

Third Party Efficiency Program – RLD Resources LLC Commercial and Retail Internet Protocol Thermostat and Controller Program PY5 Evaluation Report

FINAL

Energy Efficiency / Demand Response Plan: Plan Year 5 (6/1/2012-5/31/2013)

Presented to Commonwealth Edison Company

November 13, 2013

Prepared by:

Patricia Plympton Navigant Consulting, Inc







www.navigant.com

© 2013 Navigant Consulting, Inc.

Submitted to:

ComEd Three Lincoln Centre Oakbrook Terrace, IL 60181

Submitted by:

Navigant Consulting, Inc. 30 S. Wacker Drive, Suite 3100 Chicago, IL 60606 Phone 312.583.5700 Fax 312.583.5701

Contact:

Randy Gunn, Managing Director 312.938.4242 Randy.Gunn@Navigant.Com Jeff Erickson, Director 608.497.2322 Jeff.Erickson@Navigant.Com

Disclaimer: This report was prepared by Navigant Consulting, Inc. ("Navigant") for ComEd based upon information provided by ComEd and from other sources. Use of this report by any other party for whatever purpose should not, and does not, absolve such party from using due diligence in verifying the report's contents. Neither Navigant nor any of its subsidiaries or affiliates assumes any liability or duty of care to such parties, and hereby disclaims any such liability.

Table of Contents

Е.	Exe	cutive	Summary	1	
	E.1.	Progra	am Savings	1	
	E.2.	2. Program Savings by Measure			
	E.3.	Impac	et Estimate Parameters	1	
	E.4.	Impac	ct Estimate Parameters For Future Use	2	
	E.5.	Partic	ipation Information	2	
	E.6.	Concl	usions and Recommendations	2	
1.	Introduction				
	1.1	Progra	am Description	4	
	1.2	Evalu	Evaluation Objectives		
		1.2.1	Impact Questions	4	
		1.2.2	Process Questions	4	
2.	Eva	luatio	n Approach	5	
	2.1	Prima	ry Data Collection	5	
		2.1.1	Overview of Data Collection Activities	5	
		2.1.2	Verified Savings Parameters	5	
		2.1.3	Process Evaluation	6	
		2.1.4	Program Volumetric Findings	6	
3.	Net	Impa	ct Evaluation	7	
4.	Pro	8			
	4.1	Marke			
	4.2	Partic	ipant Telephone Interviews	9	
		4.2.1	Program Implementation	9	
		4.2.2	Participant Awareness of the Program	10	
		4.2.3	Participant Motivation	10	
		4.2.4	Participant Satisfaction	11	
		4.2.5	Participants' Feedback on Benefits of Program	15	
	4.3	Revie	w Process	16	
5.	Cor	nclusio	ons and Recommendations	17	
6.	Арр	pendix	٢	19	
	6.1	Glossary		19	
	6.2	Marke	eting Materials	23	
		6.2.1	Dent on Energy Press Release – October 2012	23	
		6.2.2	Email to ComEd Trade Allies – October 2012		
		6.2.3	Dent on Energy Fact Sheet	25	
	6.3	Data (Collection Instrument – Participant Survey		

List of Figures and Tables

Figures

0	
Figure 4-1. Participant Preferences for Program Communication	
Figure 4-2. Participant Satisfaction Ratings for the Nest Thermostat	
Figure 4-3. Participant Satisfaction Ratings for the Installation Technician	
Figure 4-4. Participant Satisfaction Ratings for the Interim Program Manager	
Figure 4-5. Participant Satisfaction Ratings for the Dent on Energy Program	14
Figure 4-6. Participant Satisfaction Ratings with ComEd	
Figure 4-7. Participant Feedback on Program Strengths	
Figure 4-8. Participant Feedback on Program Improvements	

Tables

2
2
5
6

E. Executive Summary

This report presents a summary of the findings and results from the Impact and Process Evaluation of the EPY5¹ Third Party Efficiency Program – RLD Resources LLC "Dent on Energy" Commercial and Retail Internet Protocol Thermostat and Controller Program (Dent on Energy Program). The Dent on Energy Program targets small to mid-size office buildings, churches and retail stores (100 kW– 400 kW) as well as local Heating Ventilation and Air Conditioning (HVAC) contractors and Building Automation System (BAS) contractors. The energy savings target for EPY5 was 10,000,000 kWh. For the contractors, the Dent on Energy Program provides marketing and technical training, devices (kits) and monitoring. RLD administers incentives to the contractors for installing IP thermostat kits. An incentive of \$0.04/kWh with savings up to \$500 is offered for participation in the program. For EPY5, the Implementation Contractor (IC), RLD Resources hired one specific contractor (HVAC Direct) to perform the installations due to insufficient interest from HVAC and BAS contractors.

E.1. Program Savings

For EPY5, Navigant received and reviewed ex ante gross energy savings estimates from fourteen facilities that had received IP Thermostats through the Dent on Energy Program. *Navigant was unable to obtain the necessary clarifications from the implementation contractor to verify the gross energy savings*. In concurrence with ComEd, Navigant is not reporting ex ante or ex post savings for the Dent on Energy for EPY5, and will review the implementation contractor's approach for EPY5 in EPY6 and if feasible, report EPY5 savings at that time. In addition, if the participation had been sufficient, Navigant had planned to use a matched comparison of customers with a regression bias adjustment approach, as detailed in an October 10, 2012 memo to ComEd. Navigant will use this approach in EPY6 if participation warrants it.

E.2. Program Savings by Measure

For EPY5, a protocol was not available to calculate energy savings, however participant interviews were conducted and a NTG estimate of 1.0 was produced. Free ridership and spillover were both estimated to be zero. Navigant will attempt to produce verified savings for EPY5 in EPY6.

E.3. Impact Estimate Parameters

In the course of estimating verified gross and net savings, the evaluation used a parameter in its calculations. The key parameter used in the analysis is shown in the following table.

¹ The EPY5 program year began June 1, 2012 and ended May 31, 2013.

Parameter	Data Source	Deemed or Evaluated?
NTG	Participant Interviews	Evaluated

E.4. Impact Estimate Parameters For Future Use

Since PY5 participation was lower than anticipated resulting in a small sample of participant surveys, and the program is changing significantly in PY6 to increase participation, the NTG estimate for PY5 is not representative for future years and will not be used for future program year analysis.

E.5. Participation Information

The program had 14 participant facilities in PY5 and distributed 14 IP Thermostats as shown in the following table.

Table E-2. EPY	5 P	rimary	Participation	Detail
----------------	-----	--------	---------------	--------

Participation	Totals
Participants	14
Total Measures	14
Installed Projects	14

Source: Implementation Contractor tracking system data received on 9/6/2013 and Navigant analysis.

E.6. Conclusions and Recommendations

The following provides insight into key program findings and recommendations

Program Savings Goals Attainment

- <u>Finding 1.</u> According to the interim IC program manager, at the same time that the Dent on Energy program was approaching candidate participants and participant groups, other groups were also in the ComEd service territory promoting alternatives to ComEd service. This led to confusion in the marketplace, and since in EPY5 Dent on Energy was not permitted to use the ComEd logo in their marketing materials, ComEd customers were cautious of any program that was not specifically labeled as a ComEd program.
- <u>Recommendation 1.</u> Begin or continue to use the ComEd logo in all Dent on Energy marketing materials and Web site to eliminate market confusion. Include the logo on a consistent basis to eliminate all market confusion as to which company is sponsoring the program.

- <u>Finding 2.</u> According to staff at several participating facilities, facility staff did not receive any follow-up services after the installation which led to one facility removing the IP thermostat and re-installing the original thermostat.
- <u>Recommendation 2</u>. Provide contact information to facility managers for follow-up questions as well as conduct follow-up phone calls post-installation to ensure that IP Thermostat continues to operate in a manner that provides both energy efficiency and comfort.
- <u>Finding 3.</u> According to the interim IC program manager, some facilities would have the opportunity to achieve significantly greater savings if they had more than one-IP thermostat installed.
- <u>Recommendation 3</u>. Consider developing an approach that would allow for more than one IP thermostat installed per facility based on energy savings potential analysis from additional IP thermostat(s).

Review Process.

- <u>Finding 4</u>. In EPY5, the IC did not provide viable ex ante gross savings estimates. <u>Recommendation 4</u>. In EPY6, establish the approach to calculating ex ante gross savings early in the program year.
- <u>Finding 5</u>. In EPY5, the interim IC program manager did not provide sufficient program materials for Navigant to conduct verification, due diligence and tracking system review.
- <u>Recommendation 5.</u> In EPY6, provide Navigant with sufficient program materials to conduct verification, due diligence and tracking system review and recommendations.

Although the number of participating facilities doubled from EPY4 to EPY5 (7 to 14), the number is significantly below anticipated participation. In EPY4 and EPY5, the program was led by an interim program manager on behalf of the IC, and the program transitioned to a dedicated program manager in EPY6. Using the ComEd logo in Dent on Energy's program marketing materials and increasing the follow up for participating facilities are program enhancements likely to improve the overall program performance.

1. Introduction

1.1 **Program Description**

The Dent on Energy Program targets small to mid-size office buildings, churches and retail stores (100 kW– 400 kW) as well as local Heating Ventilation and Air Conditioning (HVAC) contractors and Building Automation System (BAS) contractors. The energy savings target for EPY5 was 10,000,000 kWh. For the contractors, the Commercial and Retail IP Thermostat Program provides marketing and technical training, devices (kits) and monitoring. RLD administers incentives to the contractors for installing IP thermostat kits. An incentive of \$0.04/kWh with savings up to \$500 is offered for participation in the program. For PY5, the Implementation Contractor, RLD Resources hired one specific contractor (HVAC Direct) to perform the installations due to insufficient interest from HVAC and BAS contractors.

The Dent on Energy Program offers low-cost automation with monitoring and proactive control of HVAC systems. The benefits for the building owners (as well as property managers or tenants) include cost-savings in energy and more scientific (data-driven) HVAC maintenance. The program provided classroom and on-line training, outreach programs and technical support, including marketing support to help business partners reach new customers and build on existing relationships with clients through innovative, value-added services. The program also identifies inefficient buildings that can benefit most from the program.

1.2 Evaluation Objectives

The Evaluation Team identified the following key researchable questions for EPY5:

1.2.1 Impact Questions

- 1. What is the estimated free ridership for this program?
- 2. What is the estimated spillover from this program?

1.2.2 Process Questions

- 1. How did the participants learn about the program?
- 2. Are the participants satisfied with the program?
- 3. What are the perceived strengths of the program from the participants?
- 4. What are the suggested improvements to the program from the participants?

2. Evaluation Approach

Since the participation continued to be low in the second year of the program, coupled with the IC not providing viable ex ante savings calculations, Navigant focused on estimating free ridership, spillover and analyzing results from the participant phone interviews.

2.1 Primary Data Collection

2.1.1 Overview of Data Collection Activities

The core data collection activities included conducting telephone surveys with five participants to support a NTG estimate and interviewing the program manager and the implementation contractor's program manager. The full set of data collection activities is shown in the following table.

N	What	Who	Target Completes	Completes Achieved	When	Comments	
			Impact Ass	sessment			
1	Telephone Survey	Participants	14	5	August – September 2013	Data collection supporting NTG and process analysis in the same instrument.	
Process Assessment							
2	In Depth Interviews	Utility Program Manager and Interim Program Manager at Implementation Contractor	2	2	January – June 2013		

Table 2-1. Core Data Collection Activities

2.1.2 Verified Savings Parameters

Navigant reviewed an Excel spread sheet² containing the usage data for 14 participating facilities, and cooling degree days for 2012, 2013 and a 30-year average. Navigant also reviewed the calculations in the spreadsheet using the normalized difference in usage from cooling months in 2012 verses corresponding cooling months in 2013 to calculate annual energy savings in participating facilities. *Navigant determined that the ex ante gross savings calculations did not use a viable approach, therefore Navigant did not calculate ex post gross and net savings estimates for EPY5.*

² Excel spreadsheet sent via secure server by Kelly Shelton, Shelton Solutions,

[&]quot;PY5_Savings_to_Navigant_revised.xls," September 6, 2013.

2.1.3 Process Evaluation

To gain an understanding of the marketing efforts as well as the process for interacting with the participants and providing the installations and education about the IP thermostats, Navigant interviewed ComEd's Program Manager as well as the Interim Implementation Contractor Program Manager. In addition, Navigant conducted phone interviews with five of the participants in the program.

2.1.4 Program Volumetric Findings

Fourteen facilities received IP Thermostats through the Dent on Energy Program in EPY5, which was double the seven installations performed in EPY4. In EPY5, the facilities included: five restaurants, four churches, three truck maintenance garages, one YMCA, and one additional commercial facility.

Detail	Dent on Energy Program
Participants	14
Total Measures	14
Installed Projects	14

Table 2-2. EPY5 Volumetric Findings Detail

Source: EM&V analysis

3. Net Impact Evaluation

Free-ridership was explored via participant surveys. Navigant calculated free-ridership for each interview and then savings-weighted net-of-free-ridership for the program. All five interviewed participants felt that they would not have installed the IP Thermostat without the Dent on Energy Program and had not researched IP Thermostats before they heard about the program; therefore, Navigant determined the free ridership to be zero.

All five interviewed participants reported that they did not take any action or install any measures to improve the energy efficiency of their facility beyond the thermostats; therefore, Navigant calculated the spillover as zero.

4. Process Evaluation

4.1 Marketing and Outreach:

According to the Interim IC Program Manager, "the Program struggles with participation, in part, because we cannot use the ComEd identity. This causes skepticism in a marketplace where so many electric suppliers are approaching the target market to try to switch their supply. Businesses are nervous when we ask for their account number. Businesses are concerned that we is trying to "slam" them (e.g., switch the user without proper permission). Additionally, there is the all too common, "what's the catch?" response. The Smart Ideas brand already has a place in the market and using it would help people see this program as a safe/reputable program. If people knew it was another rate-payer-funded program, they would likely be more eager to participate. We understand why we cannot use the brand, but it sure would help if we could."³

Navigant reviewed the marketing and outreach materials (examples are in Section 6.2). Navigant also conducted telephone interviews with the interim IC program manager in January and April of 2013⁴. According to the interim IC program manager, the President of the IC, Richard Dent, participated in a media "blitz" in October and November of 2012 to help increase participation:

[Richard Dent and Kelly Shelton] did a parade of meetings with aldermen to develop ways to share information [about the Dent on Energy program with ComEd customers]. [Richard Dent and Kelly Shelton] met with suburban mayors. [Kelly Shelton] developed a one-page fact sheet and distributed it at meetings. [We] worked with chambers of commerce. [We did an] e-mail blast to organizations with businesses for members. [We started working with the] Better Business Bureau to start a lengthy process to work with members of the BBB with a stamp of approval. [We are working with the] Illinois Restaurant Association.

The majority (90 percent) of the 40 telephone inquiries were residential, despite the emphasis that Dent on Energy was a commercial program. *"Even though Richard[Dent] emphasized that the program was for businesses – the majority of the interest was from ineligible customers,"* according to the interim IC program manager.

At the same time, ComEd customers were also exposed to television advertisements for alternative suppliers to ComEd trying to attract more customers, which led to "market confusion." The interim IC program manager stated "The biggest hurdle is skepticism – [ComEd customers] are suspicious that [the Dent on Energy program is] trying to change suppliers. People have a lot of questions, and misunderstanding. There is so much skepticism and we can't use the ComEd name. In no mention of the program, can we use ComEd or any SmartIdeas logo. Utility rebates are understood and they are popular. No one is worried that something will go wrong with a utility rebate or incentive. When you are not a utility and you talk about a free or discounted item people ask "What's the catch? Many of the goals/numbers were based [on the assumption] that this would be a utility program – with a similar uptake and yet we can't market this as a utility program. Non-utility programs should have been researched and their uptake should have been used."

³ E-mail from Kelly Shelton, Shelton Solutions, January 10, 2013.

⁴ Telephone interviews with Kelly Shelton, Shelton Solutions, January 9, 2013 and April 12, 2013.

Navigant concurs with the statements of the interim IC program manager, that the lack of recognizable ComEd branding for the Dent on Energy program hampered the marketing efforts. Moreover, the concurrent marketing by ComEd competitors attempting to attract new customers was unfortunate timing for the Dent on Energy program and led to market confusion and customer skepticism.

4.2 Participant Telephone Interviews

Navigant contacted participants for the fourteen facilities (one participant was the decision-maker for three facilities) by both telephone and e-mail. Navigant completed telephone interviews with five participants in August and September 2013. The survey instrument is in Section 6.3. The following sections focus on several aspects of the program and participant feedback.

4.2.1 Program Implementation

According to several participants, following the installation of the IP thermostat, they did not receive information as to whom to call if they had questions about the thermostat's installation and/or operation, which led to one facility manager removing the IP thermostat. The following quotes illustrate these points:

"We installed [the Nest Thermostat] to help conserve energy, and actually I took it out. It wasn't hooked up for a 2-stage compressor, I took it out - I didn't have time to play phone tag [with the technician who installed it]. It was hooked up for a while, for four months, and [the weather] got hotter and hotter out and the other compressor wasn't coming on. I couldn't have it. All my [customers] are happier since I took [the Nest] out and put back in the old thermostat because they aren't sweating." Dent on Energy Program Participant

"[There was] no follow-up after the installation, I had to read the manual myself, [and] no one called and asked if we are using all the bells and whistles [of the Nest thermostat]. I didn't see any information on who I could call for more information." Dent on Energy Program Participant

"[My suggestion on ways to improve the program would be to have] periodic follow up by e-mail – honestly until I got it in my home [the Nest thermostat] was just existing here [at the restaurant]. [The Nest thermostat] was hard to figure out, after I started using one in my home, then I could drill down and ask question. [I would have liked a phone call or e-mail from the program] 6 weeks after the installation [to answer my questions]." Dent on Energy Program Participant

"Something came up with the [IP thermostat] – it needed a battery and I didn't know who to ask about it. I had to hunt down a phone number so it would have been better if I had some information on who to call for follow-up." Dent on Energy Program Participant

Currently, each facility is allowed one IP thermostat installation regardless of the number of HVAC systems or zones. According to the interim IC program manager, "The \$500 cap is not a problem right now, but it could possibly become an issue when participants are identified who [have greater opportunities for] more savings and need more than one thermostat at one location. It seems that if a higher incentive would yield higher savings, [the higher incentive] should be considered. I fully understand that the cap stands because it was written into the proposal for budget purposes, but it could potentially be a barrier to increased savings down the road."

During the phone surveys, four of the five participants suggested adding the opportunity to have more than one IP thermostat installed. One participant stated: "[My recommendation to improve the program would be to] have a Nest for each HVAC unit – [that] would be very beneficial – we have three large HVAC units at our restaurant and it would be beneficial to have each of them connected to a Nest thermostat to maximize the energy savings." Dent on Energy Program Participant

4.2.2 Participant Awareness of the Program

Two participants learned of the program through a phone call from the interim IC program manager and three learned of the program through "friend/colleague/word of mouth." One Dent on Energy Program Participant stated: "Our corporate office chose to pilot this in our restaurant because we have higher volume than some of the other restaurants."

As shown in Figure 4-1 below, when asked "what are the best ways of reaching companies like yours to provide information about energy efficiency opportunities?" the response with the greatest frequency was "e-mail" although one participant commented "for a church it's word of mouth, [since] I don't look at the other materials in the bill. If [the interim IC program manager] had just sent us something in the mail, I don't think I would have looked at it." Another participant who worked at a restaurant reported that hearing about the program through the "utility account executive" was important "because we get so much stuff in the mail. We are a mammoth [restaurant] chain. At [the General Manager of the restaurant] level, we have no influence on these kinds of decisions, [since] we do not have time to entertain [the various technology options] – the decision is made at corporate level."



Figure 4-1. Participant Preferences for Program Communication

4.2.3 Participant Motivation

Participants offered a variety of reasons for participating in the program including – the reasons are illustrated through the following quotes:

"We decided we were looking for ways to cut down our budget – energy is a big part of our budget and we thought this thermostat would help maintain our energy usage. The IP thermostat worked well on the air conditioning in our sanctuary. We had a cool summer this year so we might not see the benefits until next summer. We have two separate air conditioning systems in the sanctuary and one wasn't working this summer. The IP thermostat was on the working air conditioning unit and that air conditioning unit held up well this summer." Dent on Energy Program Participant

We are a higher volume restaurant and [corporate wanted to] see how it would work at both a higher volume and a lower volume restaurant. Dent on Energy Program Participant

"The old [thermostat] wasn't working for us, the batteries ran out fast, and we had just had gotten a new [heating] system and [the HVAC contractors] didn't give us a new thermostat." Dent on Energy Program Participant

"I like to do special projects in general. [My boss] knows I enjoy new technology". Dent on Energy Program Participant

4.2.4 Participant Satisfaction

Satisfaction varied widely between participants. The figures below show the level of satisfaction with several aspects of the Dent on Energy program by participant. Participants were asked to rate their satisfaction level with "0" as "very dissatisfied" and "10" as "very satisfied." In this section, the individual participants' ratings appear in the same position in each figure, participants one – five, to consistently describe the individual participants' satisfaction with different aspects of the program.

4.2.4.1 Participant Satisfaction with the IP Thermostat

As shown in Figure 4-2 below, most participants were satisfied with the IP (Nest Thermostat); however, one facility manager rated their satisfaction with the thermostat as "very dissatisfied" and reported having to uninstall it since it was incompatible with their facility's air conditioning equipment.



Figure 4-2. Participant Satisfaction Ratings for the Nest Thermostat

4.2.4.2 Participant Satisfaction with the Technician who Installed IP Thermostat

Satisfaction with the technician who installed the IP (Nest) thermostat also varied widely (from a rating of "1" to a rating of "ten") and one participant reported that they "didn't know." One participant rated their satisfaction as "10" and reported "[*The technician*] *did a real good job, explained and demonstrated the use of the Nest thermostat.*"



Figure 4-3. Participant Satisfaction Ratings for the Installation Technician

4.2.4.3 Participant Satisfaction with the Interim Implementation Contractor Program Manager

Three participants reported a high level of satisfaction with the implementation contractor's interim program manager and two participants reported "not applicable" as shown in Figure 4-4.



Figure 4-4. Participant Satisfaction Ratings for the Interim Program Manager

None of the surveyed participants reported any interaction with the Implementation Contractor (RLD) and reported "not applicable" when asked about satisfaction.

4.2.4.4 Participant Satisfaction with Dent on Energy Program

There was also a high degree of variability in the participants' responses when asked about their level of satisfaction with the Dent on Energy program overall, shown Figure 4-5. One participant who rated the program "5" reported "[there was] no feedback [from the program] after the installation." Another participant rated the program a "1" because "I had to take out the thermostat."



Figure 4-5. Participant Satisfaction Ratings for the Dent on Energy Program

4.2.4.5 Participant Satisfaction with ComEd

The participants reported a mostly high degree of satisfaction with ComEd as shown in Figure 4-6. One participant gave ComEd a rating of "10" because "[ComEd] gave [the IP thermostat] to us free, it lowered our energy bill, the way that it is programmed – very easy to adjust – on the days it was really hot, we just turned the dial, and it sets [the new temperature] automatically." Another gave ComEd a rating of "10" for "all the incentives."



Figure 4-6. Participant Satisfaction Ratings with ComEd

4.2.5 Participants' Feedback on Benefits of Program

When asked "What do you see as the main strengths of the Dent of Energy Program?" and participants could select up to three, the two most reported strengths of the program were "Helps reduce the company's energy bills/save energy" and "Improves the performance of equipment" as shown in Figure 4-7.



4.2.5.6 Participant willingness to recommend program and suggestions for program improvement

Four of the five surveyed participants reported that "based on their experience with the program, they would recommend the Dent on Energy program to their peers inside or outside of their organization. In addition, as shown in Figure 4-8, when asked the question, "Do you have any

suggestions for ways to improve the program, and if so, what are they?" and the participants were allowed up to four responses, the two suggestions with the greatest frequency were "Program administrator provides more information" and "Opportunity to have more than one IP Thermostat Installed".



Figure 4-8. Participant Feedback on Program Improvements

4.3 Review Process

Overall, it was difficult to obtain program information over the course of EPY5 from the interim IC program manager, either by phone or e-mail. In addition, the ex ante gross savings estimates were not calculated according to industry best practices and, as such, were not viable. Also, Navigant did not receive sufficient program materials to conduct a verification, due diligence and tracking system review in EPY5, and Navigant plans to conduct this review in EPY6.

5. Conclusions and Recommendations

This section summarizes the key impact and process findings and recommendations.

Although the number of participating facilities doubled from EPY4 to EPY5 (from 7 to 14), the number is significantly below anticipated participation. In EPY4 and EPY5, the program was led by an interim program manager on behalf of the IC, and the program is transitioning to a dedicated program manager in EPY6. Using the ComEd logo in Dent on Energy's program marketing materials and increasing the follow up for participating facilities are program enhancements likely to improve the overall program performance.

Program Savings Goals Attainment

- <u>Finding 1.</u> According to the interim IC program manager, at the same time that the Dent on Energy program was approaching candidate participants and participant groups, other groups were also in the ComEd service territory promoting alternatives to ComEd electric service. This led to confusion in the marketplace, and since in EPY5 Dent on Energy was not permitted to use the ComEd logo in their marketing materials, ComEd customers were cautious of any program that was not specifically labeled as a ComEd program.
- <u>Recommendation 1.</u> Begin using the ComEd logo in all Dent on Energy marketing materials and Web site on a consistent basis to eliminate all market confusion as to which company is sponsoring the program.
- <u>Finding 2.</u> According to staff at several participating facilities, facility staff did not receive any follow-up services after the installation which led to one facility removing the IP thermostat and re-installing the original thermostat.
- <u>Recommendation 2</u>. Provide contact information to facility managers for follow-up questions as well as conduct follow-up phone calls post-installation to ensure that IP Thermostat continues to operate in a manner that provides both energy efficiency and comfort.
- <u>Finding 3.</u> According to the interim IC program manager, some facilities would have the opportunity to achieve significantly greater savings if they had more than one-IP thermostat installed.
- <u>Recommendation 3</u>. Consider developing an approach that would allow for more than one IP thermostat installed per facility based on energy savings potential of additional IP thermostat(s).

Review Process.

<u>Finding 4</u>. In EPY5, the IC did not provide viable ex ante gross savings estimates. <u>Recommendation 4.</u> In EPY6, establish the approach to calculating ex ante gross savings early in the program year.

- <u>Finding 5</u>. In EPY5, the interim IC program manager did not provide sufficient program materials for Navigant to conduct verification, due diligence and tracking system review.
- <u>Recommendation 5.</u> In EPY6, provide Navigant with sufficient program materials to conduct verification, due diligence and tracking system review and recommendations.

Net-to-Gross Rate

Program participants did not report any activities that would have contributed to free ridership or spillover from the Dent on Energy program.

- <u>Finding 6</u> As a result of participant interviews, Navigant estimated free ridership as 0 and spillover as 0, resulting in a NTG estimate of 1.
- <u>Recommendation 6.</u> Provide Dent on Energy program participants with information on other Commercial and Retail ComEd programs such as Smart Ideas for your Business® to take advantage of the screening process performed to become a participant in the Dent on Energy program, these facilities would likely benefit from other ComEd energy efficiency programs as well.

6. Appendix

6.1 Glossary

High Level Concepts

Program Year

- EPY1, EPY2, etc. Electric Program Year where EPY1 is June 1, 2008 through May 31, 2009, EPY2 is June 1, 2009 through May 31, 2010, etc.
- GPY1, GPY2, etc. Gas Program Year where GPY1 is June 1, 2011 through May 31, 2012, GPY2 is June 1, 2012 through May 31, 2013.

There are two main tracks for reporting impact evaluation results, called Verified Savings and Impact Evaluation Research Findings.

Verified Savings composed of

- Verified Gross Energy Savings
- Verified Gross Demand Savings
- Verified Net Energy Savings
- Verified Net Demand Savings

These are savings using deemed savings parameters when available and after evaluation adjustments to those parameters that are subject to retrospective adjustment for the purposes of measuring savings that will be compared to the utility's goals. Parameters that are subject to retrospective adjustment will vary by program but typically will include the quantity of measures installed. In EPY5/GPY2 the Illinois TRM was in effect and was the source of most deemed parameters. Some of ComEd's deemed parameters were defined in its filing with the ICC but the TRM takes precedence when parameters were in both documents.

Application: When a program has deemed parameters then the Verified Savings are to be placed in the body of the report. When it does not (e.g., Business Custom, Retrocommissioning), the evaluated impact results will be the Impact Evaluation Research Findings.

Impact Evaluation Research Findings composed of

- Research Findings Gross Energy Savings
- Research Findings Gross Demand Savings
- Research Findings Net Energy Savings
- Research Findings Net Demand Savings

These are savings reflecting evaluation adjustments to any of the savings parameters (when supported by research) regardless of whether the parameter is deemed for the verified savings analysis. Parameters that are adjusted will vary by program and depend on the specifics of the research that was performed during the evaluation effort.

Application: When a program has deemed parameters then the Impact Evaluation Research Findings are to be placed in an appendix. That Appendix (or group of appendices) should be labeled Impact Evaluation Research Findings and designated as "ER" for short. When a program does not have deemed parameters (e.g., Business Custom, Retrocommissioning), the Research Findings are to be in the body of the report as the only impact findings. (However, impact findings may be summarized in the body of the report and more detailed findings put in an appendix to make the body of the report more concise.)

Program-Level Savings Estimates Terms

N	Term Category	Term to Be Used in Reports‡	Application†	Definition	Otherwise Known As (terms formerly used for this concept)§
1	Gross Savings	Ex-ante gross savings	Verification and Research	Savings as recorded by the program tracking system, unadjusted by realization rates, free ridership, or spillover.	Tracking system gross
2	Gross Savings	Verified gross savings	Verification	Gross program savings after applying adjustments based on evaluation findings for only those items subject to verification review for the Verification Savings analysis	Ex post gross, Evaluation adjusted gross
3	Gross Savings	Verified gross realization rate	Verification	Verified gross / tracking system gross	Realization rate
4	Gross Savings	Research Findings gross savings	Research	Gross program savings after applying adjustments based on all evaluation findings	Evaluation- adjusted ex post gross savings
5	Gross Savings	Research Findings gross realization rate	Research	Research findings gross / ex-ante gross	Realization rate
6	Gross Savings	Evaluation- Adjusted gross savings	Non-Deemed	Gross program savings after applying adjustments based on all evaluation findings	Evaluation- adjusted ex post gross savings
7	Gross Savings	Gross realization rate	Non-Deemed	Evaluation-Adjusted gross / ex- ante gross	Realization rate
1	Net Savings	Net-to-Gross Ratio (NTGR)	Verification and Research	1 – Free Ridership + Spillover	NTG, Attribution
2	Net Savings	Verified net savings	Verification	Verified gross savings times NTGR	Ex post net
3	Net Savings	Research Findings net savings	Research	Research findings gross savings times research NTGR	Ex post net
4	Net Savings	Evaluation Net Savings	Non-Deemed	Evaluation-Adjusted gross savings times NTGR	Ex post net
5	Net Savings	Ex-ante net savings	Verification and Research	Savings as recorded by the program tracking system, after adjusting for realization rates, free ridership, or spillover and any other factors the program may choose to use.	Program-reported net savings

‡ "Energy" and "Demand" may be inserted in the phrase to differentiate between energy (kWh, Therms) and demand (kW) savings.

+ Verification = Verified Savings; **Research =** Impact Evaluation Research Findings; **Non-Deemed =** impact findings for programs without deemed parameters. We anticipate that any one report will either have the first two terms or the third term, but never all three.

§ Terms in this column are not mutually exclusive and thus can cause confusion. As a result, they should not be used in the reports (unless they appear in the "Terms to be Used in Reports" column).

Individual Values and Subscript Nomenclature

The calculations that compose the larger categories defined above are typically composed of individual parameter values and savings calculation results. Definitions for use in those components, particularly within tables, are as follows:

Deemed Value – a value that has been assumed to be representative of the average condition of an input parameter and documented in the Illinois TRM or ComEd's approved deemed values. Values that are based upon a deemed measure shall use the superscript "D" (e.g., delta watts^D, HOU-Residential^D).

Non-Deemed Value – a value that has not been assumed to be representative of the average condition of an input parameter and has not been documented in the Illinois TRM or ComEd's approved deemed values. Values that are based upon a non-deemed, researched measure or value shall use the superscript "E" for "evaluated" (e.g., delta watts^E, HOU-Residential^E).

Default Value – when an input to a prescriptive saving algorithm may take on a range of values, an average value may be provided as well. This value is considered the default input to the algorithm, and should be used when the other alternatives listed for the measure are not applicable. This is designated with the superscript "DV" as in X^{DV} (meaning "Default Value").

Adjusted Value – when a deemed value is available and the utility uses some other value and the evaluation subsequently adjusts this value. This is designated with the superscript "AV" as in X^{AV}

Glossary Incorporated From the TRM

Below is the full Glossary section from the TRM Policy Document as of October 31, 2012⁵.

Evaluation: Evaluation is an applied inquiry process for collecting and synthesizing evidence that culminates in conclusions about the state of affairs, accomplishments, value, merit, worth, significance, or quality of a program, product, person, policy, proposal, or plan. Impact evaluation in the energy efficiency arena is an investigation process to determine energy or demand impacts achieved through the program activities, encompassing, but not limited to: *savings verification, measure level research,* and *program level research.* Additionally, evaluation may occur outside of the bounds of this TRM structure to assess the design and implementation of the program.

Synonym: Evaluation, Measurement and Verification (EM&V)

Measure Level Research: An evaluation process that takes a deeper look into measure level savings achieved through program activities driven by the goal of providing Illinois-specific research to facilitate updating measure specific TRM input values or algorithms. The focus of this process will primarily be driven by measures with high savings within Program Administrator portfolios, measures with high uncertainty in TRM input values or algorithms (typically informed by previous savings verification activities or program level research), or measures where the TRM is lacking Illinois-specific, current or relevant data.

Program Level Research: An evaluation process that takes an alternate look into achieved program level savings across multiple measures. This type of research may or may not be

⁵ IL-TRM_Policy_Document_10-31-12_Final.docx

specific enough to inform future TRM updates because it is done at the program level rather than measure level. An example of such research would be a program billing analysis.

Savings Verification: An evaluation process that independently verifies program savings achieved through prescriptive measures. This process verifies that the TRM was applied correctly and consistently by the program being investigated, that the measure level inputs to the algorithm were correct, and that the quantity of measures claimed through the program are correct and in place and operating. The results of savings verification may be expressed as a program savings realization rate (verified ex post savings / ex ante savings). Savings verification may also result in recommendations for further evaluation research and/or field (metering) studies to increase the accuracy of the TRM savings estimate going forward.

Measure Type: Measures are categorized into two subcategories: custom and prescriptive.

Custom: Custom measures are not covered by the TRM and a Program Administrator's savings estimates are subject to retrospective evaluation risk (retroactive adjustments to savings based on evaluation findings). Custom measures refer to undefined measures that are site specific and not offered through energy efficiency programs in a prescriptive way with standardized rebates. Custom measures are often processed through a Program Administrator's business custom energy efficiency program. Because any efficiency technology can apply, savings calculations are generally dependent on site-specific conditions.

Prescriptive: The TRM is intended to define all prescriptive measures. Prescriptive measures refer to measures offered through a standard offering within programs. The TRM establishes energy savings algorithm and inputs that are defined within the TRM and may not be changed by the Program Administrator, except as indicated within the TRM. Two main subcategories of prescriptive measures included in the TRM:

Fully Deemed: Measures whose savings are expressed on a per unit basis in the TRM and are not subject to change or choice by the Program Administrator.

Partially Deemed: Measures whose energy savings algorithms are deemed in the TRM, with input values that may be selected to some degree by the Program Administrator, typically based on a customer-specific input.

In addition, a third category is allowed as a deviation from the prescriptive TRM in certain circumstances, as indicated in Section 3.2:

Customized basis: Measures where a prescriptive algorithm exists in the TRM but a Program Administrator chooses to use a customized basis in lieu of the partially or fully deemed inputs. These measures reflect more customized, site-specific calculations (e.g., through a simulation model) to estimate savings, consistent with Section 3.2.

- 6.2 Marketing Materials
- 6.2.1 Dent on Energy Press Release October 2012



FOR IMMEDIATE RELEASE

October 29, 2012 Contact: Kelly Shelton Phone: 312-782-0512 E-mail: kshelton@dentonenergy.net

SMART LEARNING THERMOSTATS PROVIDED BY THE DENT ON ENERGY PROGRAM

a program of Richard Dent's RLD Resources, LLC

Chicago, Illinois - Energy conservation is everyone's responsibility. Our future prosperity is dependent on how we conserve and maximize our natural resources. Energy awareness is a stepping stone toward energy conservation. The Dent on Energy Program is increasing energy awareness by providing 100 FREE Smart Learning Thermostats. These units are available to the first 100 qualified Chicagoland mid-sized business customers who sign up for the program at www.dentonenergy.net or by calling 312-782-0512. For many businesses, thermostats control half of the energy use. "We know that the old, traditional thermostats don't help you save energy, but many people don't realize that over 80% of the programmable thermostats out there are wasting energy, too. This is because they are not programmed properly - and some are not programmed at all. The Dent on Energy Program is giving power to the everyday consumer—to make smarter choices and save money. Giving away free Smart Learning Thermostats is us making the first move. We expect that conscientious business owners will jump on board," said Richard Dent, Chicago Bears legend and President of RLD Resources, LLC.

The Smart Learning Thermostat solves this problem. After you adjust the settings for a couple days - making it cooler at times and warmer at times, this thermostat learns how you like your space and starts to self-adjust and activate features to save energy. These units have been known to cut energy use by 20%. You can control the space and track your savings from your smart devices or computer. The Dent on Energy Program is providing 100 of these Smart Learning Thermostats at absolutely NO COST to qualified applicants. The program will monitor usage and provide savings reports as well as individualized savings suggestions. To apply for the program you simply must go to www.dentonenergy.net or call 312-782-0512 to provide your contact and facility information.

RLD Resources, LLC is a wholly –owned minority certified company providing comprehensive energy consulting services.

For more information about the Dent on Energy Program, please visit www.dentonenergy.net or call 312-782-0512.

6.2.2 Email to ComEd Trade Allies – October 2012

Hi Patricia:

On yesterday's call, you asked me to forward copies of e-mails we've used to promote the program. This went to 20 ComEd Trade Allies listed under the field of "HVAC".

Kelly.

-----Original Message-----From: <u>kshelton@dentonenergy.net</u> [<u>mailto:kshelton@dentonenergy.net</u>] Sent: Tuesday, October 30, 2012 12:09 PM To: <u>jdomenz@northtownmechanical.com</u> Subject: Program for ComEd Trade Allies Hi John:

My name is Kelly Shelton and I am working with RLD Resources,LLC, a company owned and operated by Chicago Bears Legend, Richard Dent. We are working on a program called the Dent on Energy Program. Richard is providing FREE Nest Thermostats to commercial customers in ComEd territory who spend around \$25,000 annually on electricity.

The purpose of the program is to gather data to prove the impact of the smart thermostats. We are reaching out to ComEd Trade Allies to share information about the program. Sign up for the program is REALLY easy on the website we've created for the program: <u>www.dentonenergy.net</u>.

Once an eligible customer signs up, we provide the thermostat and then track their usage to calculate the savings. We thought you might benefit from being able to offer this FREE perk to your customers. We could work something out where we would provide the thermostat to YOU so you can deliver & install it.

Please let me know if you would like more information about the program.

Kelly Shelton 773-209-6868 (cell)



6.2.3 Dent on Energy Fact Sheet

Degitenergy

CUTTING EDGE TECHNOLOGY promotes energy savings with INTERNET MANAGED THERMOSTATS



Smart thermostats save you money!

- Smart thermostats automatically cycle into energy saver mode when your space is not occupied!
- Smart thermostats make adjustments to temperature settings to use less energy!

Smart thermostats save you time!

- Smart thermostats program themselves, so you don't have to!
- Smart thermostats allow you to control your temperature settings from your computer or your smart phone!

In addition to the smart thermostat, our experienced Energy Professionals will provide energy savings suggestions and help you track your savings! Visit

FREE to 1s

customers!

www.dentonenergy.net

to learn about financial incentives for the purchase and installation of smart thermostats

sign up is quick and easy!!

PROGRAM CRITERIA:

Commercial Accounts Annual electric bill of \$10,000-\$25,000 Currently using a traditional thermostat Currently using wireless internet

This Program is brought to you by RLD Resources, LLC



Richard Dent President/CEO, RLD Resources, LLC Chicago Bears Legend

for more information phone: 312-782-0512 e-mail: info@dentonenergy.net web: www.dentonenergy.net

Visit www.dentonenergy.net to sign up for the Dent on Energy Program, TODAY!!

6.3 Data Collection Instrument – Participant Survey

ComEd C&I IP Thermostat Program PY5 Dent on Energy Participant Survey

August 2, 2013

» Introduction

Hello, this is ______ from Navigant calling on behalf of ComEd regarding your company's participation in the Dent on Energy IP Thermostat Program. May I please speak with <CONTACTNAME>?

Our records show that <COMPANY> participated in the ComEd Dent on Energy IP Thermostat Program in which a Nest thermostat was installed at your business, and we are calling to conduct a follow-up study about your company's participation in this program. I was told you're the person most knowledgeable about this project. Is this correct? [IF NOT, ASK TO BE TRANSFERRED TO MOST KNOWLEDGABLE PERSON OR RECORD NAME & NUMBER.]

This survey will take about 15 minutes. Is now a good time? [If no, schedule call-back]

(IF NEEDED: Is it possible that someone else handled the Nest thermostat installation project?)

1.

I would like to ask you a few questions about your company's decision to have the IP Thermostat installed at your facility.

A1 First, according to our records, you participated in the Dent on Energy Program run by ComEd between June 2012 and May 2013. [IF NEEDED - READ: the Dent on Energy Program, sponsored by ComEd, installed an IP Thermostat (Nest) to increase energy efficiency in commercial/industrial facilities.)] Do you recall participating in the Dent on Energy Program?

- 1 Yes
- 2 No [Thank & terminate]
- 88 (Don't know) [Thank & terminate]
- 99 (Refused) [Thank & terminate]

[ASK IF A1=1]

A2 Next, I'd like to confirm the following information regarding your participation in the Dent on Energy Program. I understand that you had a Nest thermostat installed on or about &DATE. Does that sound right?

- 1 Yes
- 2 No Thank & terminate
- 88 (Don't know) Thank & terminate
- 99 (Refused) Thank & terminate

Project Background

- I1. How did you first hear about the Dent on Energy Program?
 - 1. (Shelton Solutions representative)
 - 2. (RLD representative)
 - 3. (ComEd Account representative)
 - 4. (Dent on Energy program website)
 - 7. (Friend/colleague/word of mouth)
 - 8. (Contractor)
 - oo. (Other, specify)
 - 98. (Don't know)
 - 99. (Refused)

Marketing and Outreach

- MK1. Do you recall seeing or receiving any marketing materials or other information for the Dent on Energy?
 - 1. Yes, ComEd materials
 - 2. Yes, RLD materials
 - 3. No
 - 8. (Don't know)
 - 9 (Refused)
- MK2. What are the best ways of reaching companies like yours to provide information about energy efficiency opportunities? [MULTIPLE RESPONSE, UP TO 3] 1. (Bill inserts)
 - 2. (Flyers/ads/mailings)
 - 3. (E-mail)
 - 4. (Telephone)
 - 5. (Key Account Executive)
 - 6. (Direct Mail)
 - oo. (Other, specify)
 - 98. (Don't know)
 - 99. (Refused)

B1. Before I ask you specific questions about your decision, please tell me in your own words why you decided to have the Nest thermostat installed at this facility? Were there any other reasons?

- oo. (RECORD VERBATIM)
- 98. (Don't know)
- 99. (Refused)
- B2A. Before learning about the ComEd Dent on Energy Program, had you ever had an IP Thermostat installed at this facility or any of your other facilities in Illinois?
 - 1. Yes, at this facility
 - 2. Yes, at another facility
 - 3. Yes, at both this and another facility
 - 4. No
 - 8. (Don't know)

NAVIGANT

9. (Refused)

[SKIP TO B2BB IF B2A=4. SKIP to B5 if B2A= 98, 99]

- B2B. Did you receive an incentive or another form of utility or government financial support for installing this previous IP Thermostat?
 - 1. Yes
 - 2. No
 - 8. (Don't know)
 - 9. (Refused)

NET TO GROSS BATTERY

C1. At the time that you first heard about the Dent on Energy program, had you already considered purchasing an IP Thermostat for your facility?

- 1. (YES) [CONTINUE TO C2]
- 2. (NO) [SKIP TO PARTICIPANT SPILLOVER SECTION]
- 8. (DON'T KNOW) [CONTINUE TO C2]
- 9. (REFUSED) [CONTINUE TO C2]

C2. Had you already began researching or collecting information about IP Thermostats to aid in your purchase decision?

- 1. (YES) [CONTINUE TO C3]
- 2. (NO) **[SKIP TO C4]**
- 8. (DON'T KNOW) [SKIP TO C4]
- 9. (REFUSED) [SKIP TO C4]

C3. Had you already selected which IP Thermostat you were planning to purchase?

- 1. (YES)
- 2. (NO)
- 8. (DON'T KNOW)
- 9. (REFUSED)

C4. Just to be sure I understand, did you have any specific plans to purchase and install the same or a similar IP Thermostat in your facility before learning about the program?

- 1. YES
- 2. NO
- 8. (DON'T KNOW)
- 9. (REFUSED)

C5. Why hadn't you installed the IP Thermostat already? (Open ended response)

- 1. RECORD RESPONSE VERBATIM
- 8. (DON'T KNOW)
- 9. (REFUSED)

C6. Did the program influence you to have the IP Thermostat installed **earlier** than you otherwise would have?

- 1. YES [CONTINUE TO C7]
- 2. NO **[SKIP TO C8]**
- 8. (DON'T KNOW) [SKIP TO C8]
- 9. (REFUSED) [SKIP TO C8]

C7. How much later would you have installed the IP Thermostat if you hadn't participated in the program?

- 1. Within six months
- 2. More than six months, but less than a year later
- 3. More than a year, but less than two years later
- 4. More than two years later
- 5. [DNR but code if participant responds "Never"]
- 88. (Don't know)
- 99. (Refused)

[SKIP TO C8 AFTER RECORDING RESPONSE]

C8. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have purchased and installed the same or similar IP Thermostat in your facility if you had not received it through the program? **[0-10, DK, REF]**

[IF C8 <3 AND C4 = No/DK/REF, SKIP TO PARTICIPANT SPILLOVER SECTION] [SHOW WMV10 ON SAME SCREEN WITH THE BELOW TEXT]

I'm going to read a statement about the IP Thermostat you received. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with this statement.

C9. There may have been several reasons for my installation of an IP Thermostat, but the program was a key factor in my decision to have the IP Thermostat installed. **[0-10, DK, REF]**

[ASK CC1 IF QUALIFY BASED ON TWO TERMS BELOW. ELSE SKIP TO PARTICIPANT SPILLOVER SECTION]

Consistency Check & Resolution

[CC1 WILL BE ASKED ONLY FOR THOSE RESPONDENTS WHO HAVE A CLEAR INCONSISTENCY BETWEEN RESPONSES (I.E., ONE OF THE QUESTIONS IS AT ONE END OF THE SPECTRUM FOR FREE RIDERSHIP WHILE THE OTHER QUESTION IS AT THE OTHER SPECTRUM.) THE QUESTION RESPONSES THAT WILL BE USED TO TRIGGER CC1 ARE: • C8 (HOW LIKELY IS IT THAT YOU WOULD HAVE INSTALLED THE SAME ITEM)

• C9 (PROGRAM WAS A KEY FACTOR IN MY DECISION TO INSTALL ITEM)

{IF C8= 8,9,10 AND C9= 8, 9, 10, ASK CC1. INCONSISTENCY1= 'you were likely to install the IP Thermostat without the program but that differs from your response that the program was a key factor in your decision to have the IP Thermostat installed'}

{IF C8= 0,1,2 AND C9= 0, 1, 2, ASK CC1. INCONSISTENCY1=' you were not likely to install the IP Thermostat without the program but that differs from your response that that the program was not a key factor in your decision to have the IP Thermostat installed }]

CC1. Let me make sure I understand you. Earlier, you said **[INCONSISTENCY1]**. Please tell me in your own words what influence, if any, the program had on your decision to install the IP Thermostat at the time you did? **[OPEN END, DK, REF]**

Spillover

- SO1. Since your participation in the Dent on Energy program, have you done any of the following? [1=Yes, 2=No, 8=Don't know, 9=Refused] [Multiple response]
 - a. Installed any additional energy efficient equipment or implemented any activities at this facility that received incentives from ComEd or another utility or government program
 - b. Installed any additional energy efficient equipment or implemented any activities at this facility that did NOT received incentives from ComEd or another utility or government program

[ASK IF SO1a=1, ELSE SKIP TO SO5 if SO1b=1; ELSE SKIP TO PS1]

- SO2. What type of energy efficient equipment did you install or activities that you did that received incentives from ComEd or another organization? Did you install... [1=Yes, 2=No, 8=Don't know, 9=Refused]
 - a. Lighting
 - b. Cooling
 - c. Motors
 - d. Refrigeration
 - e. Compressed Air
 - f. Something else (specify)
- SO3. On a scale of 0 to 10, where 0 means "no influence" and 10 means "greatly influenced," how much influence did your participation in the Dent on Energy Program have on your decision to install additional energy efficiency measures or conduct activities that improved energy efficiency through ComEd or other programs? [SCALE 0-10; 98=Don't know, 99=Refused]

[ASK IF SO3=8,9 or 10; ELSE SKIP TO SO5 if SO1b=1; ELSE SKIP to PS1]

SO4. How did the Dent on Energy Program influence your decision to make these additional changes? [OPEN END; 98=Don't Know; 99=Refused]

[ASK IF SO1b=1, ELSE SKIP TO PS1]

- SO5. What type of energy efficient equipment did you install or activities that you did that DID NOT receive incentives from ComEd or another organization? Did you install... [1=Yes, 2=No, 8=Don't know, 9=Refused]
 - a. Lighting
 - b. Cooling
 - c. Motors
 - d. Refrigeration
 - e. Compressed Air
 - f. Something else (specify)

[SKIP TO PS1 IF ALL SO5a-f=2, 8, 9]

SO6. On a scale of 0 to 10, where 0 means "no influence" and 10 means "greatly influenced," how much influence did your participation in the Dent on Energy Program have on your decision to install additional energy efficiency measures or implement other activities? [SCALE 0-10; 98=Don't know, 99=Refused]

[ASK IF SO6=8,9 or 10; ELSE SKIP TO PS1]

SO7. How did the Dent on Energy Program influence your decision to make these additional changes? [OPEN END; 98=Don't Know; 99=Refused]

Program Satisfaction

- PS1. On a scale of 0 to 10, where 0 is very dissatisfied and 10 is very satisfied, how would you rate your satisfaction with? [SCALE 0-10; 96=not applicable, 98=Don't know, 99=Refused]
 - a. The Nest thermostat
 - b. The technician who installed the Nest thermostat
 - c. Shelton Solutions staff (the program administrator)
 - d. RLD staff (the program implementer)
 - e. The Dent on Energy program overall
 - f. ComEd overall

[ASK IF PS1a - f < 4 or PS1a - f > 7]

PS2. Why did you rate it this way? [OPEN END; 98=DK; 99=REF]

Benefits and Barriers

- B1. What do you see as the main strengths of the Dent of Energy Program? [MULTIPLE RESPONSE, UP TO 3]
 - 1. (Helps reduce the company's energy bills/save energy)
 - 2. (Free equipment)
 - 3. (Improves the performance of equipment)
 - 4. (Trains facility staff on building operations)
 - oo. (Other, specify)
 - 98. (Don't know)
 - 99. (Refused)
- B2. What concerns do you have about the program? [MULTIPLE RESPONSE, UP TO 3]1. (Paperwork too burdensome)
 - **2.** (Incentives/free study not worth the effort or required commitment to implement)
 - 3. (Program is too complicated)
 - 00. (Other, specify)
 - 96. (No drawbacks)
 - 98. (Don't know)
 - 99. (Refused)



Feedback and Recommendations

- R1. Based on your experience, would you recommend the Dent on Energy program to your peers inside or outside of your organization?
 - 1. Yes
 - 2. No
 - 3. (Maybe)
 - 8. (Don't know)
 - 9. (Refused)
- R2. Do you have any suggestions for ways to improve the program, and if so, what are they? [MULTIPLE RESPONSE, UP TO 4]
 - 1. (Greater publicity)
 - 2. (Program administrator provides more information)
 - 3. (Opportunity to have more than one IP Thermostat Installed)
 - 96. (No recommendations)
 - oo. (Other, specify)
 - 98. (Don't know)
 - 99. (Refused)

Firmographics

I only have a few general questions left.

- F1 What is the business type of this facility? (PROBE, IF NECESSARY)
 - 1. (College/university)
 - 2. (Heavy industry)
 - 3. (Hotel/Motel)
 - 4. (K-12 School)
 - 5. (Light industry)
 - 6. (Medical)
 - 7. (Office)
 - 8. (Retail/Service)
 - 9. (Warehouse/Distribution)
 - oo. (Other, specify)
 - 98. (Don't know)
 - 99. (Refused)
- F2 Does your company own or rent this facility?
 - 1 (Own)
 - 2 (Rent)
 - oo (Other, specify)
 - 98 (Don't know)
 - 99 (Refused)
- F3. How old is this facility? (INTERVIEWER: IN YEARS) [NUMERIC OPEN END, 0 TO 150; 998=Don't know, 999=Refused]

- F4. How many employees, full plus part-time, work at this facility? [NUMERIC OPEN END, o TO 2000; 9998=Don't know, 9999=Refused]
- F5. Which of the following best describes your facility? This facility is...
 - 1. my company's only location
 - 2. one of several locations owned by my company
 - 3. the headquarters location of a company with several locations
 - 8. (Don't know)
 - 9. (Refused)
- F6. In comparison to other companies in your industry, would you describe your company as...
 - 1. A small company
 - 2. A medium-sized company
 - 3. A large company
 - 4. (Not applicable)
 - 8. (Don't know)
 - 9. (Refused)

Those are all of the questions I have. Thank you very much for your participation!