

**Illinois Energy Efficiency Stakeholder Advisory Group
Policy Manual Subcommittee Version 3.0: Proposed Policy Template**

**Proposed Policy for Version 3.0: Assessments for Fuel Switching Measures
Using HFCs**

Submitted By: Peoples Gas & North Shore Gas

Question 1: Proposed Policy and Rationale

Briefly describe the policy proposed to be included in Policy Manual Version 3.0, including rationale for why this policy is necessary in Illinois.

It is proposed that fuel switching measures that use HFCs, such as electric heat pumps, have an accompanying assessment by the incentivizing utility, of leakage impacts over the life of the measure. That should include quantification of potential leakage of the HFC employed for each of the applications. A TRC score (targeting TRC greater than 1), similar to the metrics for the “Beneficial Electrification Plan” section of CEJA, should be included in annual reporting by the utility, which is consistent with what California (and possibly several other states) are incorporating.

Questions to consider:

- 1. Why does this policy require inclusion in Policy Manual Version 3.0?*

A primary purpose of Illinois’ “Consumers and Climate First Act” (CEJA) is to reduce greenhouse gas emissions. Quoting from CEJA; “Illinois has a responsibility to protect its citizens and economy *against the threats of climate change*, including threats to our economy, health, safety and national security.” That theme is embedded, explicitly and implicitly throughout the legislation. As such, utility sponsored energy programs that may increase GHG emissions should be avoided. That may be stating the obvious, but what is less apparent is the collateral, unintended and/or hidden impacts that can occur with energy program implementation. One specific, and potentially powerful negative impact relates to hydrofluorocarbons (HFCs) and other refrigerants employed in incentivized measures. Under CEJA section 8-103 b-27 (Fuel Switching), electric heat pumps (and other electrification measures) are now incentivized. Increasing electric heat pumps use in homes and business, which utilize HFCs, will increase release of those refrigerants. That has been documented in other states (and countries); and in fact, California now has requirements to measure, report and mitigate that HFC leakage. And the impact is not insignificant. Three of the most common HFC refrigerants are R-410a with a GWP of 2088, R-134a with a GWP of 1430 and R-407c with a GWP of 1774. Over the 15-year (or longer) life of an electric heat pump, those refrigerants will leak, potentially quite a lot.

Importantly the most likely future replacement for these refrigerants (AL2 class like R-32) are typically not compatible with existing equipment. And they have their own trade-offs. They have slightly higher flammability (and that has limited their use in California) and R-32, for example, has GWP of 675. Other non HFC refrigerants have their own tradeoffs.

- 2. What unresolved policy issue(s) will be resolved by inclusion in the Policy Manual Version 3.0?*

Please be as specific as you can. If you have specific policy language to propose at this time, please include in this template. It is not a requirement to draft policy language in the proposal template. If draft policy language is not included here, you may be assigned to draft proposed policy language for review by the Subcommittee at a future meeting.

The impact of leakage of refrigerants with high GWP should be included in utility decision-making, if Illinois is to achieve the directives of CEJA, particularly that GHG be reduced. Utility energy efficiency programs, shouldn't increase emissions, and need policy to minimize that.

Question 2: Utility Impact

Describe whether the proposed policy impacts Illinois gas utilities, electric utilities, or both.

The proposed policy impact is primarily to electric and dual fuel utilities.

Question 3: Background Research

Provide any background research completed in preparing this template, including source references and links, as applicable.

Questions to consider:

- 1. Are you aware of other jurisdictions or utilities that address this policy issue?*
- 2. Have any national or regional energy efficiency organizations addressed this policy topic? If so, please provide reports and any other relevant sources.*

As mentioned above, California has identified HFC refrigerant leakage as a significant issue, and has adopted law, policy (including California Energy Commission rulings) and practices, to reduce those impacts. Two sample sections from 2021 CPUC proceeding are included below, as indicative of the seriousness they take the issue, and how State agencies are acting on that.

4.9 New low-GWP refrigerant standards Effective Program Year: 2022. In California, greenhouse gas (GHG) emissions from refrigerants in HVAC equipment *is the fastest growing global warming pollutant*. To address this climate threat, California State Senate Bill (SB) 1383, 2016, calls for the emissions of hydrofluorocarbons (HFCs) to be reduced so that by 2030, California's HFC emissions will be 40% of what they were in 2013 based on GWP impact. California SB 1013, 2018, was passed shortly after SB 1383 to help define the rules and timeline California needs to follow to reach the 2030 HFC emissions reduction goal.³⁴ While the act's original timeline has already changed, the latest pending amendment to SB 1013 calls for new stationary AC equipment installed after January 1, 2025 to contain a refrigerant with a 100-year GWP value below 750. Furthermore, under SB 1013, the CPUC and other state regulatory agencies are called upon to assess the operational performance of refrigerants with low-GWPs and to develop a strategy to encourage the adoption of those low-GWP refrigerants in equipment funded by energy efficiency programs overseen by the CPUC.

7.4 New support table fields for refrigerants Effective Program Year: 2022. Six new fields were added for avoided costs of refrigerant leakage calculated using the Refrigerant Avoided Cost Calculator. Going forward these fields will be included in Ex Ante Data (EAD) tables or permutations files submitted for measure approval when the measure contains refrigerant. Table A-8-2. New DEER and EAD fields for refrigerant NPV avoided costs
New field Field description RefrigerantNPVBenefitsPre NPV avoided costs calculated using the Refrigerant Avoided Cost Calculator for pre-existing baseline equipment
RefrigerantNPVBenefitsStd NPV avoided costs calculated using the Refrigerant Avoided Cost Calculator for standard baseline equipment
RefrigerantNPVBenefitsMsr NPV avoided costs calculated using the

Refrigerant Avoided Cost Calculator for installed measure equipment RefrigerantNPVCostsPre Negative NPV avoided costs calculated using the Refrigerant Avoided Cost Calculator for pre-existing baseline equipment (should be entered as a positive value) RefrigerantNPVCostsStd Negative NPV avoided costs calculated using the Refrigerant Avoided Cost Calculator for standard baseline equipment (should be entered as a positive value) RefrigerantNPVCostsMsr Negative NPV avoided costs calculated using the Refrigerant Avoided Cost Calculator for installed measures (should be entered as positive value).

A link to that document is included here. [DEER2023 Scoping Document FINAL.pdf](#)

There are several other HFC leakage related documents that our research on the issue has uncovered. The intention is to include those in a report that PGL/NSG engaged Slipstream to develop as part of an evaluation of HFC leakage issues, with focus on implications for electric heat pumps (and hybrid system). A report from Slipstream is anticipated within the next 30 days.

Optional Question 4: Commission Decision

Has the Illinois Commerce Commission previously addressed this policy or issue? If so, please provide language and specific citations, including the ICC docket number.

It is not apparent that ICC has yet addressed the issue.

Optional Question 5: Statutory Consistency

Have you reviewed your proposed policy against applicable Illinois law? Are there any possible conflicts? If so, please explain and provide statutory citation(s).

There has been some review of the proposed policy against applicable Illinois law, primarily CEJA. The contention is that the proposed policy would be consistent with CEJA and related legislation, as indicated in the response to question 1, and would help mitigate GHG emissions.

Optional Question 6: Additional Information

Provide additional information, as needed, to assist with understanding the proposed policy issue and your request to include it in the Policy Manual Version 3.0. For example, have any memos been drafted to the SAG related to this policy proposal?

No memos have yet been drafted, though a related report prepared by Slipstream should be available for release in the near future.