

# 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 type="checkbox"/>	Residential Customers – Single Family (non-income qualified/income eligible)
<input type="checkbox"/>	Residential Customers – Multifamily (non-income qualified/income eligible)
<input 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 checked="" 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?*

In the energy sector there is currently a lot of buzz around “electrification”. “Efficiently electrifying the end use of energy could transform utilities and other industries where power is a key input, for the benefit of customers, society, and the environment,” according to the Electric Power Research Institute (EPRI)<sup>1</sup>. Research is being carried out to model and evaluate electrification scenarios by organizations such as EPRI<sup>2</sup> and the National Renewable Energy Laboratory (NREL)<sup>3</sup>.

The Electrification Futures Study by NREL outlines electric technology in residential space heating and residential water heating. Residential space heating “represents the end use with the single-largest potential for electrification in the residential sector”<sup>4</sup>, and this is followed by residential water heating in terms of potential impact.

To the extent that jurisdictions within Illinois and/or residents on their own choose to pursue end-use electrification strategies, they will replace fuel-burning space and water heaters with electric systems. Promoting residential retrofit practices focused on treating the whole house as a system is an important factor to obtain maximum energy savings potential in future renewable energy adoption scenarios, where we assume that the amount of available energy on the grid will not be limitless.

<sup>1</sup> EPRI. <https://www.epri.com/#/pages/sa/efficient-electrification?lang=en-US>

<sup>2</sup> EPRI. Electrification Scenarios for New York’s Energy Future, <https://www.epri.com/#/pages/product/3002017940/>

<sup>3</sup> NREL. Electrification Futures Study: End-Use Electric Technology Cost and Performance Projections through 2050 <https://www.nrel.gov/docs/fy18osti/70485.pdf>

<sup>4</sup> NREL. <https://www.nrel.gov/docs/fy18osti/70485.pdf> Page 40

We propose a pilot program to install, monitor, and evaluate costs, benefits, and necessary retrofit packages of all-electric retrofits in HVAC and water heating to deliver high performance outcomes in Illinois residences.

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.

This idea is to support a small pilot study on all-electric retrofits in Illinois residences. The delivery approach is to collaborate with a small subset of contractors to implement systematic all-electric retrofits incentivized by the utilities.

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?*

Certain jurisdictions such as in Vermont<sup>5</sup> and California<sup>6</sup> are pursuing electric space and water heating strategies, implementing incentives for customers that purchase heat pump heating and water heating technologies. Approaches suitable to Illinois may differ since California is cooling dominated and Vermont homes tend to not have forced air space conditioning. Cost of energy varies as well. These differences warrant further evaluation in the Illinois context.

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 impact of the research is to give customers more choice with regard to incentives on HVAC and water heating technology in the future.

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?

This idea is intended as a two-year pilot study.

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

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<sup>5</sup> Efficiency Vermont. Rebates: Heat Pump Heating and Cooling system <https://www.encyvermont.com/rebates/list/heat-pump-heating-cooling-system>

<sup>6</sup> Alter, Lloyd. California Utility offers rebates and incentives for going all-electric. <https://www.treehugger.com/fossil-fuels/california-utility-offers-rebates-and-incentives-going-all-electric-smud.html>

\$5,000 incentive per home x 10 homes = \$50,000

Research modeling and analysis based on data collected = \$30,000

Policy research, lit review, impact analysis, interviews leading to an understanding of electric heat pump adoption in IL = \$30,000

Total: \$110,000

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

This is a pilot study of 10 homes over 2 years.

### **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.