

ADVANCING THE ADOPTION OF SMART THERMOSTATS IN NORTHERN ILLINOIS

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COLLABORATIVE EFFORT

Group effort with regular meetings since March to develop ways to advance smart thermostat adoption in Northern Illinois

- Utilities: ComEd, Peoples Gas / North Shore Gas, Nicor Gas
- Stakeholders: ELPC, CUB
- Additional Members: CLEAResult, ICC, DCEO, Franklin Energy
- Manufacturers: Nest Labs, Ecobee, Honeywell, Schneider Electric

Goals

1. Set definitions and requirements for smart thermostats
2. Incorporate energy savings into the TRM
3. Identify the best utility energy efficiency offering distribution channels



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WHAT IS A SMART THERMOSTAT?

A communicating thermostat that can sense occupancy and set back temperature setpoints accordingly

Example of Requirements:

- Wi-Fi enabled and controllable through a remote device.
- Connected to continuous 24 volt power supply source (through common wire or adapter).
- Incorporates occupancy based controls.
- Compatible with multi-stage heating and cooling units.
- Two year product warranty.

Established and shared with thermostat manufacturers on 5/20/2015



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WHY SMART THERMOSTATS?

Utility Wasted Energy Studies

- **ComEd Wasted Energy Study:**
 - “Cooling has the greatest opportunities to reduce behavioral waste, which accounts for 38% of current usage, mainly by increasing temperature setpoints.”
- **Peoples Gas and North Shore Gas Wasted Energy Studies:**
 - Thermostat setback behavior change potential: 6%
 - 2 million therms/year for North Shore Gas
 - 5.5 million therms/year for Peoples Gas across single and multi family homes

Smart Thermostats have the potential for additional energy savings beyond that of a Programmable Thermostat



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ENERGY SAVINGS

Completed Studies in Our Region

Name	Size/Baseline Comparison	Geography	Technology	Energy Savings
NIPSCO	400 smart 400 programmable 800 manual (baseline)	Northern Indiana	Nest	<u>Programmable:</u> 7.8% heating 13.4% cooling <u>Smart:</u> 13.4% heating 16.1% cooling
Vectren	300 smart 300 programmable 600 manual (baseline)	Southern Indiana	Nest	<u>Programmable:</u> 5.0% heating 13.1% cooling <u>Smart:</u> 12.5% heating 13.9% cooling



OFFERING EVALUATION

Upcoming Navigant Study

- Analysis of current Nest owners in existing ComEd Demand Response pilot
- Savings results will be used as planning values for the current program year
- Savings estimates will be submitted to the TAC to assist the process for inclusion in future TRM versions
- Future offering designs and scope will be influenced by study findings



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NON-ENERGY BENEFITS

Varies by manufacturer, but examples include:

- Remote control and monitoring through an app or website
- Intuitive user interface
- Alerts for maintenance and temperature issues
- Increased engagement with the thermostat – earn badges, leaves, etc.
- Weather information



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DELIVERY CHANNELS AND INCENTIVES

Delivery Channels & Expected Incentive Levels

- Trade Ally Network
 - Rebate and professional installation
 - \$100 from ComEd
 - Expected launch: 7/6/2015
 - Can be coupled with \$20 from Gas Utilities (Nicor Gas/Peoples Gas/North Shore Gas)
- Direct Install Through Existing Utility Home Assessment Offerings
 - Direct Install w/ customer co-pay
 - \$100 product discount with free installation labor
 - Expected launch: 8/3/2015
- Manufacturer Based Channel
 - Likely retail/online – *pending RFP*
 - Expected launch: 10/5/2015



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TARGET CUSTOMERS

Residential Customers

- Single Family Homeowners
- Condo & Townhome Owners
- 2-flat Owners (Peoples Gas and North Shore Gas Territory)
- 2-, 3-, 4-flat Owners (Nicor Gas Territory)

Additional Potential Targets – on the Horizon

- Small Business
- Low Income (via DCEO)



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COST EFFECTIVENESS

Estimated TRC Scores from Preliminary ComEd Analysis

- 2.11 when included in Trade Ally Program
- 1.15 when included with existing utility home assessment offerings
- 1.39 when included in potential retail offerings

TRC values based on preliminary ComEd analysis using estimated savings values of 194.6 kWh and 77 therms



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FIRST YEAR ESTIMATES

Potential First Year Volume Estimates

- 2,000 Direct Installs through the existing Utility Home Assessment Offerings (based on 10% of assessment participants)
- Estimated 10,000 units through Trade Ally Network
- Manufacturer Based Channel (likely retail/online) quantities pending manufacturer proposals

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MARKETING EFFORTS

Goals

Collaboration between the utilities, stakeholders, and marketing teams (utility and manufacturer) to develop:

- Umbrella messaging around smart thermostats that would be used by the members of the collaborative to increase awareness
- Recommendations for customer education efforts
- Messaging that could be used to increase customer participation in the individual channels



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NEXT STEPS

— Jun 15-19: Marketing meetings with manufacturers

— Jun 30: RFP for 3rd channel issued

— July 7: Trade Ally channel launch

— Aug 3: Direct Install channel launch

— August 24: 3rd Channel RFP selection

— Late August: Navigant savings evaluation completed

— Oct 5: launch of 3rd channel



THANK YOU
QUESTIONS?



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