

# Illinois Energy Efficiency Stakeholder Advisory Group

2020 SAG Portfolio Planning Process  
Proposed Energy Efficiency Ideas Template

## Submitter Contact Information

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## Energy Efficiency Idea Questions

Please check the boxes below to identify 1) the type of idea; 2) which Illinois utility or utilities will be impacted by the idea; and 3) which EE sector the idea impacts.

Check	Type of Energy Efficiency Idea
<input type="checkbox"/>	New Measure or New Program Idea
<input checked="" type="checkbox"/>	Proposed Program Approach
<input type="checkbox"/>	Innovative Idea

Check	Illinois Utility Impacted by Energy Efficiency Idea
<input type="checkbox"/>	Ameren Illinois
<input type="checkbox"/>	ComEd
<input type="checkbox"/>	Nicor Gas
<input type="checkbox"/>	Peoples Gas & North Shore Gas
<input checked="" type="checkbox"/>	All Illinois Utilities

Check	Energy Efficiency Sector Targeted by Energy Efficiency Idea
<input type="checkbox"/>	Residential Customers – Single Family (non-income qualified/income eligible)
<input type="checkbox"/>	Residential Customers – Multifamily (non-income qualified/income eligible)
<input checked="" type="checkbox"/>	Residential Customers – Single Family Income Qualified/Income Eligible
<input checked="" type="checkbox"/>	Residential Customers – Multifamily Income Qualified/Income Eligible
<input type="checkbox"/>	Small Business Customers (commercial & industrial sector)
<input type="checkbox"/>	Medium/Large Business Customers (commercial & industrial sector)
<input type="checkbox"/>	Other (research & development, emerging technologies, market transformation)

### **Additional Questions**

1. **Description of Idea:** Describe the proposed idea, including the purpose of the suggested idea and rationale. Describe whether this is an idea that could be implemented in an existing EE program, or whether the idea involves establishing a new measure or program. Please indicate whether additional research may be required before implementation.

*Questions to consider: What issue will this proposed change resolve? Will the proposed change increase participation and result in increased energy savings? Will this reduce costs? Will this increase customer satisfaction? Will this help achieve statutory goals? Will this help increase program penetration?*

Whether smart thermostats are an appropriate and cost-effective measure for installation in income-qualified weatherization client homes is a question requiring nuanced analysis, tailored to the unique circumstances presented in each client residence. Evaluations to date of advanced thermostat energy savings, too, make clear that client behavior is key to realizing energy savings.

The unique demographic characteristics of low-income clients, including lower broadband internet and smartphone or tablet access rates compared to the U.S.-at-large, coupled with higher cost of smart thermostats compared to non-programmable and manual programmable thermostats, do not support widespread installation of smart thermostats in low-income homes.

Given that thermostat energy savings are tied to “learned” behavior and client-initiated temperature setbacks, residences occupied by those who are homebound due to age or infirmity represent inappropriate candidates for smart thermostat installations. Likewise, in order to justify the additional expense of this installation, protocols should include an assessment of whether the customer will be outside of the home a reliably significant period of time in order to achieve the savings that smart thermostats enable. Other factors, including generally lower-than-average energy usage due to the relatively smaller low-income housing stock, raise questions about the cost-effectiveness of widespread smart thermostat installations in low-income weatherization programs.

Widespread installation of smart thermostats will remain neither cost-efficient nor appropriate

in low-income energy efficiency programs unless:

1. broadband wifi exists in the home;
2. clients demonstrate specific interest in advanced thermostat installation;
3. clients spend regular blocks of time outside of the home;
4. no technical issue arises that would significantly increase labor costs associated with thermostat installations as compared to less advanced thermostat models;
5. the client is sufficiently technology savvy; and
6. access to critical product education information and trouble-shooting is promptly and readily available.

Ultimately, the decision whether to install smart thermostats in low-income residences is best resolved by on-the-ground, weatherization field specialists, in consultation with the clients they serve.

2. **Implementation:** How will this idea be delivered to the target market? Describe marketing strategies used to reach the target market and minimize market confusion.
3. **Background:** Describe where the idea originated from, including whether this idea has been successfully implemented in other jurisdictions. Provide specific background information that will help utilities and SAG participants understand the proposed idea.

*Questions to consider: In what jurisdiction has this idea been successfully implemented? Do you have information on eligible customers, participation achieved, and/or savings achieved? Do you have access to reports describing the successful idea / program approach?*

The aforementioned guidelines to installation of smart thermostats has been adopted by Massachusetts' Low-Income Energy Affordability Network (LEAN), an association of nonprofit agencies (mostly Community Action Agencies, or CAAs) that coordinate the delivery of government and utility-funded energy efficiency services to low-income utility customers throughout Massachusetts. LEAN has been identified by ACEEE as the nation's model implementer of low-income weatherization programs. LEAN has led the way in adopting such technological advances as LED lights and air source heat pumps. In December of 2019, LEAN's Best Practices working group, which includes LEAN-member agencies and representatives from the investor-owned electric and gas utilities, adopted this recommended approach to smart thermostat evaluation as a "best practice" to be followed by implementers of the program.

4. **Idea Impact:** Provide additional information on the customer segment that will be targeted with the program idea, including how and why this idea will have a positive impact on customers participating in Illinois EE programs.

*Questions to consider: What level of impact will this idea have on current EE programs? How much additional market share do you estimate this change will impact?*

This idea should be followed and applied for statewide weatherization efforts.

5. **Duration:** Is this idea intended to be offered for the duration of the 4-year EE Plan or as a pilot measure or program?

Yes, this implementation strategy should be followed for all four years of the plan.

6. **Estimated Budget:** Provide the total estimated budget for each program year (2022 – 2025).

n/a

7. **Estimated Participation:** Provide participation totals for each program year (i.e. number of measures installed, number of customer participants, etc.)

n/a

### **Sources**

If any sources will be useful to Illinois utilities in reviewing ideas, please either provide links within this template or send attachment(s) to the SAG Facilitator with the Energy Efficiency Idea submittal.

The NCLC whitepaper, SMART THERMOSTATS: Assessing Their Value in Low-Income Weatherization Programs, can be found here:

[https://www.nclc.org/images/pdf/energy\\_utility\\_telecom/weatherization/rpt-smart-thermostats-jan2020.pdf](https://www.nclc.org/images/pdf/energy_utility_telecom/weatherization/rpt-smart-thermostats-jan2020.pdf)