Illinois Energy Efficiency Stakeholder Advisory Group

2020 SAG Portfolio Planning Process
Proposed Energy Efficiency Ideas Template

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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
X	New Measure or New Program Idea
X	Proposed Program Approach
X	Innovative Idea

Check	Illinois Utility Impacted by Energy Efficiency Idea
☐	Ameren Illinois
☐	ComEd
☐	Nicor Gas
☐	Peoples Gas & North Shore Gas
X	All Illinois Utilities

Check	Energy Efficiency Sector Targeted by Energy Efficiency Idea
X	Residential Customers – Single Family (non-income qualified/income eligible)
X	Residential Customers – Multifamily (non-income qualified/income eligible)
X	Residential Customers – Single Family Income Qualified/Income Eligible
X	Residential Customers – Multifamily Income Qualified/Income Eligible
X	Small Business Customers (commercial & industrial sector)
☐	Medium/Large Business Customers (commercial & industrial sector)
☐	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?

   Proposed Idea - Utilizing user-friendly augmented reality (AR) and/or remote collaboration tools to enable an end-use customer - virtually assisted by a trained program implementer - to successfully facilitate an energy assessment, energy efficiency kit installation, installation of a smart thermostat or post-installation audit.

   Given the nature of this proposed idea being a modification of an existing delivery channel (self-installation of EE measures) for some programs and a new delivery approach for other programs (direct install-only programs), it could fall under several categories including:
   ● A new measure or program idea that can be offered for the duration of the 4-year EE Plan or as a pilot measure or program;
   ● A proposed program approach that can be offered for the duration of the 4-year EE Plan or as a pilot measure or program; or
   ● An innovative idea that could be researched during the next EE Plan cycle by utilities, evaluators, SAG, or another advisory group;

   Purpose and Rationale -

   ● EE Program Implementation Post-Covid-19- EE programs utilizing direct installation as the primary means of implementation have been paused out of an abundance of caution due to the Covid-19 pandemic. While these programs will most likely resume operations once the risk

associated with direct installations has been mitigated, a portion of the general public will - out of caution or immunological-susceptibility - remain uncomfortable or medically incapable of allowing program implementers to directly install EE measures within their homes. As such, an alternative program delivery channel is needed that either supports the self-installation of energy efficiency measures or provides an additive delivery channel to direct installation as applicable by program.

- Program Participation - Implementing the proposed idea would:
  - reduce the volume of customers unable to participate in direct install EE programs due to a perceived risk or immunological susceptibility;
  - reduce leakage associated with self-installation measures such as EE kits by ensuring that the customers are supported properly in real-time in the proper installation of the measures;
  - increase the volume of customers capable of self-installing EE measures or conducting post-installation audits through the utilization of augmented reality and remote collaboration tools. These tools would be utilized by trained program implementers to support the self-installation of EE measures in real-time, ensure proper operation of the measures and educate the end-use customers;
  - increase participation due to the widening of available program hours and program reach. For example, a direct installation typically may only occur Monday through Friday between the hours of 8am - 5pm whereas a virtually-assisted installation may be able to occur from 7am -7pm. Additionally, harder-to-reach customers in rural areas would benefit greatly from a virtually-assisted installation that combines the meaningful interaction and expertise of a professional direct installation with the cost-effectiveness and program flexibility of a self-installation.

- Cost-Effectiveness - The proposed idea would reduce the overall cost of implementing a direct installation program by layering in an additional program delivery channel that:
  - reduces program labor by eliminating the need for a program implementer to install the measures if the virtually-assisted installation is chosen over a direct installation by the end-use customer;
  - reduces the need for an M&V evaluator or quality control auditor to physically visit an end-use customer's home to ensure proper installation;
  - reduces leakage and increases net-to-gross impacts by increasing the likelihood of a customer successfully self-installing the EE measures.

- Program Satisfaction - The proposed idea would increase program satisfaction and program awareness by ensuring:
  - the customer is adequately educated on the purpose and usage of the measures;
  - the customer receives a quality "white glove" experience while collaborating with a trained program implementer to install the measures.

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.

Program Delivery -The proposed idea enables stakeholders to utilize the same program delivery channels as exists today or build upon them additively:
- program implementers that currently manage direct installation programs for utilities would be leveraged to facilitate installations of the EE measures by end-use customers who elect for a virtually-assisted self-installation as opposed to a physical, direct installation by the program implementer. This virtually-assisted delivery channel would be incremental to the existing program delivery options available today such as direct installation or non-assisted self-installation;

- trade ally networks comprised of local contractors who do not currently manage program implementation for utilities would be enabled to facilitate installation of the EE measures by end-use customers who elect for a "virtually supported" self-installation as opposed to a physical, direct installation - directly supporting local economies and small businesses;
- Utilities whose existing budgets cannot support direct installation-only programs can leverage "virtually assisted" self-installations to provide cost-effective programs to their customers while maximizing net-to-gross impacts.

Market Strategies -The proposed idea enables stakeholders to utilize the same marketing strategies employed today or build upon them via additional channels:
- program implementers and utilities can market the "virtually assisted" self-installation as a way to ensure that energy efficiency programs can continue to operate in such a way that utility employees, program implementers and end-use customers all remain safe and healthy in a post-Covid world;
- Stakeholders can market the proposed idea similar to existing EE programs that include both a direct installation option and a self-installation option such as smart thermostat programs or EE kit programs. The addition of a virtually-assisted option would provide customers that are not as comfortable with self-installing EE measures the ease of mind associated with professional assistance and would be considered a third program delivery option;
- Due to the more cost-effective nature of a virtually-assisted self-installation in comparison to a direct installation, stakeholders could potentially offer increased incentives for participating in a program via a virtually-assisted channel including increased instant incentives on energy efficient products, bill credits, etc.
- Due to the validation of installation that comes with a virtually-assisted self-installation, utilities can offer self-installed EE measures that traditionally are perceived as leakage-prone due to non-installation such as smart thermostats;
- Market confusion can be mitigated by clearly articulating the value proposition delivered by each channel option. For example-
  - a "non-assisted" self-installation could be offered for customers who elect to self-install and possess the necessary technical skills to complete the installation unencumbered;
  - a virtually-assisted self-installation could be offered for customers who elect to self-install (due to appointment availability, immunological susceptibility, etc.) but do not possess the technical skills required to complete the installation without guidance and support from a trained professional;
  - a direct installation by a program implementer could be offered for customers who elect to have a trained professional complete the installation on their behalf.

Example Workflows:

Virtual Assessment and Smart Thermostat Tele-Installation
1. Enabling the remote assessment of a Resident's program eligibility and HVAC equipment compatibility via Program Implementer and/or Installation Contractor.
   Implementation Note:
   - The Resident's eligibility can be verified by the Installation Contractor via the program's existing avenues (i.e. online eligibility portal or via contact center).
   - The Resident's HVAC equipment compatibility can be verified via Augmented Reality (AR), via phone (during contact center eligibility verification), or via phone/video by the Installation Contractor.

2. Coordinating the fulfillment of smart thermostats to the Resident.
   Implementation Note:

- The fulfillment of the smart thermostat to the Resident can be accomplished either via Installation Contractor existing dropship vendor or via Installation Contractor drop-off at the residence.

3. Facilitating the scheduling of the "Tele-Appointment(s) to install the smart thermostat, conduct a remote quality check and acquire appropriate documentation and signatures.
    Implementation Note:
    - Remote collaboration tools can be utilized to facilitate the conversation between the Resident and the Installation Contractor to schedule the "Tele-Appointment(s)".
    - Unified calendars can be utilized to facilitate the actual scheduling itself and for "Tele-Appointment(s)" reminders.

4. Supporting the self-installation of the smart thermostat by the Resident.
    Implementation Note:
    - The Resident can be assisted remotely and in real-time (via AR, video or phone) by the Installation Contractor repurposed to participate in the "tele-installation" of the smart thermostat to ensure its proper installation and maximize customer satisfaction, comfort and energy savings.

5. Conducting the virtual "pre and post-installation" quality check by the Resident.
    Implementation Note:
    - The Resident can be supported remotely and in real-time (via AR, video or phone) by the Installation Contractor repurposed to conduct a "Virtual QC" of the smart thermostat installation to confirm its proper installation, functional state and walk the Resident through the usage of the smart thermostat and its mobile application.
    - As applicable by program requirements - the Resident can take pre-installation and post-installation pictures that are time stamped and geo-located - to provide the Installation Contractor for EMV purposes. These can be sent via AR, email, via SMS, or repository.

6. Securing appropriate signatures from the Resident and the participating Installation Contractor on documentation necessary for billing purposes and the claiming of energy savings.
    Implementation Note:
    - Services such as Docusign or others can be employed to facilitate the housing of the required documentation templates, securing the joint signatures and for document retention purposes. These documents can be configured in Docusign to forward to the appropriate document repository once completed.
    - Alternate methods include the Installation Contractor emailing a completed form to the Resident and the Resident signing the form, scanning it and emailing it back to the Installation Contractor. These documents can be configured to forward to the appropriate repository once completed.

Virtual Assessment and Energy Efficiency Kit Tele-Installation
1. Enabling the virtual assessment of program eligibility and energy efficiency kit components via Installation Contractor to ensure the Resident receives the appropriate kit measures.;

Implementation Note:
- The Resident's eligibility can be verified by the Installation Contractor via the program's existing avenues (i.e. online eligibility portal or via contact center).
- The Resident's HVAC equipment compatibility can be verified via phone (during contact center eligibility verification), or via phone/video by the Installation Contractor.
- The Resident's energy efficiency kit components can be assessed jointly between the Resident and Installation Contractor via AR or remote collaboration tools.

2. Coordinating the fulfillment of the energy efficiency kit to the Resident
   Implementation Note:
   - The fulfillment of the energy efficiency kit to the Resident can be accomplished either via dropship or via Installation Contractor drop-off at the residence.

3. Facilitating the scheduling of the "Tele-Appointment(s) to install the energy efficiency kit, conduct a remote quality check and acquire appropriate documentation and signatures.
   Implementation Note:
   - Remote collaboration tools can be utilized to facilitate the conversation between the Resident and the Installation Contractor to schedule the "Tele-Appointment(s)".
   - Calendar tools can be utilized to facilitate the actual scheduling itself and for "Tele-Appointment(s)" reminders.

4. Supporting the self-installation of the kit measures by the Resident
   Implementation Note:
   - The Resident can be assisted remotely and in real-time (via AR, video or phone) by the Installation Contractor repurposed to participate in the "tele-installation" of the energy efficiency kit measures to ensure their proper installation and maximize customer satisfaction, comfort and energy savings.

5. Conducting the virtual Post-Installation quality check by the Resident
   Implementation Note:
   - The Resident can be supported remotely and in real-time (via AR, video or phone) by the Installation Contractor repurposed to conduct a "Virtual QC" of the kit measure installations to confirm their proper installation, functional state and walk the Resident through the usage of the measures.
   - As applicable by program requirements - the Resident can take pre-installation and post-installation pictures that are time stamped and geo-located - to provide the Installation Contractor for EMV purposes. These can be sent via email, via SMS or repository.

6. Securing appropriate signatures from the Resident and the participating Installation Contractor on documentation necessary for billing purposes and the claiming of energy savings.
   Implementation Note:
   - Services such as Docusign or others can be employed to facilitate the housing of the required documentation templates, securing the joint signatures and for document retention purposes. These documents can be configured in Docusign to forward to the appropriate repository.

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?*

Idea Origination - The proposed idea originated out of a need to identify how to best assist:
- Energy Providers in meeting their mandates, goals and grid requirements for energy efficiency and peak load reduction;
- Programs Implementers in mitigating the consequences to their business during and post-Covid;
- Local trade allies in ensuring business continuity during and post Covid-19;
- Customers in reducing energy consumption and saving money as their habits change, their time at home increases and their household budgets tighten;
- Everyone in remaining safe and healthy during challenging times.

Successful Implementation - Given the unexpected nature of the Covid-19 pandemic, stakeholders have had to shift traditional operations quickly to meet the challenging needs of their workforces and customers. As such, there is not a significant amount of precedence for virtually-assisted self-installations as of yet, however, we are aware of multiple initiatives underway to bring these types of program delivery mechanisms to market nationwide.

While the concept of a virtually-assisted self-installation is more novel within the EE space, the idea of implementing EE programs with a self-installation channel is established and has proven to be successful and effective. Furthermore, the addition of a virtually-assisted option for self-installation reduces several of the challenges traditionally associated with self-installations including leakage, installation feasibility and segment reach.

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?*

The customer segments that could be targeted include:
- Residential Customers – Single Family (non-income qualified/income eligible)
- Residential Customers – Multifamily (non-income qualified/income eligible)
- Residential Customers – Single Family Income Qualified/Income Eligible
- Residential Customers – Multifamily Income Qualified/Income Eligible
- Small Business Customers (commercial & industrial sector)

Additionally, the proposed idea would drive benefit to these customer segments by:
- ensuring EE programs can continue to operate safely and effectively post-Covid;
- enabling the meaningful interaction of a direct installation while delivering the cost-effectiveness of a self-installation;
- increasing the eligible pool of potential participants who may not be able to participate in existing programs due to a lack of schedule flexibility, immunological susceptibility, or technical expertise.

- Increasing program participation in harder-to-reach rural areas where traditional direct installations are more challenging to implement.

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?

     The proposed idea provides a modicum of flexibility that would enable it to be offered as:
     - an additional measure for an existing program operating within the 4-year EE Plan;
     - an augmentation of an existing measure (self-installation) for an existing program operating within the 4-year EE Plan;
     - a new pilot measure or program offering;
     - all of the above dependent upon each respective stakeholder's capabilities and requirements.

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

     Additional discussion and collaboration with the SAG stakeholders around the size and scope of the proposed idea are required to arrive at an estimated budget.

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

     Additional discussion and collaboration with the SAG stakeholders around the size and scope of the proposed idea are required to arrive at an estimated budget.

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.

Additional sources that can shed insight into the proposed idea include:

https://energycentral.com/o/willdan/how-utilities-are-moving-virtual-assessment-and-verification
https://www.publicpower.org/periodical/article/mass-public-power-utilities-offer-virtual-energy-efficiency-audits-response