than actual customer load patterns and standby energy requirements.

### ***Training and Education Needs***

Some comments provide insight into needs for additional CHP-focused training and education resources in Minnesota. WLSSD notes that many opportunities for CHP may exist, but that customers lack the technical expertise and knowledge to either recognize or exploit those opportunities. WLSSD suggests that making available low-cost (or no-cost) expertise and information resources could help prospective CHP hosts to assess and pursue project opportunities.

Additional comments from stakeholders participating in the Minnesota CHP Stakeholder Engagement process – obtained by telephone survey – suggest that the state’s technical workforce is adequately

positioned to support CHP project design, construction, operations, and maintenance. However, stakeholders suggest that CHP prospects could benefit from educational capabilities and resources focused on helping energy users assess CHP potential for their facilities, as well as how to manage policy, legal, and finance issues related to project planning and development.

### **Conclusion: Issues for Consideration**

Participants in the Minnesota CHP Stakeholder Engagement process represent a broad cross-section of organizations and individuals in the state's commercial, institutional, and regulatory sectors. Accordingly they bring a variety of perspectives and experiences to the issues affecting CHP deployment – from rising biomass expectations to shrinking customer load.

Minnesota's utilities express general opposition to CHP policy options that envision new regulatory requirements. Their reasons tend to target the basic assumptions underlying the proposed options – *i.e.*, estimations of market potential, comparative economics, and underlying environmental and energy policy strategies. Additionally, they indicate concerns about unintended consequences – such as potential cross-subsidies, community burdens without commensurate benefits, and policies that favor natural gas companies at the expense of electric companies.

At the same time, however, Minnesota's utilities also acknowledge substantial potential for CHP in some parts of the state. And they support policy changes that would clarify their ability to obtain regulated cost-recovery for investments in CHP assets at customer sites where those investments make sense. In all cases utilities assert their interest in evaluating CHP potential according to the criteria they consider important, in the context of their fiduciary and public utility obligations.

While acknowledging the legitimacy of those interests, however, potential CHP customers and vendors identify structural barriers in current policies and standards that they suggest unnecessarily complicate CHP projects and inflate project costs. Some stakeholders express concern about policies that focus too much on driving utility investment in onsite power systems. Others assert that energy policy priorities support establishing appropriate price signals for environmental, social, and system attributes, and implementation challenges shouldn't prevent the state from continuing its leadership in promoting conservation and clean energy alternatives to serve customers.

Submitted comments and other input suggest a need for continued exploration of several issues including:

- Establishing criteria for evaluating CHP projects and comparing them to alternative solutions
- Identifying “high-value” opportunities to prioritize CHP deployment and resource planning
- Balancing provisions for CHP investment by utilities, customers, and third parties, respectively
- Clarifying the implications of policy options and resolving potential conflicts and unintended consequences
- Developing effective education and assistance tools to facilitate CHP deployment

The Minnesota Department of Commerce welcomes additional input and interaction, and expects to continue the process of CHP stakeholder engagement. Meetings #3 and #4 in the CHP Stakeholder Engagement process will provide opportunities for further discussion of these and other issues affecting CHP deployment in Minnesota.

**Appendix A:**

**CHP Comment Period Invitation**

*via email to stakeholders, Sept. 25, 2014*

-----  
**A comment period is now open from September 24 through October 10.** The Minnesota Department of Commerce invites stakeholders to submit written comments regarding issues and factors affecting CHP deployment in Minnesota. Possible topics for comment may include, but are not limited to:

- FVB Energy's proposed CHP policy options
- CHP finance, policy, technical application, and education and training needs
- Alternative mechanisms and approaches to facilitate economically efficient deployment of CHP in Minnesota
- Current barriers and issues hindering CHP projects
- Resource planning, strategic, and regulatory factors affecting CHP options and potential
- Any other CHP issues that stakeholders would like to comment on

**Please submit written comments in PDF format** no later than Oct. 10, 2014, to the following email address: [cip.contact@state.mn.us](mailto:cip.contact@state.mn.us)

If you have any questions, please contact Jessica Burdette at [Jessica.burdette@state.mn.us](mailto:Jessica.burdette@state.mn.us) or [651-539-1871](tel:651-539-1871) or me via the information in my signature. Thank you!

**Adam Zoet**

Energy Policy Planner

Minnesota Department of Commerce

85 7th Place East, Suite 500, Saint Paul, MN 55101

P: [651-539-1798](tel:651-539-1798)

-----