



Minnesota Energy Resources Corporation
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Rosemount, MN 55068
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September 13, 2019

Mr. Michael Burr
Burr Energy
mtburr@burrenergy.com

VIA E-MAIL

Re: Comments of Minnesota Energy Resources Corporation Regarding Fuel Switching

Dear Mr. Burr,

Minnesota Energy Resources Corporation ("MERC") submits the following Comments in response to the Minnesota Department of Commerce, Division of Energy Resources' July 30, 2019 request for written comments relating to the fuel switching stakeholder meetings.

1. During Meeting #1, several stakeholders discussed the need for a deeper analysis of various use cases and technology solutions that may result in utility fuel switching activity (between natural gas and electric utilities) that is prohibited for CIP incentives. Please describe:
 - a. Potential energy-saving measures that could result in fuel switching, and that you believe should be made eligible for CIP incentives;
 - b. Noteworthy benefits, factors, and considerations involving these use cases and technologies; and
 - c. Uncertainties and unintended consequences related to these use cases or technologies that should be addressed in the policy process.

MERC Response:

The focus on specific use cases and technologies may be helpful, but it is a restrictive way of addressing fuel switching because it highlights exceptions rather than overall policy goals and impacts, and emphasizes site energy use rather than source energy use. More broadly, fuel switching and combined heat and power (CHP) require consideration of source energy use otherwise the largest potential issues and benefits could be missed. By definition, fuel switching substitutes one fuel for another for the same end use. With that in mind, CIP programs are designed to incentivize equipment and behaviors that exceed normal practices and equipment efficiency standards at the end use, as long as the energy source remains the same. Water and space heating are the natural gas end-uses that would be most affected by fuel switching. Although MERC would oppose using CIP funds to encourage widespread fuel switching without a more formal framework including consideration of source energy use, there are three possible exceptions.

First, MERC encounters situations involving low-income customers where it makes sense to replace electric resistance water or space heating with a natural gas fueled alternative, primarily because it would save the customer considerable money and natural gas is often already available on the premises.

Second, MERC occasionally works with municipalities where electric energy efficiency programs are not available, but MERC offers gas programs. Although technically not fuel switching, MERC believes that it is advantageous to allow the installation of certain electric efficiency measures with the approval of the municipality that benefit the customers (e.g., direct install lighting and thermostats) and to permit MERC (or other gas utilities) to claim electric savings that would otherwise be missed. In this case, electric savings would be converted to gas savings on a BTU basis.

Third, some customers may decide to switch fuels on their own. In those cases, MERC believes that it is appropriate to use CIP incentives to encourage the installation of the most efficient natural gas options available and claim savings against the proper natural gas baseline.

2. Not all fuel-switching use cases involve switching between utility energy supplies. For example, implementing some energy-conservation measures can lead to increased utility sales and decreased sales of non-utility delivered propane and fuel oil. Please describe:
 - a. Use cases and technologies exemplifying potential energy-saving measures that you believe should be addressed in State energy policies (within CIP or otherwise);
 - b. Noteworthy factors and considerations involving these use cases and technologies; and
 - c. Uncertainties and unintended consequences related to these use cases or technologies that should be addressed in the policy process.

MERC Response:

It is most likely that a gas utility would experience this situation when gas service is extended to areas where other fuels (electricity, propane or fuel oil) are used to provide space and water heating. In those cases, a customer's decision to switch to natural gas could allow the use of CIP incentives to encourage the installation of natural gas equipment exceeding gas baseline standards.

3. Criteria for allowing fuel-switching in CIP may be influenced by requirements and factors affecting specific high-impact use cases. Please comment on which fuel-switching use cases you believe will have the greatest beneficial impact on the State of Minnesota, and therefore should merit the highest priority in policymaking.

MERC Response:

Citing specific use cases that would have the greatest beneficial impacts on the state requires a description of the state's goals. If carbon emissions, for example, are the primary concern and the goal is to reduce these emissions, source energy use and generation fuel mix must be considered, not only site energy usage. The two most commonly cited examples are CHP and electrification of space heating using heat pumps. In both cases, consideration must be given to the electric generation fuel mix. Because the grid is highly interconnected, fuel mix should be considered beyond individual utility service territories and possibly beyond the state's boundaries at the operating area or interconnection levels. Other impacts, especially for the

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electrification of space heating, should include consideration of weather-related peaks and how these could affect infrastructure.

If you have additional questions regarding these comments, please contact Jim Phillippo at james.phillippo@wecenergygroup.com or 920-433-5763.

Sincerely,

A handwritten signature in black ink, appearing to read "James O. Phillippo". The signature is fluid and cursive, with the first name "James" being the most prominent.

James O. Phillippo
Program Manager- Energy Efficiency Programs
Minnesota Energy Resources Corporation