



December 21, 2017

Nancy Lange, Chair  
Minnesota Public Utilities Commission  
121 7<sup>th</sup> Place East, Suite 350  
Saint Paul, MN 55101-2147

CC: Dan Lipschultz, Commissioner  
Matt Schuerger, Commissioner  
Katie Sieben, Commissioner  
John Tuma, Commissioner

Re: Comments from the Alliance for Industrial Efficiency; In the Matter of a Commission Investigation to Identify and Develop Performance Metrics and, Potentially, Incentives for Xcel Energy's Electric Utility Operations; PUC Docket No.: E-002/CI-17-401

Dear Honorable Chair Lange,

The Alliance for Industrial Efficiency (the "Alliance") appreciates the opportunity to submit comments to the Minnesota Public Utilities Commission (the "Commission") as it considers Xcel Energy's Utility Operations. The Alliance is a diverse coalition that includes representatives from the business, environmental, labor and contractor communities, including over 160 electrical and sheet metal contractors in Minnesota alone. Alliance member Veolia Energy provides operation and maintenance services for a 22.8 megawatt combined heat and power system at the University of Minnesota in Minneapolis/ St. Paul. Our coalition is committed to enhancing manufacturing competitiveness and reducing emissions through industrial energy efficiency, particularly through the use of clean and efficient power generating systems such as combined heat and power (CHP) and waste heat to power (WHP).

We are writing to support an overall increase in cost-effective, energy-efficient, and reliable distributed generation (DG)—such as CHP and WHP—in the commercial, industrial, and institutional sectors in Minnesota. To achieve this, we recommend that the Commission establish a CHP and WHP deployment goal for Xcel Energy.

### **About CHP and WHP in Minnesota**

CHP is a sustainable and efficient energy solution that recycles waste heat from power generation and converts it into useful thermal energy. By generating both heat (thermal energy) and electricity from a single fuel source, CHP dramatically increases overall fuel efficiency – allowing utilities and host companies to effectively “get more with less.” CHP more than doubles the fuel efficiency of a conventional plant, using more than 70 percent of fuel inputs. WHP systems recover waste heat and use it to generate electricity with no additional fuel and no incremental emissions. As a consequence, CHP and WHP can produce electricity while lowering costs for both host companies and all Minnesota ratepayers.



In Minnesota, there is a substantial opportunity to implement CHP. Currently, the state has 56 CHP sites, generating over 1 gigawatt (GW) of clean and efficient power.<sup>1</sup> The Department of Energy estimates the state has 4,310 MW of remaining CHP and WHP technical potential capacity (identified at 6,326 sites), with 1,495 MW of remaining onsite technical potential in the industrial sector alone.<sup>2</sup> A 2016 report from the Alliance for Industrial Efficiency found that deploying an economically viable portion of the state's CHP and WHP potential,<sup>3</sup> would save Minnesota's industrial sector customers \$1.1 billion in cumulative electricity costs from 2016 to 2030.<sup>4</sup> Cutting electricity costs in this way would help make the state's industrial base more competitive.

Minnesota is particularly well-positioned for CHP growth because of its strong industrial base and significant remaining technical potential. Manufacturing accounts for 14 percent (\$43.7 billion in 2013) of the total gross state product and employs over 11 percent of the workforce.<sup>5</sup> Minnesota's industrial sector consumed 34.6 percent of the total energy used statewide in 2013 (or 663.4 trillion British thermal units).<sup>6</sup> The size of the state's manufacturing sector and the significant technical potential for CHP indicates that Minnesota has a tremendous opportunity for additional CHP and WHP deployment.

By establishing a CHP and WHP deployment target, the Commission would send a strong signal to Minnesota ratepayers about the importance of these technologies. This would further encourage utilities to align with their customers to encourage additional use of CHP and WHP.

To ensure that Xcel Energy achieves this goal, the Commission should address any utility policies, programs, and regulations that may act as barriers to CHP and WHP deployment. We recommend that the Commission examine and evaluate: (1) whether Xcel adequately treats CHP and WHP in its Integrated Resource Plan; (2) whether Xcel has burdensome standby rates or interconnection rules that impede deployment of these technologies; (3) the options Xcel customers have for net metering and power purchase agreements; and (4) whether Xcel has effective utility incentives to support deployment of CHP and WHP.<sup>7</sup> Addressing these issues

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<sup>1</sup> U.S. DOE Combined Heat and Power Installation Database, (<https://doe.icfwebservices.com/chpdb/state/MN>).

<sup>2</sup> U.S. Department of Energy, Mar. 2016, "Combined Heat and Power (CHP) Technical Potential in the United States" (<https://www.energy.gov/sites/prod/files/2016/04/f30/CHP%20Technical%20Potential%20Study%203-31-2016%20Final.pdf>).

<sup>3</sup> Percentage of Minnesota's technical potential for CHP with less than 10-year payback period.

<sup>4</sup> The Alliance for Industrial Efficiency, Sep. 2016, "State Ranking of Potential Carbon Dioxide Emission Reductions through Industrial Energy Efficiency" ([http://alliance4industrialefficiency.org/wp-content/uploads/2016/09/FINAL-AIE-State-Industrial-Efficiency-Ranking-Report\\_9\\_15\\_16.pdf](http://alliance4industrialefficiency.org/wp-content/uploads/2016/09/FINAL-AIE-State-Industrial-Efficiency-Ranking-Report_9_15_16.pdf)). Report considers potential for CHP alongside other modest industrial efficiency improvements. Citation here refers to unpublished data reflecting CHP and WHP deployment alone.

<sup>5</sup> National Association of Manufacturers, Feb. 2015, "Minnesota Manufacturing Facts," (<http://www.nam.org/Data-and-Reports/State-Manufacturing-Data/2014-State-Manufacturing-Data/Manufacturing-Facts--Minnesota>).

<sup>6</sup> U.S. Energy Information Administration, "Minnesota: State Profile and Energy Estimates," December 2015 (<https://www.eia.gov/state/?sid=MN#tabs-2>).

<sup>7</sup> We note that Xcel does provide a limited \$500/ kilowatt for up to 10 megawatt WHP systems elsewhere in its service territory. Xcel Energy, "Recycled Energy Info Sheet" (<https://www.xcelenergy.com/staticfiles/xcelresponsive/Programs%20and%20Rebates/Business/CO-Recycled-Energy-Info-Sheet.pdf>). This program could be replicated, expanded, and extended to include CHP in Minnesota. If this approach is adopted in Minnesota, we recommend that the incentive be restructured so that a larger portion is paid in the early years to encourage greater deployment.



would help remove barriers to CHP and WHP and enable Xcel to develop a more efficient and resilient energy infrastructure for its customers and for the state.

### **Conclusion**

For all of the reasons stated above, the Alliance urges the Commission to establish a CHP and WHP deployment goal for Xcel Energy. Further deployment of CHP and WHP would lower electricity costs and increase resiliency for not only Xcel's industrial customers, but all ratepayers by reducing the need for new power plants and transmission and distribution resources. Ultimately advancing CHP and WHP in Minnesota will enhance the resiliency, competitiveness, availability and security of Minnesota's energy infrastructure.

Thank you for your consideration.

Sincerely,

Jennifer Kefer, Executive Director  
Alliance for Industrial Efficiency