



Clear Answers for Clean Water™

## **Western Lake Superior Sanitary District Comments Regarding Issues and Factors Affecting Combined Heat and Power Deployment in Minnesota**

WLSSD continues to review the documents provided, at present, we have comments related to two specific areas: 1.) Standby rates, and 2.) Issues and factors affecting CHP deployment in Minnesota.

Although the state is considering these issues and factors as they broadly impact the state as a whole, we believe that including information specific to our own desired outcomes and our current understanding of our local electrical utility structures will reveal real-world implications of the proposed policies. WLSSD is in the Minnesota Power Service Territory, so Minnesota Power (MP) will be referenced.

### **1.) Standby Rates**

Western Lake Superior Sanitary District's (WLSSD) proposed combined heat and power (CHP) project would provide locally-generated electricity at high-efficiency production rates with a renewable source that reduces demand on the generation, transmission, and local distribution systems. The project would also allow WLSSD to control energy costs and provide stability in wastewater treatment rates for the 17 communities and 4 major industrial customers within its regional system. Nonetheless, uncertainty about standby rates could derail this worthwhile endeavor.

*The Analysis of Standby Rates and Net Metering Policy Effects on Combined Heat and Power (CHP) Opportunities in Minnesota* report outlined the critical issues with standby rate as they presently exist:

- A lack of transparency
- Limited flexibility
- A lack of effective price incentives for effective distributed generation operation

Currently no MP customers operate under its existing standby rate. A review of the published rate as it might apply to the WLSSD project does not lead to any clear interpretation of potential costs. The WLSSD project has varying levels of electrical generation based on wastewater loadings received; and as a result, WLSSD also has fluctuating electrical needs. Despite multiple variables, the current standby rate bases its costs on nameplate ratings and hard number reserve purchases, not actual loads and actual generation at the time of standby needs.

The WLSSD project includes multiple generators that often will not run at full nameplate capacity, allowing for the other generator(s) to pick up generation lost when one unit goes off line—either as a result of a forced outage or a planned maintenance outage. Additionally,

WLSSD can take actions to reduce short term loads to compensate for loss of generation; standby rates should take these options into financial consideration.

The current standby rate structure also does not vary based upon outage rates. The costs for a CHP customer with significant outages should receive correspondingly higher charges than a customer with less frequent outages, particularly if they are coordinated with the utility to minimize impact. Mechanisms should be built into standby rates to recognize well-managed CHP customers.

The State of Minnesota has emphasized the need for high-efficiency renewable resource energy production. The WLSSD project meets that need, but does not reap a greater benefit under current rates than would a lower efficiency, fossil fuel-based CHP project. Incentives should be developed to further recognize and incent CHP projects that utilize renewable energy sources. This is important since renewable energy projects such as ours often require additional capital investment (i.e. gas conditioning is required for bio-gas use while no additional investment would be required to use natural gas).

Based on the above comments, a need for a Generic Proceeding on Standby Rates exists, and a well-thought-out transparent rate could encourage a large expansion of CHP projects statewide.

## 2.) Issues and Factors Affecting CHP Deployment in Minnesota

FVB Energy's proposed CHP policies are heavily-centered on one perspective: the Investor Owned Utility (IOU) perspective. By limiting perspectives available to CHP providers the options brought forward place too much emphasis on IOU economics. While all concerned entities can benefit from greater CHP deployment—especially renewable resource CHP—the policy proposals give the IOUs too much control over the review of projects, the funding of projects, and the economic return rate of projects.

Many factors may influence a non-IOU organization to capitalize on its CHP opportunities; desired outcomes can include more than the heat and energy opportunities. For instance, it is a long-standing practice for Kraft pulp mills to operate CHP processes. The decision to use CHP in these facilities involves much more than the economics of simply heat and electricity alone. CHP operations in these facilities also help these organizations to reclaim costly chemicals that can be reused. For WLSSD the consideration of the CHP project involves consideration of minimizing our carbon footprint, balancing our mission to protect the environment while being self-sustaining and a desire to control treatment costs for our customers.

The use of the existing Conservation Improvement Program (CIP) provisions can lead to a faster deployment of CHP; however, the same questions raised by having a utility run its own CIP, apply to CHP. Minnesota can meet the full potential of CIP provisions to promote CHP best

through a healthy balance of utility run and third part run CHP projects. Further emphasis on non-utility incented CHP projects could eliminate the disparity between utilities (and their CHP customers) in regard to CHP opportunities and costs.

Renewable resource CHP projects can effectively help the state meet its goal of greenhouse gas reduction, while avoiding the problems associated with the generation variability that wind and solar create on the grid. Because of this, the reliability of CHP projects brings a greater value to meeting the state's long term goals and a greater value to all customers on the grid. In order to increase the deployment of reliable renewable resource CHP projects, the policy changes need to provide a satisfactory incentive to encourage both utilities and non-utilities to pursue CHP opportunities.

Finally, the size and scale of organizations with CHP opportunities vary widely throughout the state. Great opportunities may exist in many of these facilities, but they do not have the expertise or knowledge internally to either recognize or capitalize on them (e.g. technical staff, technology, or finances). When the opportunities are recognized in smaller organizations, they will turn to the utility for assistance and utilities may also lack experience or expertise with CHP. As a result, pursuit of opportunities must be outsourced to consultants. This can be difficult and costly. Low or no-cost external expertise and/or a clearinghouse for resources would help reduce this barrier.