

Minnesota Fuel-Switching Stakeholder Process

*Facilitating informed dialogue
for effective policy planning*

Minnesota Fuel-Switching Meeting #1
Fuel-Switching Policy, Objectives, and Options
June 26, 2019 | Minnesota Housing Finance Agency

**BURR
ENERGY**

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DEPARTMENT**
ENERGY RESOURCES

Today's Agenda

- I. Introduction, Background, and Policy Context
- II. 2019 Fuel-Switching Stakeholder Process
 - Objectives, Methodology, and Agenda
- III. Fuel-Switching Discussion
 - A. Stakeholder Comments and Policy Background
 - B. Fuel-Switching Drivers
 - C. CIP Policy Considerations
- IV. Conclusion
 - A. Summary
 - B. Next Steps and Housekeeping

I. Introduction and Background

Joe Sullivan

Deputy Commissioner, Division of Energy Resources

Jessica Burdette

Manager, Energy Regulation & Planning

Anthony Fryer

Conservation Improvement Program Coordinator

Energy Efficiency as a Resource

The legislature finds that energy savings are an energy resource, and that cost-effective energy savings are preferred over all other energy resources...[and] energy savings should be procured systematically and aggressively...

Objectives:

- Reduce utility costs for businesses and residents
- Improve competitiveness and profitability of businesses
- Create more energy related jobs
- Reduce economic burden of fuel imports
- Reduce pollution and emissions that cause climate change

Minnesota Statute §216B.2401

Amended by Article 12, Sec. 2 of HF 729 (4th) - 2013

CIP Fuel-Switching Policy

Current CIP Fuel-Switching Policy Prohibition and Exception

- Department decision issued in 2005 prohibits inclusion of targeted fuel-switching projects in CIP.
- Department guidance issued in 2012 provided exception:
 - Electric utilities may provide direct space heating and domestic hot water energy savings measures to low-income delivered fuel customers and low-income small gas utility customers offered in conjunction with the Weatherization Assistance Program.
 - Utilities may claim the energy savings from those measures towards their CIP energy savings goals.

Fuel-Switching Developments Since 2005

Market Changes and Fuel-Switching Questions

- Since the 2005 Commissioner's Order, stakeholders have sought to develop programs and pilot studies that would require fuel-switching prohibitions to be amended or rescinded
- Advances in various technologies have led to greater efficiencies, renewable sustainability, and control capabilities
- May 2018 Fuel-Switching Meeting prompted stakeholder inputs
- DOE grant re: Electrification action plan development

Meeting facilitator



Michael Burr, Director, Burr Energy

- Founder and principal, Burr Energy LLC and Microgrid Institute
- 30-year career in the energy and utility industry
- Former editor, *Public Utilities Fortnightly*, *Electric Light & Power*, and *Independent Energy*
- Focus on energy policy, law, finance, economics, and technology innovation
- Expertise in stakeholder outreach and engagement, workshop facilitation, and collaborative project management

Current and recent engagements

- Consultant, Massachusetts Clean Energy Center Community Microgrid Feasibility Assessment Program (2018-current)
- Design Engineering Contractor, Minnesota Department of Natural Resources Red Lake Wildlife Management Area Solar Microgrids Phase 1 (2018-current)
- Facilitator, Minnesota Department of Commerce, Division of Energy Resources CHP Action Plan Stakeholder Engagement Process (2014-2016)

II. Methodology



Meeting #1 (Weds., 6/26):
Fuel-Switching Drivers
CIP Policy Considerations

Meeting #2 (early September)
Fuel-Switching Technologies that Support CIP,
Fuel Switching and CIP Portfolios

Meeting #3: (mid October):
Fuel Switching and CIP Portfolios (continued),
Process Summary and Expected Outcomes

Meeting #4: (TBD)

Final Report: (4Q 2019)

Detailed Agenda

Meeting Objectives

- Clarify fuel-switching policy issues and options in CIP context
- Facilitate discussion of issues
- Gather stakeholder input to inform policy consideration

Introduction

9:00 – 9:15 Introduction, Background, and Policy Context

9:15 – 9:20 2019 Fuel-Switching Stakeholder Process - Objectives, Methodology, and Agenda

Fuel-Switching Discussion

9:20 – 9:45 Summary of May 2018 Meeting and Comments,
2019 Legislative Proposal (*not adopted*)

9:45 – 10:30 Moderated discussion – Fuel-Switching Drivers

10:30 – 10:45 Break

10:45 – 11:45 Moderated discussion – CIP Policy Considerations

Conclusion

11:45 – 12:00 Summary, Next Steps, and Housekeeping

III. Fuel-Switching Discussion

Summary: May 2018 Fuel-Switching Meeting and Written Comments

1. **What constitutes fuel switching?**
 2. **Does the Department have the authority to permit fuel switching?**
 3. **Would fuel switching advance CIP goals?**
 4. **How could fuel-switching measures be included in CIP portfolios?**
- **Other key issues**

Summary of Stakeholder Written Comments from May 2018 Meeting

1. What constitutes fuel switching (or should for CIP purposes)?

Definitions vary:

- Specific (strategic electrification)
- Narrow (three- or four-prong tests)
- Broader (fuel substitution resulting in greater sales by a utility)
- Broadest (replacement of one fuel for another, reducing net energy used)

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

- Most say yes, if it results in net energy savings
- Legislative change may be needed for optimal policy
- MN AG's office says no, because it results in increased sales for a utility, and can involve delivered fuels that are not addressed in the CIP statute. BUT fuel-switching should be part of a holistic and integrated policy approach

Summary of Stakeholder Written Comments from May 2018 Meeting

3. Would fuel switching advance CIP goals?

- *It's complicated.*
- Yes, if it's structured and managed to produce greater energy savings.
- Maybe not, if it increases a utility's energy sales.

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

- *Very carefully.*
- Fuel switching could be included with appropriate criteria and TRM guidance.

Summary of Stakeholder Written Comments from May 2018 Meeting

Other key issues

- Competitive fuel-switching needs no financial incentive through CIP.
- Load-building fuel-switching should only be allowed for decoupled utilities.
- A shared-savings approach could enable equitable attribution for energy savings among gas and electric utilities.
- Savings of energy and emissions should be measured at source rather than site of consumption to account for system losses, fugitive methane, etc.
- Beneficial electrification (*esp.* re: transportation fuels) merits its own policy.
- A holistic and integrated policy approach may be more manageable and may achieve greater results than a patchwork policy approach.

Any updates or comments?

Fuel-Switching Legislation

Summary: 2019 Fuel-Switching Legislative Proposal (not adopted)

HF 2208/S 2611 (2019) – Proposed to substantially amend the State’s Energy Savings Policy Goal in several ways, including:

- Explicitly including fuel-switching among energy saving methods eligible for incentives;
- Expanding the statutory goal to include “optimization” of energy use;
- Redefining the statewide energy savings target from “equal to 1.5 percent” to “equivalent to 2.5 percent” of utility retail sales;
- Establishing requirements for energy conservation and optimization planning, reporting, and verification; and
- Codifying four criteria for fuel-switching improvements, including:
 - 1) Reduces cost and amount of source energy consumed on a fuel-neutral basis;
 - 2) Results in lifetime net reductions of GHGs;
 - 3) Is cost-effective on a societal basis; and
 - 4) Doesn’t increase utility peak demand or require significant new infrastructure.

Fuel-Switching Outside Minnesota

- *California** – 1992 CPUC established “Three-Prong Test” (Program must not increase source BTU consumption; Program must be cost effective (have a TRC and PAC benefit/cost ratio of 1 or greater); and 3. Program must not adversely impact the environment).
- *Connecticut* – 2018 Comprehensive Energy Strategy encourages investment in heat pumps that cost-effectively displace oil, propane, or less-efficient electric resistance heating, and endorses switching to natural gas CHP.
- *Illinois* – 2013 statute defined efficiency to include “measures that reduce the total BTUs” consumed; ICC approved pilot incentive program for CHP, utilities offering CHP incentives; CHP savings methodology to be included in next TRM update; TRM revised to allow shared savings by gas and electric utilities by programs that switch gas furnaces to heat pumps.
- *Maine* – 2013 statute expanded conservation programs to require funding of all cost-effective, reasonable, and achievable efficiency opportunities, and directs RGGI funds on a fuel-neutral basis.
- *Maryland* – Empower Maryland program allows counting CHP electric savings toward state goals, and utilities now offer CHP incentives under Commission-approved energy-savings programs.

**Limited or no electric retail choice.*

Fuel-Switching Outside Minnesota

(continued)

- *Massachusetts* – 2019 update to DOER Mass Saves program includes incentives for fuel switching from oil and propane to more efficient and affordable energy sources. Also Mass. Green Communities Division sets criteria and methodology for recognizing CHP energy savings.
- *Oklahoma** – Since 2010, gas and dual-fuel energy-efficiency programs measure savings based on total efficiency, from extraction to the appliance; fuel switching incentives are allowed for natural gas utilities, but not electric utilities.
- *Pennsylvania* – TRM provides guidance for calculating energy savings and total resource cost (TRC) for a variety of fuel-switching options. In 2018, PA PUC adopted policy statement and established a working group to advance development of CHP.
- *Texas* – Energy Efficiency Goal exempts heat pumps from its prohibition on utility incentives for gas-to-electric fuel-switching.
- *Vermont** – 2015 Renewable Energy Standard (Act 56 (H.40)) requires “energy transformation” reducing fossil-fuel consumption and related GHG emissions, and includes qualified fuel-switching technologies.
- *Washington** and *Idaho** – “Fuel efficiency” rebates allowed for switching from electric to natural gas heating.

**Limited or no electric retail choice.*

Moderated Discussion: Fuel-Switching Drivers

What fuel-switching use cases are driving questions about CIP policy prohibition?

Example A: An electric utility program offers a rebate to help residential and business customers replace oil, propane, or gas-fired furnaces with heat pumps that have lower lifecycle costs, higher efficiency, and lower or equivalent emissions.

Example B: A natural gas utility offers incentives for combined heat and power (CHP) systems that reduce industrial customers' net energy consumption, costs, and climate footprint than separate utility electric and onsite thermal production.

And for another conversation:

Transportation Electrification: An electric utility sponsors an electric fleet vehicle program that increases electricity sales and reduces emissions by displacing fossil-fueled transportation consumption.

Others? Discuss.

Moderated Discussion: CIP Policy Considerations

What CIP policy considerations affect how incentives may be used for fuel switching?

Net Energy Savings: What policy changes would best enable accounting and attribution of net energy savings rather than just reduction of a given utility's sales?

Avoiding Cross-Subsidy: How can the program prevent one utility's ratepayer funds to be used for the benefit of a different utility or its ratepayers?

Effective Criteria: What criteria should be applied to ensure fuel-switching supports CIP goals without unintended consequences?

Others? Discuss.

IV. Conclusion

1. Discussion recap and final comments
2. 2nd Meeting: Early September
3. Stay tuned for updates

Contact us



Michael Burr, Director
+1.320.632.5342
mtburr@burrenergy.com

Peter Douglass, Project Manager
+1.320.493.1923
pdouglass@microgridinstitute.org