

**STATE OF MINNESOTA
BEFORE THE
MINNESOTA DEPARTMENT OF COMMERCE
DIVISION OF ENERGY RESOURCES**

Minnesota Department of Commerce,
Division of Energy Resources
Combined Heat and Power Stakeholder Process

**MINNESOTA POWER'S
COMMENTS ON DRAFT
CHP ACTION PLAN**

I. Introduction

Minnesota Power (“the Company”) participated in the stakeholder process held by the Department of Commerce - Division of Energy Resources (“Department”) on combined heat and power (“CHP”) issues. On March 31, 2015, the Department released a Draft Combined Heat and Power Action Plan (“Draft Plan”) which provided a summary of the CHP stakeholder process and identified six priority issues, along with potential action items to address the issues. Minnesota Power offers these comments in response to the Draft Plan.

II. Overall Response to Draft Plan

The Company appreciates the opportunity to participate in the stakeholder process on CHP issues and commends the Department for providing an inclusive summary of the stakeholder meetings and written comments submitted in the stakeholder process.

The Company has some overall concerns in response to the plan. First of all, the Draft Plan does not include a statement of the objective it intends to accomplish or the principles the plan is based on. It is difficult to evaluate the plan without a clear sense of the plan’s purpose. For example, is the goal to reduce carbon emissions? Is the goal to simply install more CHP facilities? If the goal is to reduce carbon emissions, it might make sense to wait to complete the action plan until Minnesota has more certainty with the effects of the Environmental Protection Agency’s Clean Power Plan and can align action items to meet those carbon controls. In order for the Draft Plan to be effective, it should include a statement of its purpose.

Secondly, it seems that, while some action items were developed as a result of the stakeholder process, other action items were imposed in the Draft Plan and were not developed out of the stakeholder process. Specifically, the intention to use utilities’ existing CIP programs

to incorporate CHP projects was introduced in the stakeholder process and received considerable opposition and concerns expressed from many parties. However the Draft Plan includes modifying CIP programs to include CHP projects and does not address the many concerns brought up in the stakeholder process. Minnesota Power has serious concerns about modifying the CIP program, which has been very successful in promoting energy conservation. As described in more detail in the next section, the Draft Plan doesn't address how the fundamental differences between energy conservation and generation efficiency would be managed in a modified CIP program, how the program would be administered or funded, or how highly-customized CHP project benefits would be measured with highly-prescriptive savings calculations. The Draft Plan indicates that only thirty-eight percent of respondents who participated in the post-engagement CHP stakeholder survey indicated that including CHP as an eligible supply-side resource under Electric Utility Infrastructure ("EUI") in CIP would be an effective policy initiative to facilitate CHP deployment in Minnesota.¹ With sixty-two percent of respondents not agreeing with this assertion, it seems the stakeholder process was not utilized to develop this important action item.

Thirdly, the Company is concerned that the recommendations in the Draft Plan do not adequately address important obstacles to developing successful CHP projects. Minnesota Power has extensive experience working with its customers to provide CHP opportunities and industrial energy efficiency measures which are both affordable and reliable for their business needs. In its initial comments in the stakeholder process filed October 10, 2014, the Company expressed support for pursuing CHP opportunities which are affordable, reliable, and in the best interests of all customers. In Minnesota Power's experience, the primary obstacles to developing these CHP opportunities have been the risk of stranded assets if the host customer were to go out of business or experience a significant reduction in operational demand, poor cost-to-benefit ratios for the projects, and the regulatory framework to evaluate CHP projects which are based mainly on cost. Minnesota Power is concerned that the recommendations in the Draft Plan do not adequately address these primary obstacles to developing successful CHP projects. While some of the recommended options address economic screening of projects, the action plans failed to adequately address important issues such as stranded asset risk, funding of program costs, and cost recovery of utility-funded projects.

¹ See page 41 of the Draft CHP Action Plan.

The discussion below addresses Minnesota Power's responses to the specific action items proposed in the Draft Plan.

III. Comments on Action Items

Standby Rates

Minnesota Power has been actively involved in the generic proceeding on standby rates. In comments filed April 15, 2015, the Company stated that standby rates should be based on customer backup power requirements and the costs they impose on the utility's system. The rates should be as simple and understandable as possible, while sending clear price signals and incentives for customer-owned generation to be operated as efficiently as possible. Additionally, the methodology for standby rates should be flexible, recognizing that there may be differences between Minnesota utilities based on varying system load and customer generation characteristics. The Company will continue to be engaged with all aspects related to this topic through discussion with the Commission and other stakeholders.

CHP Evaluation Methodology and Criteria

The Draft Plan recommends establishing a CHP attribution model as part of Minnesota's Technical Reference Manual ("TRM") in collaboration with TRM Committee members.

Minnesota Power has serious concerns with utilizing TRM to include CHP projects. TRM provides standard methodologies and inputs for calculating the savings impacts and cost-effectiveness of energy conservation improvement programs ("CIP") in Minnesota, resulting in project savings and incentives. However, TRM does not have a proven track record of accommodating CHP projects. While TRM provides a standardized and relatively simple way to evaluate projects, CHP projects require a custom calculation for savings since the economics vary by site. CHP is much more custom than prescriptive, while TRM is more prescriptive than custom.

In addition, there are many questions about how the savings and incentives would work if TRM were utilized. Where would the savings come from with CHP projects? What kind of incentive would be applied: a capital incentive on a project-by-project basis or a dollar per kWh incentive? And how would these incentives be funded? The existing CIP budget could be wiped out by just one CHP project.

There are also questions about which type of projects would take priority if CHP were included in CIP. Given the fundamental differences between energy conservation and generation efficiency, the cost savings ratios are fundamentally different. Reducing energy usage is always more cost-effective than adding efficiencies to energy production, as it represents 100% efficiency – a measure that CHP projects do not reach. The Draft Plan is silent on how CHP projects would be prioritized within CIP.

The administration of CHP projects is fundamentally different from administration of the projects and technologies currently included in TRM. CHP projects require considerable upfront costs to administer the program and evaluate projects, even if no projects are ultimately accepted. And even when projects are accepted, the timeline to completion is considerably longer than traditional CIP projects. CHP projects require administration throughout its project life – often close to twenty years.

The Draft Plan also recommends examining ways to adapt and incorporate aspects of Illinois' CHP TRM to establish a Minnesota-specific CHP savings methodology. At the present time, the Illinois model exists as a pilot program and does not have a proven track record in accommodating CIP projects. The Company does not think it is prudent to adopt a model that has not been proven to be effective, particularly when customers would likely be expected to pay the costs of these projects for many years to come.

Mapping CHP Opportunities

The Draft Plan recommends mapping CHP opportunities at Minnesota Wastewater Treatment Facilities and at public facilities, building off the analysis completed by FVB Energy. A Department of Energy (“DOE”) grant is expected to fund the wastewater mapping project and a DOE grant application has been submitted to fund the mapping at public facilities.

Minnesota Power was unable to find the source of the data used in FVB Energy's analysis to assess CHP opportunities in Minnesota. In general, the Company supports the mapping of CHP opportunities by the Department, so long as the DOE grants cover all costs and utility customers do not pay for these or subsequent mapping projects. The Company does have a concern that the focus of this action item is on public facilities. As mentioned in the Draft Plan, public facilities are good candidates for implementation of CHP systems in part because they are better able to accept longer paybacks and have access to financing to implement CHP projects. The Company is concerned that the Department may attempt to model the mapping and

subsequent CHP development beyond public facilities and into the private sector, where conditions are very different. For example, private candidates for CHP projects tend to require a much shorter payback period and do not have access to the same financing as public facilities.

CHP Ownership Problems and Solutions

To address some of the barriers involved with CHP ownership, the Draft Plan recommends leveraging existing financing programs applicable to CHP. Minnesota Power supports improving awareness and communication of existing financing programs to meet the individual needs of customers for CHP projects. This action item would be most successful from a utility perspective to the extent that these financing programs help allay the risk of stranded assets if the host customers were to go out of business or experience a significant reduction in operational demand.

While the action item may help to finance customers' CHP projects, it fails to provide a regulatory solution for utilities interested in ensuring cost recovery for CHP investments. In FVB Energy's study published in September 2014, one of the key findings was that significant increases in implementation of CHP will require investment by utilities in CHP, primarily because utilities have a sufficiently low weighted average cost of capital to make many CHP projects cost effective. The action item doesn't appear to promote utility ownership or offer a regulatory solution for utilities.

Education and Training Needs and Options

The Draft Plan recommends expanding education and training resources, including CHP evaluation methodology training and support and CHP outreach and development support. Minnesota Power supports the expansion of education and training resources for CHP and recommends that the training and support includes both technical and economic aspects of CHP. The Company proposes that a pre-screening tool and scoping procedure be established so that only projects with legitimate potential are considered and attention can be given to high-potential projects. The tools should start with a high-level technical and economic feasibility screening before moving to deeper screening of CHP projects.

Adapting CIP for Supply-Side Investments

The Draft Plan contemplates identifying and developing a set of EUI measures, including CIP, to be included in Minnesota's TRM. In comments filed April 15, 2015, the Company expressed serious concerns about incorporating CHP projects in to the CIP program. The Draft Plan does not include any provisions to allay these concerns.

There are fundamental differences between promoting energy conservation – the current goal of CIP – and encouraging generation efficiency. A basic premise of conservation is that costly utility investment in generation and transmission infrastructure can be deferred – a principle that saves money for all customers. Promoting CHP projects will add generation at a higher cost than existing generation and this cost will be paid for by all customers.

Projects within existing CIP programs cannot be legitimately compared with generation CHP projects, since the cost savings ratios are fundamentally different. As previously stated, reducing energy usage is always more cost-effective than adding efficiencies to energy production, and savings benefits from CIP projects utilize a one-year savings measurement, while the savings calculations for CHP projects are often measured over many years.

Additionally, the most economic CHP projects are likely very large projects which could dwarf existing CIP budgets. Adding a separate tier for CHP within existing CIP programs would require considerable upfront costs to administer the program and evaluate projects, even if no projects are ultimately accepted. And even when projects are accepted, the timeline to completion is considerably longer than traditional CIP projects, further compounding the impact to CIP budgets. It is unclear how the proposed action plan to adopt existing CIP programs for CHP projects would be funded. Additionally, it is unclear how this initiative would address the stranded asset risk. The action plan as currently stated does not appear to be in the best interests of utility customers.

IV. Conclusion

While Minnesota Power intends to continue supporting its customers to provide CHP opportunities which are both affordable and reliable and believes some aspects of the Draft Plan will help to accomplish this, the Company has serious concerns that other aspects of the Draft Plan will harm utility customers overall. The proposed action plan to adapt existing CIP programs to include CHP projects does not address many serious concerns about how such a program would be funded and administered, how it would prioritize between CHP projects and

efficiency projects, and how it would protect customers from higher costs and from the risk of stranded assets if the CHP host were to go out of business. The current Draft Plan fails to provide a statement of its purpose or list of guiding principles. It also fails to provide options for utilities to promote CHP projects to their customers and does not address important issues such as stranded asset risk, funding of program costs, and cost recovery of utility-funded projects. The Company urges the Department to delay finalizing the Draft Plan until these important issues can be addressed and resolved.

Minnesota Power proposes an action plan which includes separate criteria to evaluate and compare CHP projects. The criteria should include an economic evaluation, a stranded asset risk assessment, a benefit analysis, and a customer agreement. These criteria would need to be established to assure that only sensible CHP projects are developed. The benefits analysis tool to evaluate societal, utility and non-participant impact would need to be developed specifically for CHP projects, since the existing CIP benefit analysis tool is useful for evaluating conservation projects rather than generation projects. The action plan should also include a regulatory mechanism which provides cost recovery for utilities and protection from excessive rate increases for customers.

The Company appreciates the opportunity to participate in these discussions and plans to continue to be an engaged and willing participant on this topic.

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Respectfully Submitted,



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