

# IFTTT Carbon Evaluation Executive Summary

Reviewing the Carbon-Aware Applets for Functionality and Effectiveness at Avoiding Carbon



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Prepared For  
Commonwealth Edison Company

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## Acknowledgements

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## EXECUTIVE SUMMARY

From 2021 to the present, ComEd has offered carbon-awareness features to their customers through software called If This, Then That (IFTTT). The IFTTT platform enables smart device automation and behavioral alerts using electric grid carbon intensity as an input signal (among other input signals, like price). This allows users to make changes to the electricity use of certain qualified devices such as thermostats to cause fewer carbon emissions.

ComEd's IFTTT carbon applets are enabled by a grid carbon intensity signal provided by WattTime through an API. As a non-profit, WattTime is dedicated to providing the partners that use our data with support to help them improve the effectiveness with which their products reduce carbon emissions. WattTime has evaluated the IFTTT Carbon Applets and related messaging in order to provide feedback on the effectiveness of the current program and to identify changes that could be made to make the program more impactful.

The key take-aways from the IFTTT evaluation include:

1. The overall carbon reduction impact of the current IFTTT carbon program is low
2. Low impact is primarily due to low participation (nine long-term users; 65 total users)
  - a. Low participation is likely due to poor attraction and retention, driven primarily by deficiency in perceived value, ease-of-use, and compatibility
  - b. As of the completion of the pilot for this study, there are 65 carbon applet users
3. The existing program has limitations that keep the per-user carbon reduction potential lower than it could be
4. The biggest gains in per-user effectiveness would likely come from:
  - a. Expanding device compatibility (particularly to EVs)
  - b. Expanding platform compatibility beyond IFTTT to include more native smart device control (with closed-loop automation)

The current IFTTT program is capable of avoiding on the order of 10 tonnes of CO<sub>2</sub> per 1,000 devices. By expanding the compatible devices to include EVs, that potential can be increased to about 100t per 1,000 devices. Allowing program participation through brands that have already built native software for Automated Emissions Reduction (AER) using closed-loop control will double or triple the effectiveness and will vastly improve the user experience. The range of potential is shown in the following figure.

As further detailed herein, a survey conducted as part of the project indicated that 85% of ComEd customers who did not receive carbon reports would like to receive them and 83% are interested in knowing their carbon footprint. ComEd has stated that they are retiring the ACRR report. Altogether this indicates that there is strong interest from

users in understanding their carbon footprint, and that receiving clearer results of their actions may be motivating.

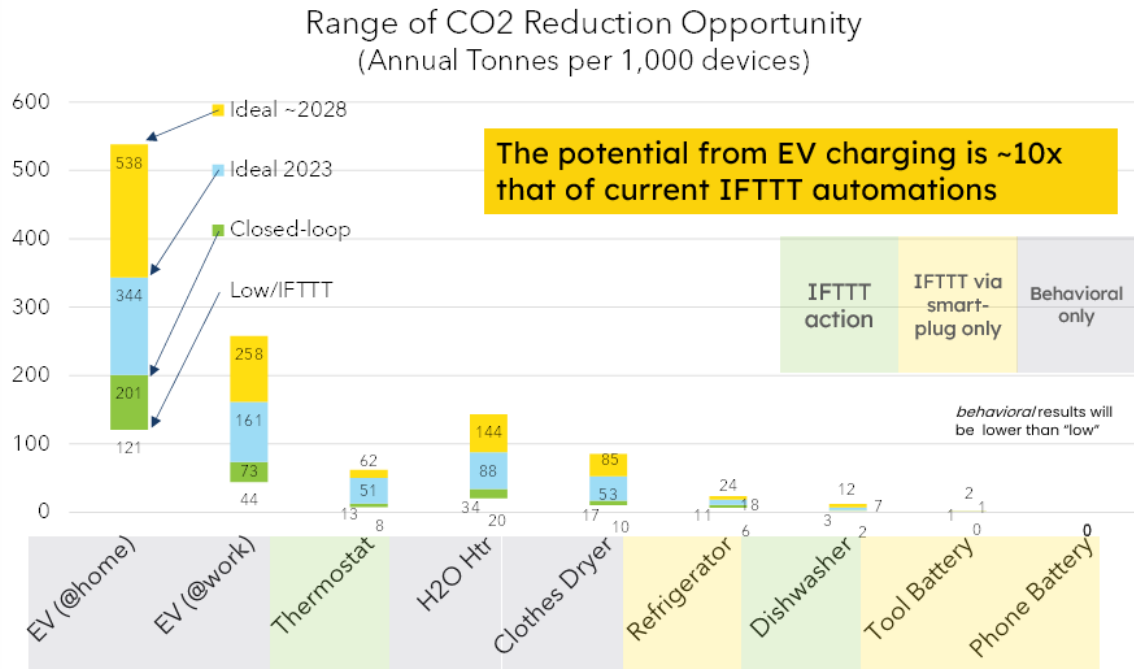


Figure 1: IFTTT program performance falls far short of what is achievable with similar technology, between 0 and the bottom end of the green bar. An automation that works with a device brand natively (closed-loop control) will perform better and fall in the range of the blue and green bars. The potential for all devices will increase over time as the Chicago region electricity grid gets more renewable energy (best possible future performance indicated by the top of the yellow bar).