

“If This Then That” (IFTTT) Internet of Things Pilot Evaluation Executive Summary



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Prepared For
Commonwealth Edison Company

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EXECUTIVE SUMMARY

If This Then That (IFTTT) is a web-based service that allows for IoT (Internet of things) smart devices to interact with one another by allowing customers to connect with ComEd provided services to control their home smart devices. The services provided by ComEd are designed to take cues from the existing Peak Time Savings (PTS) and Hourly Pricing (HP) programs, or from a newly available Carbon Index. Each of these programs incentivizes or encourages customers to reduce or shift energy demand, either to benefit the grid or reduce their own carbon emissions.

The ComEd-provided services, or “triggers,” are as follows:

^{*}Peak Time Savings (PTS): Once a PTS event is called by the program, a customer can be alerted through an IFTTT applet when peak hours will be in effect. Prior to the start of a PTS event, the IFTTT applet can trigger smart devices to prepare for the event, such as directing a thermostat to pre-cool the home. At the start of a PTS event, the IFTTT applet can trigger smart devices such as thermostats, light bulbs, and plugs to power down or reduce demand. After PTS events are over, the applet will turn the devices back to their original settings.

^{*}Hourly Pricing (HP): A customer is alerted when the price of electricity, as provided by HP day-ahead or real-time market pricing, is above the customer's set price parameters. As with PTS IFTTT applets, a notification is sent to the customer, or a signal is sent to smart devices to adjust their settings to save money by reducing demand during the hours above their price threshold.

[†]Carbon Quality: A preset parameter called Carbon Index value reflects the carbon emissions intensity of the grid by hour. As with HP price thresholds, the IFTTT applet is used to alert customers when grid carbon intensity is clean or dirty based on a default threshold. IFTTT applets can signal smart devices to take action accordingly, such as raising thermostat setpoints or powering down lights, to reduce energy consumption during high carbon times.

In 2023, ComEd expressed interest in assessing the effectiveness of the IFTTT integration services in terms of customer participation, satisfaction, energy and demand savings, and carbon emissions reduction impact. Upon receiving and analyzing data for potential study groups of IFTTT users broken out by program, Slipstream determined that none of the programs had sufficient enrollment to warrant a full evaluation. Instead, Slipstream performed power analyses on participants enrolled in the PTS and HP programs that also have IFTTT enabled to provide ComEd with

^{*} Customers must enroll in respective programs to participate

[†] ComEd's IFTTT carbon applets are enabled by a grid carbon intensity signal provided by WattTime through an API.

approximate target participation levels needed to move forward with comprehensive program evaluation for these two programs. WattTime developed a report outlining the effectiveness of the Carbon Quality and Carbon Footprint programs. While each report outlines specific recommendations for each program, overarching recommendations from these analyses include:

Key Recommendations

Value to Customers and ComEd: Whether through the IFTTT service or not, ComEd should continue to offer a smart home device automation service tied to PTS and HP.

Usability: Test existing program instructional materials with IFTTT users to ensure they are user-friendly, understandable, and comprehensive. Encourage key smart device providers to integrate their products with the IFTTT service so that they are available to ComEd customers through the service.

Communications: Revisit and update the ComEd IFTTT website before rolling out the program and ensure that links to how-to videos are easily accessible and communicated regularly. Send customers more frequent communications, particularly about new features and integrations. Consider increasing the frequency of ACRRs or allowing customers to select their own frequency of delivery.

Costs: If connections are an effective workaround, develop comprehensive and easy-to-follow instructions for customers, and ensure that these customers are aware of these instructions. Otherwise, look for other ways to reduce costs either by negotiating with IFTTT directly or switching to another service.

Evaluation: Revisit impact analysis once PTS and HP IFTTT groups have reached greater than 5,000 customers each.

Sample sizes required for each IFTTT group

IFTTT group	Approximate sample size needed for full evaluation
Peak Time Savings	4,500
Hourly Pricing	5,000