



**Summary Report - Stakeholder Written Comments
Minnesota Department of Commerce May 30, 2018 Fuel-Switching Stakeholder Meeting**

The Minnesota Department of Commerce, Division of Energy Resources (hereafter the “Department”) hosted a stakeholder meeting on May 30, 2018, to begin discussions concerning utility Conservation Improvement Programs (CIP) that incentivize the switching of end-use fuel type.

In convening the May 2018 meeting, the Department noted that in November 2017, Otter Tail Power filed a modification to its current triennial plan, requesting that it be able to include customers that use non-CIP natural gas or delivered fuels as their primary heating source in its air source heat pump program. The request was denied by Deputy Commissioner Bill Grant for reasons outlined in a decision filed on April 19, 2018. As part of the denial, the Deputy Commissioner instructed Department staff to convene a stakeholder meeting to discuss fuel switching within the Conservation Improvement Program.

The following entities submitted written Comments¹ within the comment period:

- Minnesota Center for Energy and Environment (CEE)
- Citizens Utility Board of Minnesota (CUB)
- Geothermal Exchange Organization (GEO)
- Otter Tail Power (OTP)
- Minnesota Attorney General’s Office (MN AG)
- Xcel Energy
- Minnesota Power (MN Power)
- CenterPoint Energy
- U.S. DOE Midwest CHP Technical Assistance Partnership (CHP TAP)

Burr Energy LLC developed the following summary of the 2018 Stakeholder Written Comments to support the Department’s 2019 Fuel-Switching Stakeholder Engagement process.

1. What constitutes fuel switching [for CIP purposes]

CEE: “[F]uel-switching measures that result in all of the following: a net reduction in fuel-neutral energy usage, measured from the source; a net reduction in fuel-neutral customer energy costs; a net reduction in carbon emissions; and a neutral or net reduction in coincident demand.”

¹ Minnesota Department of Commerce Docket CIP-18-402

CUB: “A utility’s promotion of a measure that will result in that utility’s fuel being substituted, in whole or in part, for the use of another energy source, which results in greater increase in that utility’s energy sales than if the measure had not been implemented.”

GEO: “Switching from a technology with an efficiency limitation of 100% to one [that captures renewable energy onsite] should not be considered fuel-switching in the traditional sense, rather it is ‘technological transformation.’”

OTP: [Does it completely displace the previous fuel? Is the existing technology near or at the end of its useful life? Is it targeted *intentionally* to displace one fuel for another, or does it happen passively?]

MN AG: “[F]uel switching is simply the means by which strategic electrification is accomplished. “In Minnesota, there are a number of open dockets of various scopes and at various stages—this one included—that are connected to the concept of strategic electrification. Strategic electrification has been defined as ‘powering end-uses with electricity instead of fossil fuels in a way that increases energy efficiency and reduces pollution, while lowering costs to customers and society, as part of an integrated approach to deep decarbonization.’

“[T]he levers controlled by utility regulators may not be the right, or most efficient, levers to pull in order to create a space for strategic electrification technologies [that impact sectors other than utilities such as oil, gas, and delivered fuels].”

Xcel: “[F]uel switching is a complex concept that cannot be uniformly rejected or allowed with a general, blanket policy.” [Cites four use cases illustrating various scenarios and implications.]

MN Power: “In the context of CIP, fuel switching is typically discussed with the assumption that the substituted fuel will result in overall energy efficiencies (or reduce site specific energy consumption).”

2. Does the Department have the authority to permit fuel switching?

CEE: “Presumably the Department could rescind [its own] guidance using the same regulatory authority.”

CUB: “Nothing in the statute precludes a comprehensive evaluation of energy savings due to conservation measures, considering resulting decreases and/or increases in the use of all types of fuels... In fact, if a utility’s proposed fuel switching program is found to meet the objectives of CIP, the Department must approve it.”

GEO: [Citing precedents from 2005, 2010, and 2012] “It is hard to view the Department’s past action as anything other than proof that it can and should make changes with regard to fuel switching.”

CenterPoint: “CenterPoint Energy believes the Department has authority to permit fuel switching measures that conserve energy on a source energy basis... [T]he extent that a fuel switching measure reduces energy consumption is dependent on the efficiency of source energy use rather than the site energy use.”

OTP: “The statute in its current form does not touch on fuel switching. Because of this Otter Tail believes it to be reasonable to look for guidance from the Department... [P]ast decisions by the Department on fuel switching clearly show the Department does have the authority to decide fuel switching policy.”

MN AG: “[T]he CIP statutory framework does not authorize the Department to approve a program, project, or measure that would serve to increase the sales of retail energy by that utility... Even if fuel switching was allowed under the CIP statute, there are at least two policy reasons why the Department should decline to allow the practice at this time: First, energy efficiency should be prioritized... [T]he analytical tools to assess the validity and cost-effectiveness of cross-disciplinary approaches have not yet been developed. Second, [gas to electric switching on a large scale] could cause significant rate impacts to remaining natural gas ratepayers... Forecasting and planning would be essential to ensure a smooth and equitable transition ... and CIP is not the right venue.”

Xcel: “Based on past precedents, Xcel Energy believes the ability to permit fuel switching or beneficial electrification is well within the Department’s authority.”

MN Power: “[T]here is ambiguity regarding fuel switching within the context of CIP statute. As such, clarification may be necessary through legislative changes, with updated and clearly stated CIP policy objectives, along with set guidelines, evaluation requirements, and a clear-cut cost recovery path.”

3. *Would fuel switching advance CIP goals?*

CEE: “[D]epends on the specific application of the technology and characteristics of the fuels involved in each application.

“[Notwithstanding the need to avoid competitive fuel switching,] as the state’s CIP program matures and technology advances, and the state’s electric generation resource mix becomes less carbon-intensive, CEE believes that it is time to carefully and cautiously incorporate efficient fuel-switching technologies into CIP in order to encourage and capture the benefits of those technologies.”

CUB: [It’s complicated] “Fuel switching may reduce ratepayer costs, improving business competitiveness – or may increase costs for non-participating ratepayers... Fuel switching may reduce – or increase – emissions.”

GEO: “Removal of the existing fuel switching prohibition to allow geothermal heat pumps to replace fossil fuel furnaces would move Minnesota closer toward meeting the five objectives contained in the State Energy Policy Goal.”

CenterPoint: “The Company suggests the following three-part test can be useful in determining whether a given fuel switching conservation measure should be permitted: Does the fuel switching measure reduce overall energy consumption, measured on a source-BTU basis?; Does the fuel switching measure reduce overall costs to the customer?; and Does the fuel switching measure reduce overall greenhouse gas emissions?”

OTP: “Allowing fuel switching when the installed measure results in overall energy savings will progress the energy goals for the state. It will also advance the energy goals found in Minnesota Statute §216B.2401, ‘to reduce utility costs for businesses and residents, improve the competitiveness and profitability of businesses, create more energy-related jobs, reduce the economic burden of fuel imports, and reduce, pollution and emissions that cause climate change.’”

MN AG: “Projects that include a decrease in delivered fuels are not envisioned by the CIP statute. Nor are projects that result in an increase in consumption of electric energy or natural gas. Fuel switching, which could implicate both types of projects, does not advance CIP goals.”
Xcel: “[I]t is in the interest of all Minnesotans that CIP stakeholders re-examine the alignment of current policies on beneficial electrification and fuel switching with statutory targets that encourage us to leverage low-emission energy sources throughout our economy.”
MN Power: “Enabling utilities to pursue projects resulting in energy savings regardless of fuel type would result in both environmental and customer benefits that support the objectives defined in Minnesota’s Energy Savings Policy Goal.”
CHP TAP: “[T]he goal of the CIP is to conserve energy in the state of Minnesota. This includes electric and natural gas savings and does not seem to preclude combined savings.”

4. How could fuel switching measures be included in CIP portfolios?

CEE: “[T]wo existing regulatory pathways... [1] work through the Minnesota TRM process to add new measures and develop technical assumptions and energy savings calculations... [2] specific utility to propose new CIP measures [and technical assumptions] to its CIP portfolio through the CIP Triennial Plan process or a CIP project modification request...”

“Determining how to evaluate a measure for compliance with our proposed criteria will require new technical assumptions for equalizing energy across fuels, determining carbon emissions profiles for the utilities and fuels, and evaluating measure-specific impacts on peak demand. In order to integrate fuel switching into the existing CIP reporting, tracking, and cost-effectiveness paradigm the Department will also need to determine how energy savings resulting from fuel-switching technologies will be assigned to utilities and what avoided costs, if any, utilities may claim for those savings.”

CUB: “The potential non-participant costs of increased energy demand created by fuel-switching measures can be mitigated – and even transformed into net savings for non-participants – through measures to control peak load and encourage energy usage outside of peak periods... Similarly, a fuel-switching measure might only result in emissions reductions if it is powered by renewable electricity, so a participating customer might be required to subscribe to a minimum level of renewable electricity.”

CenterPoint: “[A]fter a policy framework has been established, technical questions about how best to incorporate fuel switching measures into CIP portfolios be handed off to a Technical Reference Manual Advisory Committee (TRMAC) like process.”

OTP: “[B]y expressing energy in BTUs, then converting the BTU savings to the appropriate unit... Technical Reference Manual technical working group to identify technologies, determine how to calculate the deemed savings, and provide recommendations to a CIP policy committee.”

MN AG: “At this time, it is not clear how fuel switching measures could be included in utilities’ CIP portfolios. [It could however become] part of a broader, economy-wide effort to decarbonize and provides examples of several states that have recently begun down this path.”

Xcel: “The current first-year energy savings metric for goals may be more appropriately replaced by lifetime net benefit and emissions reductions goals.”

MN Power: “[By] Defining a standard unit of measure and an agreed upon conversion calculation; Determining how to evaluate measures that increase the utility load but decrease

carbon emissions and creates other societal benefits. Should these societal benefits be considered differently from the societal benefits created by utility-specific fuel type measures?; Defining criteria for approved technologies and installation requirements to ensure efficiencies are being realized when fuel switching measures are being offered/implemented.”
CHP TAP: [Cites Illinois legislative approach and Pennsylvania regulatory approach, both collaborative processes to incorporate fuel-switching measures in the states’ TRMs and utility energy efficiency programs.]

5. Other key issues:

CEE: “MN does not currently have a mechanism to drive and capture the benefits of efficient electrification ... and could benefit from additional clarity with regard to demand response... [A]ny electrification and DR programs to be incorporated into the CIP regulatory framework [should] be tracked and reported separately from the energy efficiency activities that are fundamental to CIP.”

CUB: If the Department changes the methodology to allow net energy savings irrespective of fuel to be attributed to a utility’s energy savings goals, “it will be necessary to re-evaluate utilities’ energy savings potential and consider increasing the annual goals. Allowing net energy savings from fuel switching to apply to a utility’s retail energy savings would considerably increase the utility’s energy savings potential. As a result, the 1.5% annual savings goal may become much less challenging...

“[I]ncentive payments tied to fuel-switching measures are unnecessary, would reward utilities twice for the same measure, and would harm ratepayers. Utilities should not receive CIP incentive payments for measures that are expected to increase their revenues.”

GEO: Illinois “‘shared savings’ approach allows a gas utility to claim those savings (quantified in therms of gas) between a gas furnace and a BTU-equivalent minimum efficiency air-source heat pump. Savings between air-source heat pump and geothermal system are granted to the electric utility (quantified in kWh).

“We would advocate that the source test for natural gas extend to the source and wellhead. We also recommend the Dept. include methane emissions in the next CIP savings report on energy savings and CO2 reduction.”

CenterPoint: “[T]he Company recommends the Department consider only permitting load building fuel-switching for utilities with fully decoupled rate structures.”

OTP: “[A] customer choosing to update a measure [that is] below code to a more energy efficient option should be eligible for a rebate even if the fuel source of the new measure differs from the fuel source of the prior measure.”

MN AG: “Examples from other states show the promise of the holistic pursuit of IDSM [integrated demand side management]. These Comments likewise show that the pursuit of a narrow element of IDSM without a broader discussion is a risky proposition for ratepayers.”

CHP TAP: “Energy savings from switching measures must be calculated based on source energy savings rather than site savings, because this basis “more precisely captures the energy savings impact” and provides greater incentives for greater energy savings.

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