2020 MES Industrial Workshop:
How to Pursue Industrial Efficiency in a Changing Policy Environment

2020 Midwest Energy Solutions Conference
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Overview

Reaching the industrial customer segment with energy efficiency programs is a challenge for many Midwest utilities. The general goal is that utilities should provide energy efficiency resources for all customer classes, but there are barriers that make it harder to serve some customers. In the case of industrial sector customers, those barriers are often due to the energy efficiency policies.

Policies that provide an opt-out of contributing to utility energy efficiency funding by industrial customers, or exempt them outright from program funding and participation, are intended as a free market solution – if it is in the company's financial interest to save energy it will do so on its own without needing a utility program. This viewpoint, however, ignores the impact that industrial energy efficiency can have on the whole utility system. Industrial energy efficiency programs are highly cost-effective and can provide large savings that contribute to meeting utility goals.

There are also non-policy factors such as expertise and experience in identifying energy saving needs and installing efficiency measures that customers may not have on their own. Individual companies working on their own also may not be able to leverage the economies of scale that utilities can achieve over their whole service territory, meaning less energy savings per dollar invested in measures. Large customers are also often part of companies that have declared their own energy or carbon saving goals and utility energy efficiency programs could be part of the strategy for meeting those goals if the company chose to or was allowed to participate.

If it is in the interest of the utility and the system that industrial customers be retained as participating in efficiency portfolios, how then can utilities overcome some of the policy and economic barriers that prevent them from serving these customers? In late February, MEEA sought to explore that issue with about 60 attendees at our annual Midwest Energy Solutions Conference.

To facilitate discussion and brainstorming, we envisioned two broad scenarios that broadly represent the situation in the Midwest – one where industrial non-participation is limiting utilities from being able to meet their efficiency potential and their mandated saving goals, and the other where political resistance to energy efficiency overall is hurting the ability to serve industrial customers. The first scenario, Scenario A below, looks a bit like the landscape in Illinois or Minnesota; Scenario B could be set in a state that looks something like Indiana or Kentucky or Missouri. Neither of them is intended to exactly represent the policies in any one state.

We divided up participants and assigned each table one of the scenarios. Each table was assigned an industrial energy efficiency expert from consulting, utilities, and government agencies, as a table lead

to help guide the discussion. We asked them to envision, as a table, that they were either a utility trying to find ways to serve industrial customers or they were an industrial customer that was trying to save energy. We asked them to discuss from those two perspectives how these barriers could be overcome and how utilities could better serve their industrial customers with energy efficiency resources and services under these challenging policy scenarios. We then asked them to change their scenario and perspective to look at it again from the other angle.

This paper presents the scenarios below and then our synthesis of the notes from the workshop into broad themes that may help identify novel program and outreach ideas to help increase industrial energy efficiency savings in the Midwest.

Scenario Outlines

Scenario A

The state has required utility energy savings goals that are moderate to aggressive. Pilots & new programs are normal and usually can find regulatory approval. Funding for EE in general is robust, but industrial EE programming is limited because of one of the following:

- There is a low-threshold opt-out/exemption that removes a substantial portion of the C&I customers from participating
- There is a high-threshold opt-out/exemption that affects only the largest industrial customers

Barriers & Considerations

Utility/Implementer

- Reduced funding levels for industrial programs
- Technical/Economic/Achievable potential of industrial sector EE is not being reached because of the opt-out
- There is a push from stakeholders or regulators for maintaining participation levels and/or decreasing opt-out levels; there is a policy goal of serving all customer classes

Customer

- You lack staff expertise and staff time for assessing/implementing EE
- State energy goals that might be more aggressive than corporate energy goals – the utility might want energy savings more than you do
- Lack of capital to pursue energy efficiency
- Your company culture views energy costs as static expenses with little opportunity for energy reduction
- Your company has concerns over information sharing

Scenario A is intended to look like an amalgamation of the states in the Midwest with mandated energy efficiency targets for the utilities. In Illinois, customers over 10 MW are exempted and unable to participate in utility energy efficiency programs even if they want to. In Minnesota, some very large customers are exempted. In Michigan, customers over 1 MW aggregate demand are allowed a self-direct option where they are asked to spend the same as they would have contributed to the utility portfolio, rather than participating in the utility program.

Scenario B

The state has no hard targets for energy savings through EE but does require or allow for EE plans. There is a limited scope to the approved portfolios – both in breadth of program offerings and in approved spending levels. Pilots & new programs are uncommon and not always approved when proposed. There is no strong incentive on the utility side for offering robust industrial programs because one of the following may also apply:

- There is an opt-out/exemption that removes a substantial portion of the large industrial customers from participating
- There is not an opt-out/exemption but the limited approved spending levels mean that most of the C&I funding that is available is going to general C&I programs, leaving little left for industrial-specific programs

Barriers & Considerations

Utility/Implementer

- There is low funding for industrial programs and there may be concerns about "cross-subsidization" of customer classes
- There is some level of policy resistance to expanding EE offerings – legislation, rules, or regulatory precedent limit how much EE is approved
- There may be excess generation capacity in the state leads to low avoided costs, limiting what is considered cost-effective EE

Customer

- You lack staff expertise and staff time for assessing/implementing EE
- State energy goals might be less substantial than your corporate goals – you might be more interested in saving energy than the state is about helping you save it
- Lack of capital to pursue energy efficiency
- Your company culture views energy costs as static expenses with little opportunity for energy reduction
- Your company has concerns over information sharing

Scenario B brings together a combination of limited policy support for robust energy efficiency, low funding, and a general energy policy emphasis on generation assets. The voluntary EE states around the Midwest vary from examples like Iowa, where EE plans are required but with recent legislative barriers that limit the funding and program potential, to Indiana where the regulatory framework for voluntary EE is strong but a low 1 MW opt out has decimated industrial participation, to Kentucky or Missouri where utilities are long on generation and energy efficiency is not prioritized by the political processes.

These two scenarios don't necessarily capture all the Midwest's industrial energy efficiency policies – for example Ohio where the energy efficiency standard has recently been repealed and where we are still trying to understand what the landscape will look like going forward – but we think they provided our workshop participants with a reasonable cross-sectional representation of industrial energy efficiency in our region.

Discussion Key Points

The table below takes the notes from the table leads and MEEA staff and attempts to consolidate them to some broad themes by scenario and perspective. The headers are our synthesis of the ideas into thesis statements, while the bullet points are taken directly from the workshop notes with some consolidation and minor edits for clarity.

UTILITY	CUSTOMER
Scenario A - Utility	**Scenario A** - Customer

Keep cost of participation low
• Cost Focus -> Low-cost/no-cost measures & programs
• What is their target project payback? [design programs that meet it]
• Limited EE funds so need the most customers possible
  ○ Look at programs that are low capital, so you don't have to incentivize them as much per customer
  ▪ SEM
  ▪ Systems optimization programs
 	
Grow trust and enhance customer experience
• Ask "What's in it for me" from customer perspective
• Start w/ less intrusive low/no progs -> grow fr. there
• Reduce hassle factor (consistent experience across programs)
  ○ Apps
  ○ Have one SPOC if participating across programs w/different implementers
• Screen/Pre-qualify customers actually interested/able to implement EE
• Cohort model
• Bringing in SMEs to customer facility
  ○ (Cheaper than offering energy mgrs/SPOC)
  ○ Circuit rider / share EM prog
• Customer service advantage for being engaged with these customers
• Customers like working with utilities because they vetted the program, etc.
	Customers have reasons to participate beyond energy savings
	• Tie in to Carbon Reduction goals
	• Tying EE with other benefits – increased production, process improvements, safety, reduced pollution
	• Top Level Commitment(s)
	  ○ Bottom-Up Business Case
	
	The utility can help make the case for participation
	• Educate customer preparation of business case
	• NDAs, Proof of Security
	• Better outreach to make customers aware of these programs
	• How do we make more attractive programs? "What am I getting out of this"
	• Data
	• Value proposition in engaging them – change the way they think in accounting department – make compelling arguments
	
	Customers need to gain experience & trust with EE
	• ID Internal Champion(s)
	• Cohort system – peer to peer – build trust
	• Integrate w/ Lean Manufacturing
	• Introduce Competition
	  ○ Personnel or sectors
	  ○ Setting goals/rewards
	  ○ generating ideas
	  ○ Monthly
	• Quick wins

UTILITY	CUSTOMER
Scenario A - Utility	**Scenario A** - Customer

Demonstrate the value beyond just energy savings

- Show value case
- Outreach about details/benefits of prog
  - Value prop
  - Potential Savings > Incentives
  - Sustainability objectives
  - Talk about co-benefits - safety, maintenance
  - Competitiveness / save $
  - Good commun, conn w/ cust

Serve more customers at once

- Cohort model
- Circuit rider / share EM prog
- One way to drive down cost if you focus on small customers is focus on concentrated geographical area
  - (like a downtown) - small business-type approach
  - Rural industrial parks
    - Strategic energy manager for small industrial park - utility funded

Serve the right customers

- Pre-qualify customers actually interested/able to implement EE
- Target businesses that already have certification (e.g. ISO) - target those with environmental goals/specific certifications that have environmental requirements
  - targeted outreach to small companies with green/environmental goals
  - Working with certification programs to support EE
- Focus on the eligible customers
  - Work more w/ opted-in cust to get big savings - get $$$ worth
  - More outreach to higher volume of smaller customers
    - Harder to engage
  - Focus on the small/medium sized industries.

Keep customer cost ($ and time) low

- Build trust through these low-intrusion programs – customers realize the financial benefits – snowball effect
- Low hanging fruit – major results for cheap
- Lowest payback measures – build trust, internal buy in
- Lighting – low intrusive programs – nobody wants to stop production
- Low-cost, no-cost measures – technical assistance from the utility
- Fee-based programs – utility chooses them
- Make programs lucrative enough for them to opt in – competitive advantage
- Green Funds

Build on early successes through more advanced programs

- SEM
- ID Non-Incentive Benefits (Real Business Case) KPIs
  - Real/Credible
  - Standardization
  - Repeatable
- Benchmarking Equipment/Process Lines
- Waste reduction (without affecting production) – operational – customized assistance
- Training [customer on] longer term [energy] planning
- Training – how to have an energy management program – technical, programmatic

People not Widgets

- Staff augmentation (utility)
  - Staffing grants (feasibility?)
- Utility acct rep - Key Account Reps
- Grants/embeds
  - SMEs - Credibility (Industry Expert)
  - Circuit rider
- Cohort model

UTILITY	CUSTOMER
Scenario A - Utility	**Scenario A** - Customer

▪ As you move down in size, customers are often more sophisticated
▪ Really small businesses don't have capacity to deal with program
 	
People, not widgets
• Bringing in SMEs to customer facility
  ○ (Cheaper than offering energy managers/SPOC)
• Strategic energy manager for small industrial park - utility funded
• Training - Tech or programmatic, how ID energy waste
• Tech assist from utility
• Offer additional service that lays out EE plans
  ○ Relationship based recommended to program has size req [?]
• Cohort model
• Circuit rider / share EM prog
 	
Provide a pathway to keep customers as participants
• Do our customers want to be opted out? Strategies can be used to reduce opt-out eligibility
  ○ on-site generation to reduce load
  ○ split loads
  ▪ Create new account(s) to reduce load (convert large customers to small customers)
• Work w/ opted-out customers to claim savings [?][unsure on the meaning of this one-if they are opted-out already then who is claiming the savings and for what?-GE]
 	
Policy Change
• Change opt-out criteria
• Policy change to allow opt-in
• Stronger lobbying by engaging companies that want EE programing/incentives
  ○ Consolidate voice of large exempt users that support EE
  ○ Identify those who have branches/facilities/etc. in other states that have benefited from EE
	• Way for utility to set up a contracting model – one energy manager for multiple small industrial firms
	• Funding Energy Advisors
	  ○ Advisory groups
	
	Policy Change
	• Modify state goals to match corporate
	• Criteria for opting in/out

Utility	Customer
Scenario B – Utility	**Scenario B** – Customer

### Understand the Customers 	
• EE as a service to customer
• Embedding idea of EE within customer/organization itself – no help from outside
• Utilities talking about EE as a service – helping them to do business
• Utilities care about large industrial customers – want to have a relationship – EE as a service
• Understanding needs of customers and tailoring programs accordingly
 	
### Manage customer perceptions of who pays for industrial EE/play fair 	
• Messaging [about EE] funding allocation [within customer sectors]
• Identifying misconceptions affecting policy restrictions
• Rate Class Manipulation
• Guardrails on funding different sectors
• Cap each customer annually
• Adjusting funding: Supply vs Demand [for program $]
 	
### Leverage limited ratepayer funds for private or government investment 	
• Find alternative Funding e.g. Federal, Econ Development
• On-Bill Financing
• Energy Broker Financing
• Do EE from an econ dev / comp perspective
• Leverage multiple gov funding streams for projects
  ○ Utilities partnering with DOE – cobranded recognition – leveraging DOE resources where funding is lacking
  ○ Lev gov't resources – Industrial Assessment Centers (IACs)
 	
### Work with trusted partners for outreach, delivery 	
	### Customers need more help understanding their energy use
	• To overcome view of energy costs, need demonstrated benefits of EE to me/my business
	• Access to utility / data analytics
	  ○ Normalized for weather
	  ○ Feedback / easy measurement of EE impacts
	• Help in understanding effects/cost reduction
	• Access to utility data/analytics
	• Gather as much relevant data as you can - customers need information
	• Need tools to use to interpret energy use
	• Lack of understanding
	  ○ Dashboards & viz
	
	### Build trust & experience
	• Small businesses need help to understand the utility programs.
	  ○ Barrier in trust with utility intentions
	• Benchmark facilities so they can compare to previous energy use
	• Easy Tools - Identify low-hanging fruit
	• Hands on support
	  ○ Get savings impact from utility to help sell internally
	• Reduce the hassle for the customer
	• Single POC
	• Incentive to reduce energy intensity per company based on production numbers
	• Some automated assessment to show opportunity - outreach based on customer bills, develop collateral
	
	### Connect with the customer & help them demonstrate their EE to their own customers
	• PR/Customer Satisfaction
	• Recognition programs
	  ○ Set up ways to recognize good EE projects

Utility	Customer
Scenario B – Utility	**Scenario B** – Customer

• Leverage Market Providers (MT)
• Offer prog through other types of actors
  ○ facility management firms
  ○ Management consultants
  ○ ESCOs/contractors
• Facilities have account manager outside of EE, hear about the needs of the facility
• Trade associations, geographic associations, sector-based associations
  ○ partner with them to find the natural leaders within the org who want to do well
  ○ can help demonstrate success and build cohorts
• Econ Development offices
  ○ Business/economic development programs/orgs – distinct perspective
 	
People, Not Widgets
• Spend more on people power
  ○ Less on incentives, EM&V
• Look at how you pay/spend – spend more on people, pay less for incentives/EM&V
• Spend $ on people more than incentives
• Some utility staff have skills that can be deployed to do low cost testing for industrial customers – point of entry for other programs
 	
Use workforce development as a pathway to programs
• Workforce education and training could be leveraged
  ○ Colleges/universities/trade schools/tech colleges/etc.
  ○ students get hands on experience
  ○ how to do treasure hunts or low touch walkthroughs of facilities
• Trade allies – how do we get trade allies to go an extra step?
 	
Build trust & experience
• Prioritize C + I customers [that are eligible]
	• Case studies
	• Tie EE into PR/marketing
	  ○ branded tie-ins
	  ○ Environmental education
	
	Connect with experts & peers
	• How can external pressure (from programs like 2030 districts) play into this?
	  ○ Building owners/companies/etc. pledge to reduce businesses
	  ○ Marketing/sharing of best practices
	• Geographical targeting
	• Work with regional groups
	• Utilize university/academic energy program
	• Join MEEA
	• Involve industrial energy centers
	
	Leverage other funding
	• Slush fund [develop one, presumably? - GE]
	• Lack of capital- identify non-utility funding opportunities that exist, green lending programs, etc.

Utility	Customer
Scenario B – Utility	**Scenario B** – Customer
- Free/low cost energy audits to mid-sized industrial - Low-touch SEM - 50001 Ready prog - Facilitate SEM Process - ID Quick "Wins" - Gateway measures (e.g. low/no cost) - do a variety of optimization strategies w customer - outside of utility programs there might be some benefit and way to reach savings through lower cost ways - focus on industrials with high peak demands - focus on DR Market EE better to Industrial Customers - Project case studies - Leverage Our (Utility) Data - With all barriers, if measures cross both C&I sectors, use both – penetrate both markets, tailoring what you already have to be more industrial - Aggressive/Compelling Outreach - Educating about EE impacts - lowering [of wholesale] power prices [through DRIPE] - Lifecycle benefits including incentives Make EE more relevant/valuable/visible to policymakers - Demonstrate cost to state in terms of DGP, other metrics - By District - Influence Policy(Makers) e.g. Non-Incentive Benefits - Considering better definition on avoided cost: ex. Fixed vs off/on peak - Evaluate impact of gas + electric -> Btu - Ways to talk about EE without “carbon” - Econ Dev - EE in utility long-term planning - Project case studies	

Discussion

There are several broad themes that came up repeatedly in the workshop. As we think about how to design programs and outreach plans for industrial energy efficiency, these are ideas we should keep in mind that may help reach deeper into this customer segment and overcome institutional and political barriers.

- To create a culture of energy saving in industrial customers, they need people with energy expertise, not just a better piece of equipment. Whether it is through direct training, subject matter experts, or even staffing grants, it is people, not widgets that will make the difference.
- Limited funding can be stretched further through things like geographic targeting, cohort training models, and workforce development that can serve larger numbers of customers at once, especially in cases where there are multiple smaller customers that are still eligible for programs.
- It is important to start at a scale acceptable to companies who are unaccustomed to energy efficiency and may not be willing to make large investments. That means starting with small, low-cost or no-cost programs that can build trust between the customer and the utility and which can then be developed into a connection that can lead to deeper savings through custom energy efficiency programs that require more investment of time and resources by the customer.
- Utilities need to work with partners that customers already have established and trusted relationships with. Industrial parks, chambers of commerce, trade associations, facilities management companies and such can all help provide a pathway to communication with customers about the potential for energy savings and help to build the trust utilities need with their industrial customers.
- Utilities need to be better at demonstrating the value of industrial energy efficiency both to customers and to policymakers, and internal champions within customers need to be able to demonstrate the value to the decision makers at their companies. This means that there need to be more case studies conducted, but also ways that customers can better understand their own energy data and relate it to their internal goals and KPIs.

As the Midwest's utilities, implementation contractors, consultants, advocates and customers consider industrial energy efficiency in the Midwest, we hope that some of the ideas we explored at our workshop will help spur conversation and program ideas that will help retain and expand this essential segment of utility customer-funded energy efficiency for our region.