



nest 
Power
Project

February 2019

Agenda

Introduction to Nest

Power Project Overview

Serving low-income homes: deployments & results



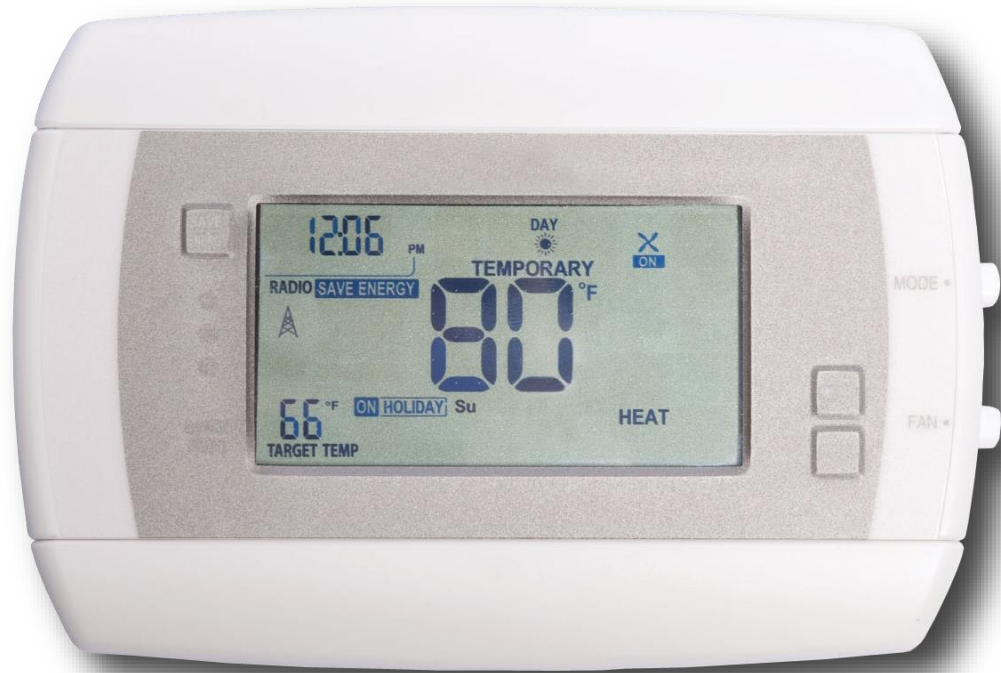
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Affairs/LMI Lead

nest

Google



Introduction to Nest



12:06 PM DAY
RADIO SAVE ENERGY TEMPORARY X ON
80°F
66°F ON HOLIDAY Su HEAT
TARGET TEMP



Since introducing the Nest thermostat



Saved

24B kWh
\$1.5B worth of energy

10-12%

average heating savings

15%

average cooling savings

What we heard from customers

- They want to save energy, and they want it to be easy
- Some want a product that feels less tech-y
- The people in the home, not the hardware, should be the focus
- Many are sensitive to the up-front cost of a product

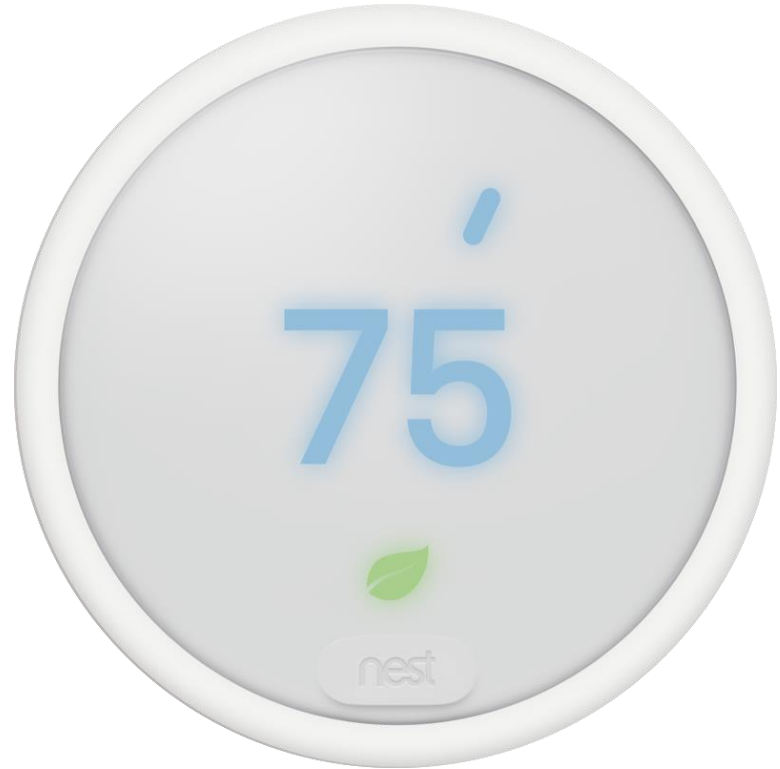
Nest Thermostat E launched in 2017

E is for Easy, Energy, Everyone



It includes all Nest's proven energy-saving features.

- AutoSchedule
- Home/Away Assist (plus optional geo-fencing)
- Eco Mode
- Nest Leaf (behavioral feedback)
- Airwave
- Heat Pump Balance
- True Radiant
- Energy History
- Sunblock



NOTE: ENERGY STAR qualified savings do not require wifi

Deploying 100,000 Nest thermostats is equivalent to taking **20,000 cars off the road** for a year in Alberta

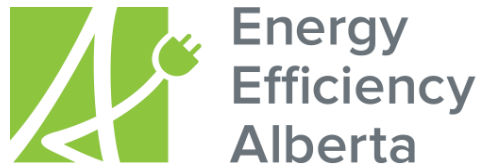
Assumes 0.63 ton of CO2 per Nest thermostat
<http://www.offsetters.ca/education/calculators/car-emissions-calculator>

Large Programs in Canada

Total smart thermostat GHG reduction estimate



150,000 devices
75,000 CO2 tonnes
reduced/year



150,000 devices
94,500 CO2 tonnes
reduced/year

Power Project Overview

<https://nestpowerproject.withgoogle.com/>

STARTING ON EARTH DAY, NEST IS DOING SOMETHING ABOUT IT.

- ✓ Providing **1 million Nest thermostats** units at reduced prices to existing low-income programs nationwide.
- ✓ Partnering with **Habitat for Humanity** to put a **Nest thermostat** in every new home.
- ✓ Building a digital platform to localize the issue and **facilitate consumer donations**.
- ✓ Launching a **national ad campaign** to raise awareness of energy poverty and create solutions.



How does Thermostat E benefit low-income households

Customer benefits

Bill Savings

- ✓ Helps reduce bills
- ✓ Manages consumption

Comfort

- ✓ Learns habits
- ✓ Allows automation



Utility/Agency benefits

Maximizes weatherization

- ✓ Maximizes savings
- ✓ Visual indicator of work

Reaches everyone

- ✓ Simple interface
- ✓ Language options

But don't just take our word for it

“

There was **one measure that clearly stood out as having the highest cost-effective achievable potential savings – smart thermostats** in homes with gas furnaces. This measure was cost-effective for all types of existing housing, including multifamily, manufactured housing and single-family.

”

“10-year Plan: Reducing the Energy Burden in Oregon Affordable Housing”, Jan. 7, 2019



Low- and moderate-income programs launched to date



And more!

Background: Colorado Energy Office/Arapahoe County

- Nest partnered with Colorado Energy Office and Arapahoe County
- 250 thermostats provided for use in WAP
- Single-family, owner-occupied, gas heated, willing client
- No requirement for home WiFi
- Installed in about half the homes weatherized May 2016 – Dec. 2017

Results: Colorado Energy Office/Arapahoe County

- **Homes that received a Nest thermostat achieved average gas savings of 18.4% compared to 11.1% for comparable standard WAP clients.**
- Weatherization Assistance Program National Energy Audit Tool (NEAT) showed Nest thermostats to be very cost-effective, with SIRs ranging from 4.3 – 8.6.
- Just 5% of thermostats were removed due to either client request or hardware/compatibility problems.
- The absence of WiFi did not appear to have any significant impact on incremental savings.

Key takeaways

- **Smart thermostats drive quantifiable, cost-effective energy savings for low-income households**
- **Low-income households are able to use smart thermostats effectively**
- **Smart thermostats provide a point of engagement that allows low-income households to participate in energy programs (e.g. demand response)**



Thank you!

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