

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
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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.

Healthy Building Materials & Income Qualified Retrofits

Specific proposals:

1. **Reporting requirement on insulation and air sealant materials**
2. **Prohibiting insulation materials with worst in class chemicals linked to respiratory harm**

Proposal details

1. Reporting requirement on insulation and air sealing materials

The following data should be reported at the property level:

- Highest volume insulation application (i.e., attic ceiling, attic floor, open wall cavities, enclosed wall, etc.)
- Type of insulation material used in highest volume application (i.e., blown in fiberglass, cellulose batt, spray polyurethane foam (SPF), etc.)
- Highest volume sealant application (i.e., air ducts, HVAC penetrations, foundation, door gaps, etc.)
- Type of sealant material used in highest volume application (i.e., wet-applied mastic, 1-part spray foam, silicone, etc.)

Purpose

The reporting requirement will collect data on common insulation and sealant material usage to better understand: (1) The effectiveness of various materials in contributing to reduced energy use and (2) use patterns of materials containing chemicals of concern.

The prohibition of insulation materials containing known dangerous respiratory sensitizer chemicals will protect the health of retrofit installers and building residents.

Rationale

As detailed in a report published by Energy Efficiency For All (EEFA), entitled [*Making Multifamily Housing More Energy Efficient: A Guide to Healthier Upgrade Materials*](#), some insulation and air sealant materials contain chemicals linked to asthma, reproductive and developmental problems, and cancer. This Guide also describes that safer materials of comparable cost are widely available and being utilized in energy efficiency retrofits in the affordable housing sector. An EEFA, Elevate Energy, NRDC, and Three3 Inc. case study entitled [*Healthy Building Materials Case Study: Energy Performance of Chicago Properties Retrofit With Fiber Glass Insulation*](#) demonstrates that safer insulation materials perform well in affordable multi-family retrofits through a look at 13 Chicago metropolitan-area multifamily properties.

Current information generally indicates that materials containing chemicals of concern and safer materials are both utilized in energy efficiency retrofits. However, we do not have data on how often such materials are used, for what major applications, and the efficacy of different materials for energy use reduction. Requiring reporting will provide the data to better understand material performance and the scope of usage of materials containing chemicals of concern. It may also help to increase the non-energy benefits, and associated data, on Income Qualified Single Family and Multifamily Retrofit work.

2. Prohibiting insulation materials with worst in class chemicals

Insulation materials containing Category 1 or 1A respiratory sensitizers as defined by [Appendix A to 29 CFR § 1910.1200](#) (Health Hazard Criteria: A.4 Respiratory or Skin Sensitization) be prohibited from use in retrofits.

Purpose/Rationale

A respiratory sensitizer is a chemical that will lead to hypersensitivity of the airways following inhalation of the chemical (29 CFR § 1910.1200 A.4.1.1). Category 1 and 1A respiratory sensitizers can cause diseases such as asthma, rhinitis, alveolitis and other allergic respiratory diseases. Isocyanates are an example of a respiratory sensitizer chemical.

According to the [National Institute for Occupational Safety and Health \(NIOSH\)](#), [isocyanates](#) are powerful respiratory irritant and sensitizer chemicals used in spray polyurethane products including building insulation. Isocyanates can cause chronic, debilitating respiratory diseases including asthma, with deaths reported in workers after severe asthma attacks ([NIOSH alert Preventing Asthma and Death from Diisocyanate Exposure](#)). NIOSH also reports that building occupants (staff at a school) have developed asthma after application of isocyanate-containing polyurethane roofing materials. The California Department of Toxic Substances Control has adopted regulations to list spray polyurethane

foam systems containing methylene diphenyl diisocyanates as a Priority Product to protect workers and consumers from chemical exposures that could occur during normal use of these products (attached).

NIOSH recommends that “When feasible, employers should substitute a less hazardous material for isocyanates,” and notes that “Preventing exposure to isocyanates is a critical step in eliminating the health hazard.” Therefore, prohibiting the use of insulation materials containing category 1 or 1A respiratory sensitizers will align with these NIOSH recommendations by preventing exposure and promoting the use of safer alternative materials that do not contain isocyanates or other similarly hazardous chemicals.

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.

Reporting requirement: As energy data is already being reported at the property and household level for IQ Single Family and Multifamily retrofits, an additional requirement to report on insulation and air sealant materials usage is easily implemented into existing programs.

Prohibiting insulation materials with worst in class chemicals: This requirement could be implemented with existing IQ Single Family and Multifamily retrofit programs by adding the criteria for prohibited chemicals to mandatory program requirements. The Stakeholder Advisory Group (SAG) policy manual and individual utilities could include additional guidance for program implementers as needed.

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.

See additional background under purpose and rationale sections in response to question #1.

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.

This idea will provide important data and an understanding of materials currently being used in Income Qualified Single Family and Multifamily retrofits. It will also help to remove any of the worst-in-class chemicals that could be exacerbating asthma and other health issues in income-qualified homes and buildings. As Illinois utilities look to understand and potentially incorporate non-energy impacts into the evaluation of their programs, especially their income qualified programs, this analysis will be beneficial.

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?

Duration of 4 year plans, with potential modifications (additional data analysis, etc.) on a year by year basis.

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

Should have limited to no budget implications.

7. **Estimated Participation:** Provide participation totals for each program year (i.e. number of measures installed, number of customer participants, etc.)
[No unique participation from this idea. Will be incorporated into IQ retrofit programs.](#)

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.

[All healthy building material resources on the Energy Efficiency for All website](#)