

MEMORANDUM – Preliminary List of Policy Barriers to Implementing Utility Infrastructure Efficiency

To: Project Stakeholders
From: EUI Policy Review Project Team
Subject: Preliminary list of possible policy barriers to implementing utility infrastructure efficiency projects
Date: June 6, 2017

Both the 2016 TRM measure development process and the 2010 report outlining supply-side opportunity attempted to characterize and address policy barriers to infrastructure efficiency implementation. The result was a clear realization that a separate, policy-focused study with a rigorous stakeholder engagement process was required to fully understand the policy and regulatory landscape. Fully understanding barriers and how to overcome them is the major goal of this study. Thus, the following summary of prior discussions should be considered a starting point from which to build. Each of the following barriers to implementation was mentioned by at least one stakeholder in a prior discussion of infrastructure efficiency.

Business case for conservation is not strong enough

The business case for improving EUI efficiency may not be strong enough. For regulated utilities, fuel is typically a pass-through cost to customers, so efficiency measures that result in reduced input fuel do not impact the utility's bottom line or provide a return on investment. On the other hand, if a simple cost recovery mechanism is available for infrastructure efficiency projects, especially if they qualify for a set rate of return, the projects may become more financially viable.

Projects may trigger an otherwise unnecessary New Source Review

Significant EUI efficiency projects may trigger a New Source Review permitting process. Not only is the process itself burdensome, but older facilities may need to invest additional funds to achieve NSR compliance that would be unnecessary otherwise. According to several stakeholders, the desire to avoid a New Source Review is the single greatest impediment to considering major generation facility efficiency projects.

Capital cost recovery for certain projects may be uncertain or complicated

Recovering costs of EUI efficiency projects may require additional effort or justification on the part of the utility. There is a defined rider that regulated utilities can use to recover incremental costs of efficiency projects, but some utilities may not be interested in expending the additional effort required to file the rider. For unregulated utilities, the utility board may have to be convinced to raise rates in the short term to pay for a project.

Lack of awareness of potential projects and their value

Many utilities may not be aware of infrastructure efficiency opportunities. Promoting some efficiency efforts may mean simply engaging utilities to discuss options they have for improving their system efficiency.

EUI spending does not count toward CIP spending requirements

Utilities cannot claim infrastructure costs toward their CIP spending goals. Minnesota electric utilities are required to spend 1.5% of gross operating revenue on conservation programs in addition to meeting their energy savings goals. Most Minnesota utilities do not have a problem meeting the spending requirement with the investments made into demand-side conservation. However, some utilities may be below the spending requirement and when choosing whether to invest in a demand side program vs. infrastructure, the fact that the expenditure would not satisfy the spending goal may tip the scales away from the infrastructure project.

Efficiency is not the top priority (compared to reliability and rates)

Reliability and security are always higher priorities than efficiency. An obvious barrier to efficiency implementation is that there are simply higher priorities. An organization has limited resources to focus on priority issues and there may not be funds available to staff a performance engineer to develop EUI efficiency options. As we develop a roadmap, finding ways to offer incentives or direct assistance to identify efficiency opportunities may be valuable to utilities.

Large facilities may be exempt from CIP – whether or not they're eligible to claim savings is uncertain

Many large gas generation facilities are exempt from CIP. If the primary incentive for completing efficiency projects is CIP credit, facilities that are exempted from CIP will not be willing or able to participate. There was some discussion of this issue during the TRM measure development process, but it was not conclusive. It is possible, but unlikely that the potential CIP credit would convince some facilities to opt back into CIP. It's also conceptually possible to award efficiency credit at a generation facility to downstream distribution owners who are not exempt from CIP. That solution is likely too complicated to work well. Further discussion on this issue is needed.

EUI projects do not have a customer engagement component

Infrastructure projects do not engage customers. For some utilities, especially rural co-ops or municipal utilities, part of the goal of demand-side efficiency programs is to engage customers and visibly provide a service. Customer engagement isn't a main priority of CIP, but some utilities might be reluctant to displace opportunities to reach out to customers with central infrastructure projects.

Some EUI conservation may not be captured by CIP metrics (fuel input, VAR)

The CIP electric conservation metric is kWh, which does not capture some infrastructure efficiency potential that results in reduced reactive power losses. This issue could be addressed by updating the policy to allow VAR or Volt-Amp conservation to fulfill CIP goals. This would open up possible measures like Volt-VAR management, which could deliver significant additional savings at minimal additional cost compared to Conservation Voltage Reduction.

There are easier CIP options than EUI

Easier options are available. There is no urgent need to invest in infrastructure efficiency while demand-side efficiency programs are still meeting conservation goals today. Part of the inspiration for this study is to lay the groundwork to develop infrastructure as an efficiency tool as the "low-hanging fruit" of demand-side programs begins to dry up in coming years.

Lack of certainty in calculating eligible savings (partially addressed with TRM measures)

Lack of standardized calculation methodology introduces uncertainty to planning EUI efficiency projects. Some measures are now defined in the TRM, which removes the uncertainty about savings methodology

for those projects. There is still room for improving the defined measures and more could be added in the future, but the highest value opportunities at least have a prescribed methodology as of late 2016.

Definition of “normal maintenance” as the baseline is not always clear (partially addressed in TRM measures)

The existing conservation statute requires that eligible infrastructure projects must be more energy efficient than would otherwise be implemented in the course of “normal maintenance activity,” which is not clearly defined by the statute. For the TRM measures developed, the issue was addressed as well as possible, but this is likely to be an area that could use further clarification and ongoing dialogue. The Clean Air Act provision that established the New Source Review permitting process also has a “normal maintenance activity” clause which has also been a source of uncertainty in the past. If there have been any cases in Minnesota where the meaning of the clause was contested, there may already be a precedent that we could use to more reliably define “normal maintenance.” If there is any question about how the clause will be applied for a given project, the utility may want to request a pre-install review by the Department of Commerce.

Some assets that serve MN load are physically located outside the state, raising questions about eligibility for CIP savings credit (resolved)

Many Minnesota utilities own generation and transmission assets physically located outside the state. The solution to this issue is that savings from a project are prorated based on the percentage of load located in MN that is served by the infrastructure affected by the project.

No CIP metric for conserving coal (resolved)

Improving the efficiency of coal-fired plants could result in reduced input fuel required, but there was no CIP metric for conserving coal. This issue was addressed by the generation protocol developed for the TRM. A conversion factor based on the plant and grid heat rates is used to convert input coal reductions into equivalent kWh saved, which can be reported under the existing CIP framework.