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Minnesota Department of Commerce
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August 22, 2019

RE: Conservation Improvement Program and Fuel Switching

Deputy Commissioner Sullivan:

The City of Minneapolis (“Minneapolis”) appreciates the opportunity to provide feedback on the topic of fuel switching. Minneapolis offers the following comments for the Department’s consideration.

- 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;

We support energy efficient fuel switching for heating technologies, including beneficial electrification, under CIP.

We understand beneficial electrification to be the replacement of direct fossil fuel use with electricity in a way that reduces overall emissions and energy costs for the benefit of the end-user and the environment. We see the most opportunity under an updated fuel switching policy for GHG emissions reductions, energy savings, and cost savings associated with heat pump technologies.

- b. Noteworthy benefits, factors, and considerations involving these use cases and technologies;

Benefits

Efficient fuel switching for heating use cases can result in consumer investment that accelerates the State’s ability to meet its goals under the Next Generation Energy Act (NGEA).

Considerations

Fuel switching allowed under CIP should be limited to efficient fuel switching as outlined in 1)a which is consistent with Minn Stat. 216B.2401 and also support other foundational state policy goals for greenhouse gas emissions reductions under the NGEA.

Factors

Fuel switching from gas to electric under CIP should only be permitted:

- *to enable beneficial electrification and*
- *when the new electric load is on a load management program.*

- c. Uncertainties and unintended consequences related to these use cases or technologies that should be addressed in the policy process.

Uncertainties

Uncontrolled new electric heating loads could add to system peak demand and require infrastructure upgrades. These upgrades can be deferred and minimized with effective load management programs are employed. Load management programs will become increasingly important.

Unintended consequences

Fuel switching from electric heat to gas using CIP funds could be followed by future CIP requests from customers to switch back to efficient electric heat as market transformation leads to widespread heat electrification. With limited resources for energy efficiency improvements, it is important to invest CIP funds in technologies that are likely to be sustained and are in keeping with broader policy goals, including greenhouse gas reductions.

- 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);

Fuel switching associated with delivered fuels to utility service should consider overarching state policy goals for greenhouse gas reductions. We support efficient fuel switching for heating and commercial industrial applications, and especially support beneficial electrification.

While we believe transportation electrification is a necessary transition, we believe that incentives for switching from conventional (petroleum-based fuels) transportation should be funded outside of CIP.

- b. Noteworthy factors and considerations involving these use cases and technologies; and
- Benefits**

Efficient fuel switching from heating that relies on delivered fuels to heating served by a utility can result in consumer investment that accelerates the State's ability to meet its goals under the NGEA.

Considerations

Fuel switching allowed under CIP should be limited to efficient fuel switching as outlined in 1)a which is consistent with Minn Stat. 216B.2401 and supports other foundational state policy goals for greenhouse gas emissions reductions under the NGEA.

Fuel switching from delivered fuels to energy saving electric heating applications would help correct the issue that customers who pay into the electric efficiency funds have not historically been eligible for electric CIP funds for heating.

Factors

Fuel switching from gas to electric under CIP should only be permitted:

- *to enable beneficial electrification, resulting in net energy savings, customer cost savings and GHG emissions reductions, and*
- *when the new electric load is on a load management program.*

- c. Uncertainties and unintended consequences related to these use cases or technologies that should be addressed in the policy process.

Unintended consequences

CIP-supported fuel switching from delivered fuels to utility gas could put pressure on funding by customers who have not contributed to CIP gas programs. This can create an issue with fairness.

However, fuel switching from delivered fuels to energy saving electric applications would help correct the issue that customers who pay into the electric efficiency funds have not historically been eligible for electric CIP funds for heating.

- 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.

Support Beneficial electrification for commercial and industrial applications

The City’s analysis of GHG emissions revealed that the growth in gas use is mainly being driven by the commercial and industrial sectors. Therefore, CIP funding of fuel switching should also include incentives for commercial applications that would benefit from electrification.

Prioritize life cycle emissions savings

Finally, Minneapolis would like to share a recent development related to our greenhouse gas emissions inventory for consideration on the topic of fuel switching policy. For the first time since we have been tracking, in 2017 annual GHG emissions from gas were greater than GHG emissions from electricity. This continued in 2018 and gas GHGs are trending up, putting the City’s climate goals--which are identical to the state’s NGEA goals--at risk.

Natural gas is now the largest source of GHG emissions in the City due to increasing consumption. Until 2017, electricity emissions were the largest source, but a steady decrease in electricity consumption paired with increasing renewable electricity generation has resulted in a 41% decrease in electricity emissions since 2006.

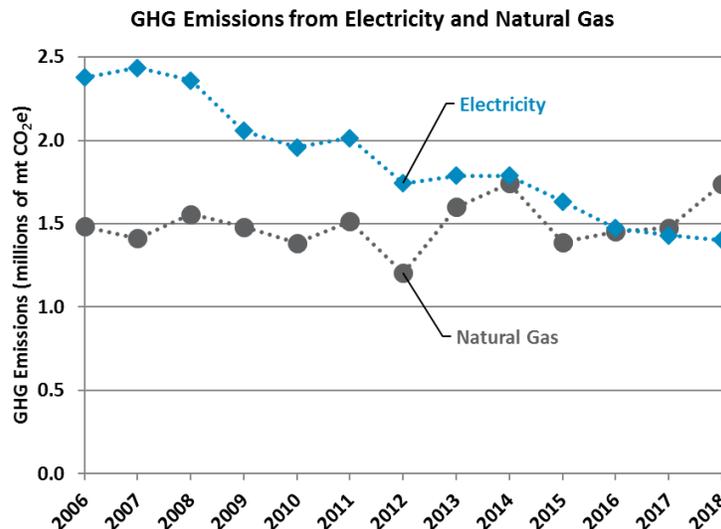


Figure 1. Minneapolis historic greenhouse gas emissions from electricity and natural gas

It has been generally accepted that as electricity is sourced from renewable energy that the emissions profile for electric heating compared to gas heating would become increasingly favorable. The data we have collected and analyzed in recent years bears this out. Figure 2. suggests that this trend will continue.

To align with science-based reduction in greenhouse gas emissions reductions goals in statute (adopted by many cities in Minnesota), Minneapolis urges Commerce to adopt CIP policies that prioritize lifecycle emissions reductions. We believe it is within Commerce's authority to revise the fuel switching rules adopted in 2005 in a manner that aligns with the goals of the NGEA so as not to exacerbate the emissions trending issue that Minneapolis is experiencing.

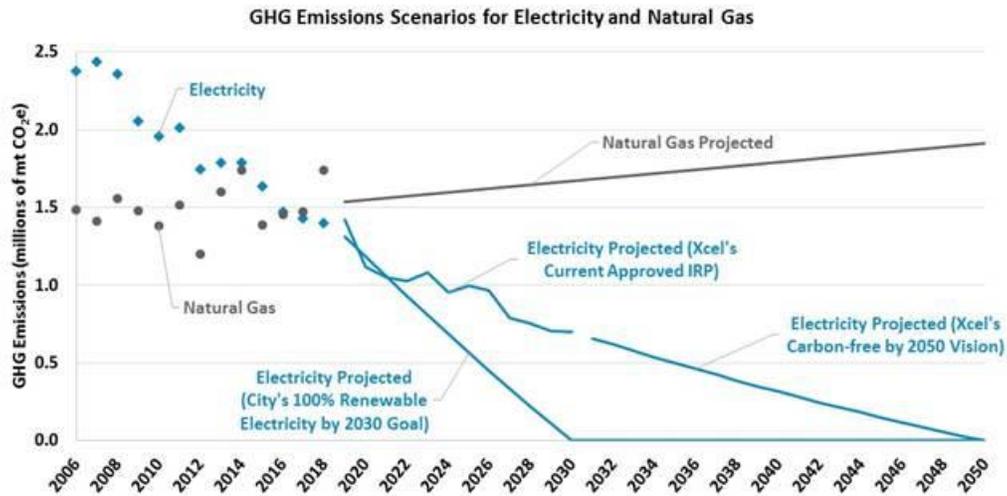


Figure 2. Minneapolis historic and forecast greenhouse gas emissions from electricity and natural gas

City of Minneapolis appreciates the opportunity to provide input on fuel switching as it relates to the Conservation Improvement Program and thanks the Department for its consideration.

Respectfully submitted,

Kim W. Havey
Director
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