

Proposed Policy for Version 3.0: Interactions Between Electrification and Other Efficiency Measures

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Question 1: Proposed Policy and Rationale

It is important to be clear and consistent about how energy savings from electrification measures and other efficiency measures with which they would interact are calculated. In particular, it is important to be clear about which savings are “counted first” and the related issue of which fuel is counted as having been saved. Consider an electric utility-only program that provides a single-family home insulation upgrades, air sealing and an electric cold climate heat pump to replace a gas or propane furnace. It is important to be clear about whether (A) electrification savings are counted first and then the weatherization measures are applied to the new heat pump heating baseline (i.e., counted as pure kWh savings); or (B) weatherization savings are counted first as gas or propane BTU savings – and converted to kWh equivalents to count towards electric utility savings goals – and then electrification savings are calculated relative to the now more efficient fossil fuel consumption baseline.

Clarity on this policy is needed to address a new issue raised by CEJA – the counting of electrification savings. It has implications for both how much electrification can be pursued in a given year as well as how much gas efficiency savings can be counted towards electric utility savings goals – while staying within statutory limits for both. For example, under option A above, the electric utility will count greater electrification savings (meaning they will hit the electrification savings cap more quickly) but no gas/propane conversion savings (not affecting that cap). Under option B, the electric utility will count substantial gas/propane conversion savings (meaning that statutory cap will be hit more quickly) but count less electrification savings (meaning the electrification savings cap will not be hit quite as quickly).

City of Chicago, CUB, & NRDC propose the following Policy Manual language with respect to this issue:

When an electrification measure is installed in concert with, at the same time and/or as part of a project in which other efficiency measures that would affect future electricity consumption by the electrification measure, the electrification savings should be counted first and savings from the interacting efficiency measures should be treated as standard electric efficiency measures with savings estimated relative to the new electric baseline.

This approach is the best approach for a couple of reasons. First, it does not make sense to count gas/propane conversion savings – typically with measure lives of 15-20 years or more – when we know that there will never be any gas/propane savings because of the electrification. If weatherization measures are installed as a separate project – without knowing the electrification measures were coming – that is a different story. But if we know electrification is happening, it is illogical to treat weatherization of a home whose heating system is about to be electrified as anything other than standard electric efficiency savings resulting from increasing the building envelop efficiency of an electrically-heated home.¹ Second, if NRDC’s proposed approach is not

¹ Note that we use a heating electrification example here, as that is likely to be the most common application of this policy. However, the concept applies equally to water heating and other possible electrification end uses.

adopted, there could be a perverse incentive to wait to perform weatherization until after electrification has been completed rather than to do both at the same time. There are administrative efficiency reasons (avoiding unneeded extra site visits) and engineering reasons (e.g., sizing a new heat pump to the load of the weatherized home rather than to the unweatherized home) to try to do both at the same time.

Note that NRDC's proposed approach on this policy issue was part of ComEd's recently approved settlement for its 2022 plan so it has already been accepted and approved by the ICC as reasonable.

Note also that though the TRM does not currently address this issue, there is a brief discussion of interactive effects between different efficiency measures that references a 2011 VEIC memo.² That memo suggests that one option for addressing interactive effects is to capture the effects with the longest lifetimes first. We would argue that while that may make sense for two efficiency measures, it does not necessarily make sense when considering a combination of electrification and efficiency measures, particularly when there are statutory limitations on both electrification savings and gas/propane conversion savings that are affected. Moreover, we would argue that even if a heat pump has a somewhat shorter life than an insulation upgrade, that electrification can be assumed to last longer. The new heat pump will simply be replaced with a new one in 15 or 18 or 20 years. We implicitly assume that today in our assumptions about savings lives of weatherization measures (all assumed to provide the same savings from the same fuel for as long as they last).

Question 2: Utility Impact

This policy principally impacts electric utilities.

Question 3: Background Research

N.A.

The only relevant reference is the ComEd 2022 Plan settlement language (p. 34 of 52) pasted below:

When heat pumps are installed in concert with weatherization measures, the weatherization measures should be treated as electric efficiency measures (i.e., as if the baseline was the heat pump) for the purpose of estimating savings and counting such savings towards ComEd's savings goals, subject to any modifications approved in the Policy Manual and/or TRM.

² See TRM v. 10.0, section 3.11. Also see:

http://portal.veic.org/projects/illinoistrm/Shared%20Documents/Memos/Interactive_Effects_Memo_121311.docx