Measure Life - Why is it important and part of the policy discussion?

- For most TRM measures, the measure life relates to the expected lifetime of the efficient equipment, and typically it is assumed that the baseline equipment would last a similar period.
- For LED lamps however, the measure life is dependent on the *baseline* lamp life since these lamps typically have significantly lower expected lifetimes [Incandescent/Halogen – 1-2 years, CFLs - 6 -8 years v 18-20 years for LEDs]
    - Therefore the continuation of savings is dependent on the baseline lamp being replaced by another baseline lamp after it has burnt out.

- In 2022, VEIC recommended a maximum of 2 years measure life for all LED lamps, reflecting the expectation that after the baseline lamp had burned out (i.e. by 2025), the only available replacement lamp would be an LED and therefore the savings would not continue.
- In the Stakeholder agreement, the measure life was set at 2 years for non-IQ Direct Install, and 8 years for IQ programs.

Measure Life – Comment Summary

Policy Issue #1, Question 4: Should the measure lifetime for LED bulbs continue to be eight (8) years in IL-TRM Version 14.0? Please explain.

ICC Staff:	Does not support keeping the eight-year measure life for IQ programs. "Backstop" have all but swept inefficient lamps off store shelves. Tiered measure life would better reflect field realities in IQ communities.
IL OAG:	IL OAG has no position
NRDC:	No. Any incandescent/halogen replaced would not be expected to last more than two years. Once such a lamp reached the end of its life, the baseline would become a new LED. Therefore measure life should be 2 years.
Opinion Dynamics:	Lifetime should reflect remaining life of product being replaced. Sell through does not need to be accounted for. Stockpiling should be addressed by programs, and credit for doing so could be reflected in measure life.

Measure Life – Comments

Policy Issue #1, Question 4: Should the measure lifetime for LED bulbs continue to be eight (8) years in IL-TRM Version 14.0? Please explain

ICC Staff: Staff does not support keeping the eight-year measure life for IQ programs. The useful life assigned to LED bulbs in IL-TRM v14 should reflect today's market reality, not the conditions that existed when the current eight-year measure life was first adopted for income-qualified (IQ) programs. The federal 45-lumen-per-watt "backstop" and DOE's 2022 lighting rule have all but swept inefficient lamps off store shelves, pushing LEDs to near-universal availability and has shifted the baseline. LEDs installed in enclosed fixtures, high-heat kitchens, or humid bathrooms can fail well before their lab-rated life. A blanket eight-year life assumes uniform operating conditions that the incomequalified sector rarely experience; a tiered approach (e.g., 6 yrs for enclosed or high-temperature locations, 12 yrs for open fixtures) would better reflect field realities in IQ communities.

IL OAG: IL OAG has no position on Question 4 for Policy Issue #1

Measure Life – Comments

Policy Issue #1, Question 4: Should the measure lifetime for LED bulbs continue to be eight (8) years in IL-TRM Version 14.0? Please explain

NRDC: No. Any incandescent/halogen lamp that might be replaced through direct installation would not be expected to last (and to therefore provide inefficient lighting) for more than two years. Once such a lamp reached the end of its life, the baseline would become a new LED as that is the only thing that can now be purchased. Thus, the savings life should be just two years.

Opinion Dynamics: From a purely technical perspective, our opinion is that the measure lifetime for LED bulbs offered through direct install in low income channels should generally be the expected remaining life of the existing product(s) replaced by the LED. This is because once existing products fail, federal regulations mean that LEDs should be the only available product on the market to replace them.

Reasonable assumptions for the full measure life of products that LED bulbs might replace are: ~5 years when replacing compact fluorescent lamps (CFLs), and ~1-2 years when replacing incandescent lamps (halogen or otherwise). How the remaining useful life should be assumed to compare to these full measure life assumptions is a difficult question to definitively answer, and it may be more expedient to simply credit the programs with the full measure life of the products replaced rather than attempting to negotiate a remaining useful life assumption.

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Measure Life – Comments

Policy Issue #1, Question 4: Should the measure lifetime for LED bulbs continue to be eight (8) years in IL-TRM Version 14.0? Please explain

Opinion Dynamics: A few additional topics for consideration:

1) Past Illinois agreements have added some additional time to measure life to account for sellthrough of inefficient bulbs. Our opinion at this point is that sell-through of inefficient bulbs should have reached its conclusion and therefore does not need to be accounted for. We are not aware of any field studies that have validated this opinion to date and if other parties disagree on this point it could be useful to do some field data collection to confirm.
2) Another topic that is frequently brought up when talking about the appropriate measure life for these measures is possible customer stockpiling of inefficient products (e.g. if a program direct installs a LED bulb to replace a halogen bulb, while the remaining useful life of that halogen bulb may be only a year, the customer may also have additional halogen bulbs in storage that otherwise would have been installed on burnout). In our minds, the programs would ideally address this issue by also addressing these stockpiled products. Per the Ameren stipulation, "addressing" this issue should consist of recycling or otherwise disposing of the products. It is unclear to us whether the language in the Ameren stipulation was intended to address stockpiled bulbs or only installed bulbs. As long as stockpiling is addressed by the programs, it is reasonable to credit the programs in some manner for addressing that issue, potentially by extending measure lives for the installed products replaced to compensate