

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 type="checkbox"/>	Proposed Program Approach
<input checked="" type="checkbox"/>	Innovative Idea

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

Check	Energy Efficiency Sector Targeted by Energy Efficiency Idea
<input checked="" 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 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?

Current Illinois utility programs provide incentives for heat pump installations. Ameren provides incentives for a minimum SEER 16/HSPF 9 unit, and the minimum efficiency for ComEd is SEER 16/8.6 HSPF. Additional energy and resiliency benefits may be obtained through installation of a solar powered split system heat pump. The solar panel will generate power for the outdoor condensing unit during peak temperatures of the day. The reduction in purchased power improves the system’s efficiency beyond the additional savings realized by the heat pump alone. We propose to determine suitable rebates for solar ready heat pumps and to pilot these units.

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.

Marketing this approach can be focused on single-family customers by targeting ad campaigns with specific qualifications spelled out and by having clear comparison charts detailing costs and benefits of different heat pump options.

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?

Solar ready heat pumps are commercially available that can provide up to SEER 24. Most systems are connected to solar arrays installed for entire home power. According to Energy.gov, installing a heat pump to replace a standard residential split system air conditioning power consumption can be reduced approximately 50%. When adding solar panel power generation, the savings can be an estimated 75% when compared to the standard system. Source- <https://www.energy.gov/energysaver/heat-and-cool/heat-pump-systems>

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?

Replacing old air conditioners with solar ready heat pumps can reduce the amount of money qualified customers will have to worry about during and after the 2019-present pandemic. Increasing renewable energy retrofits to rebate-qualified customers will lead to an increase to current EE programs. Solar panel power generation is clean and very marketable as the market continues to grow.

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?

We envision this as an initial 2-year program. In the first year, utilities will set up the incentive structure. In the second year the program can be marketed and implemented by utilities on a pilot basis to evaluate the success of the program.

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

In year one the budget is estimated at \$15,000 to conduct product and market research, and develop the incentive structure. In year two the budget is estimated at \$35,000 to incentivize projects in Illinois, and analyze effectiveness of the incentive.

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

We anticipate a pilot of 10 homes.

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.

Lennox. Solar Solutions. <https://www.lennox.com/buyers-guide/why-buy-lennox/solar-solutions>; and <https://www.lennox.com/products/heating-cooling/heat-pumps/xp25>

Revision Energy. “Solar Powered Heat Pumps” <https://www.revisionenergy.com/solar-power-for-your-home/solar-powered-heat-pumps/>

Energy Sage “Benefits of Solar-powered air source heat pumps” <https://news.energysage.com/benefits-of-solar-powered-air-source-heat-pumps/>