



414 Nicollet Mall  
Minneapolis, Minnesota 55401

May 15, 2015

—Via Email—

Minnesota Department of Commerce  
Division of Energy Resources  
Attn: Ms. Jessica Burdette  
85 7<sup>th</sup> Place East, Suite 500  
St. Paul, MN 55101-2198

RE: COMMENTS ON DRAFT COMBINED HEAT AND POWER ACTION PLAN

Dear Ms. Burdette:

Northern States Power Company (NSP), doing business as Xcel Energy, appreciates the opportunity to submit comments on the Department of Commerce's Draft Combined Heat and Power (CHP) Action Plan. Through the Department's CHP stakeholder process in the fall of 2014 and our October 2014 Comments on that process, we raised a number of issues for consideration related to the expanded development of CHP in Minnesota. We are concerned that those issues are not reflected in the Department's Action Plan.

Specifically, the Action Plan does not address the challenges related to cross-subsidization and cost-effectiveness of CHP as a resource, which are key considerations in developing a plan for CHP implementation in Minnesota. As we have learned in considering other distributed generation resources, there can be significant customer impacts if the program rules are not established appropriately from the onset to ensure the allocation of costs and benefits is equitable. The Company supports the rational and cost-effective expansion of CHP in Minnesota that benefits the overall electric system as well as participating customers. Below we provide a summary of those issues we believe are not adequately addressed in the Action Plan, as well as comments related to the priority issues identified by the Department.

### COMMENTS

We participated in the Department's CHP stakeholder engagement process in the fall of 2014 and submitted Comments on October 10, 2014. In those Comments we presented our suggested guiding principles for the development of CHP in

Minnesota, as well as our responses to the Department’s proposed topics, and an overview of the results of a CHP technical and economic potential study developed by Resource Dynamics Corporation (RDC) for the Electric Power Research Institute (EPRI) on our behalf. The study, called “Technical and Economic Potential for DG (Distributed Generation) and CHP Applications in Xcel Energy’s Minnesota Territory,” used Company-specific customer data to identify CHP potential and project opportunities by customer segment and associated payback. While the Department’s Action Plan is intended to summarize the key findings from the stakeholder process, we feel that a number of key issues we raised are missing. In these Comments we address:

- The necessity to identify an explicit objective for the Action Plan and CHP deployment in Minnesota;
- Guiding principles for consideration as we move forward with these objectives;
- Concern regarding study analysis; and
- Specific details regarding the Department’s priority issues identified in the Action Plan.

#### **A. Issues for Inclusion in the Action Plan**

The Company appreciates the Department’s efforts to engage parties in a dialogue on the design of an appropriate regulatory structure for the expansion of CHP in Minnesota, one which addresses the value of the technology while appropriately allocating costs and benefits among customers. As we stated in our October Comments, we believe there is a role for CHP to promote efficient system operation, reduce carbon emissions, and expand customer options. In order to determine an appropriate CHP program for Minnesota, we believe that the Department’s Final Action Plan should address the following issues.

##### *1. Identify an Objective*

The Action Plan lacks a specific goal, which makes it difficult to determine how to measure the success of implementation of the plan. Whether that objective is carbon reduction, promotion of a specific technology, furthering the implementation of district energy systems, or decreasing electricity or natural gas consumption, identifying an explicit goal is important for developing the evaluation methodology and establishing stakeholder support. We therefore suggest that the final version of the Action Plan include a specific objective.

## 2. *Guiding Principles*

In our October 2014 Comments we included a set of potential guiding principles for consideration in any policy decision about the expanded development of CHP in Minnesota. Those principles included: (1) holistic and balanced approach to carbon reduction; (2) resources must be cost-effective; (3) identify system value; (4) find an incentive opportunity outside of Conservation Improvement Program (CIP) funds; (5) reduce cross-subsidization; (6) appropriate allocation between energy source providers; and (7) flexibility. The Action Plan's stakeholder comments summary did not directly reference these guiding principles, we hope they will be included in the final version.

## 3. *Address Inconsistent Study Results*

With our October Comments we submitted the RDC/EPRI study on technical and economic potential for CHP applications in our Minnesota service territory. The study used Company-specific customer data to identify CHP potential and project opportunities by customer segment, and provides a complementary perspective to the work conducted by the Department and its consulting partners in this stakeholder process.

The results of the RDC/EPRI study were not reflected in the Action Plan; however two other studies that were funded by grants from the Department were referenced. The two studies discussed in the Action Plan were performed by the University of Illinois, Energy Resources Center (ERC) and FVB Energy (FVB). There are a number of inconsistencies in the baseline assumptions and conclusions between the two studies. For example, economic potential for CHP in Minnesota identified by ERC is 26 percent less than that identified by FVB.

Additionally, the baseline assumptions and conclusions presented by the ERC and FVB analyses do not match up with those identified in the RDC/EPRI study. For example, the economic potential for CHP in our Minnesota territory as identified by ERC and FVB is, respectively, 54 percent and 50 percent higher than that identified by the RDC/EPRI study. These results demonstrate that there is variability and a lack of consensus on the total CHP potential in Minnesota, and it may be risky to depend on a single source of data to inform the statewide Action Plan. These inconsistencies need to be addressed and resolved prior to release of the final CHP Action Plan. In addition, the Department should consider all available study results in developing the Action Plan, especially given that the vast majority of CHP potential exists in our Minnesota service territory.

## **B. Response to Department's Priority Issues and Action Items**

The Department's Action Plan identifies six priority issues to address in order to effectively advance CHP in Minnesota. We believe the issues we raised above should also be addressed as part of the Action Plan. In addition, we provide comments on several of the priority issues identified by the Department below.

### *1. Standby Rates*

The issues associated with providing standby service and net metering for CHP technologies are being examined in the generic standby service proceeding (Docket No. E999/CI-15-115). We agree the standby proceeding is the appropriate venue for addressing this issue and note that we filed Comments on April 15, 2015 in that docket.

### *2. CHP Evaluation Methodology and Criteria*

We agree that developing a criteria and method for measurement of CHP project impacts is an important priority in the Action Plan. As the guiding principles we proposed in our October Comments suggest, the criteria for CHP evaluation should look at more than energy savings, and should consider carbon emissions, cost-effectiveness, customer commitment, and system value as well.

The criteria might also compare CHP with other carbon emissions reduction opportunities, as a benchmark for those criteria. For example, if the goal of expanded CHP is emissions reduction, it is worth noting that CHP may result in more gas burned on site than with other heating technologies, which could result in more localized Nitrogen Oxide (NO<sub>x</sub>) emissions. As we mentioned in our comments above, identifying an explicit objective for the CHP Action Plan would help to inform the evaluation methodology. The development of a CHP evaluation methodology should include a broader group of stakeholders with the technical expertise to determine appropriate measures for CHP project implementation.

We agree with the statement in the Action Plan that fuel switching issues need further analysis in this process, to determine how savings will be attributed between electricity and natural gas, and acknowledge potential lost revenues. Before an evaluation methodology can be implemented, a resolution is necessary on the treatment of fuel switching in CHP projects.

### 3. *Mapping CHP Opportunities*

While a map of CHP opportunities around the state could be a valuable resource for identifying those facilities most suited for CHP development, the methodology for the mapping process should be thoroughly vetted in order to produce meaningful results. Given the site-specific nature of CHP technology, it will be challenging to uniformly identify CHP resource potential. Unlike other energy resources, CHP potential is not necessarily related to fuel availability, unless the intention is to map areas close to natural gas pipelines, biomass, or waste gas sources.

CHP is a load-driven technology, and its potential is variable based on load. For example, the load profile and duty cycle of a CHP project will be unique to that specific project. The higher the load profile and hours of operation, the better the performance of the CHP system. Two projects with some common characteristics, but different load profiles/duty cycles, can have substantially different overall system evaluations.

As we mentioned above, a number of the results presented in the Action Plan from the ERC and FVB analyses are inconsistent with the findings from our RDC/EPRI study. If the intention is to use the FVB Energy analysis to inform the mapping process, we are concerned that the data may not accurately represent CHP potential in our service territory.

### 4. *CHP Ownership*

CHP technology is by nature a customer-driven solution, one that relies on customer action and cannot be forced by the utility. A utility mandate is therefore not the most effective way to promote deployment of this technology. Thus we agree with the suggested action item in the plan- to identify financing mechanisms or incentives that make CHP more attractive to customers- as a more appropriate approach.

The Action Plan does not currently provide an appropriate regulatory structure that appropriately addresses the value of CHP, while maintaining a financially suitable model for utilities and customers. The Company is a participant in a CHP system at our Sherburne County Generating Station, where we provide steam to Liberty Paper. We would support further opportunities for utility ownership or development of CHP systems under the right circumstances.

5. *Adapting CIP for Supply-Side Investments*

This action item should instead be to “identify appropriate financing mechanisms or incentives for CHP.” We do not agree that CHP uniformly belongs in the Conservation Improvement Program (CIP). We believe that current CIP policies allowing waste heat recovery for electric generation or thermal use (Bottoming-cycle CHP systems) are aligned with the goal of reducing energy waste that is currently occurring. Topping-cycle CHP systems are *new generation resources* and should be treated as such by inclusion in a Resource Plan rather than being considered as a conservation measure. Supply-side resources have not traditionally been included in CIP, and it seems inconsistent to make an exception for CHP without also considering other, potentially more cost-effective, supply-side options. Should parties wish to pursue this path, we believe that clear objectives and a more flexible overall approach should be established before making this exception.

**CONCLUSION**

We appreciate the opportunity to submit further comments in this process and to offer some additional issues for consideration in the Department’s CHP Action Plan. We are willing to participate in subsequent stakeholder efforts on this topic and believe those efforts should address the concerns raised here. The final CHP Action Plan that results from these efforts should represent an agreement among stakeholders on the data that will be used as the basis for implementing the plan, and include an objective that is realistic and equitable for utilities, ratepayers, and other stakeholders.

Please contact me at [paul.lehman@xcelenergy.com](mailto:paul.lehman@xcelenergy.com) or 612-330-7529 if you have any questions.

Sincerely,

/s/

PAUL J LEHMAN  
MANAGER  
REGULATORY COMPLIANCE AND FILING