



# Utilizing Intelligent Efficiency to Meet Environmental Goals

*2016 ACEEE Intelligent Efficiency Conference  
Austin, Texas  
December 6, 2016*

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• [Company](#) | October 25, 2011

Thermostats? Yes, thermostats.

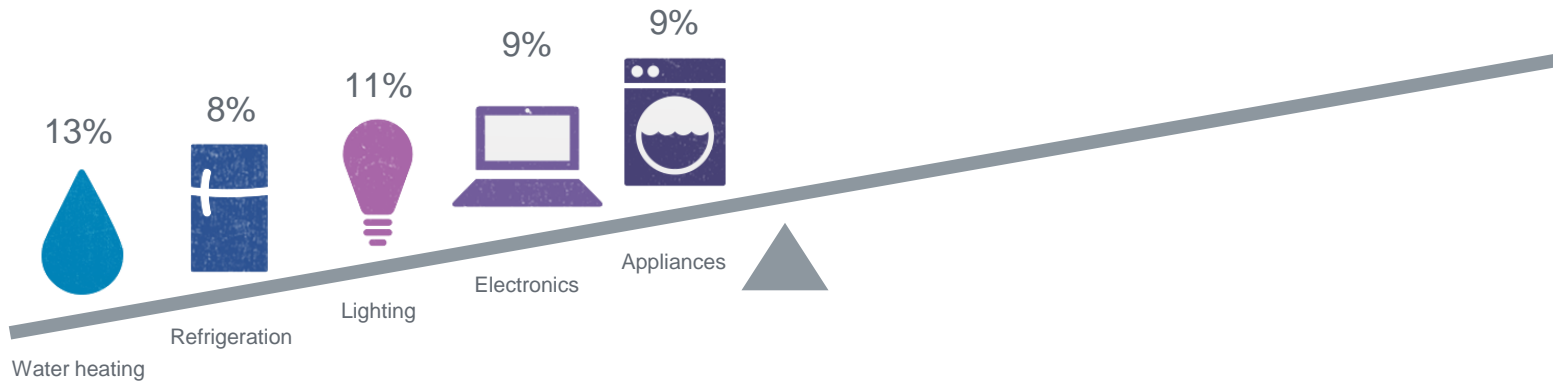


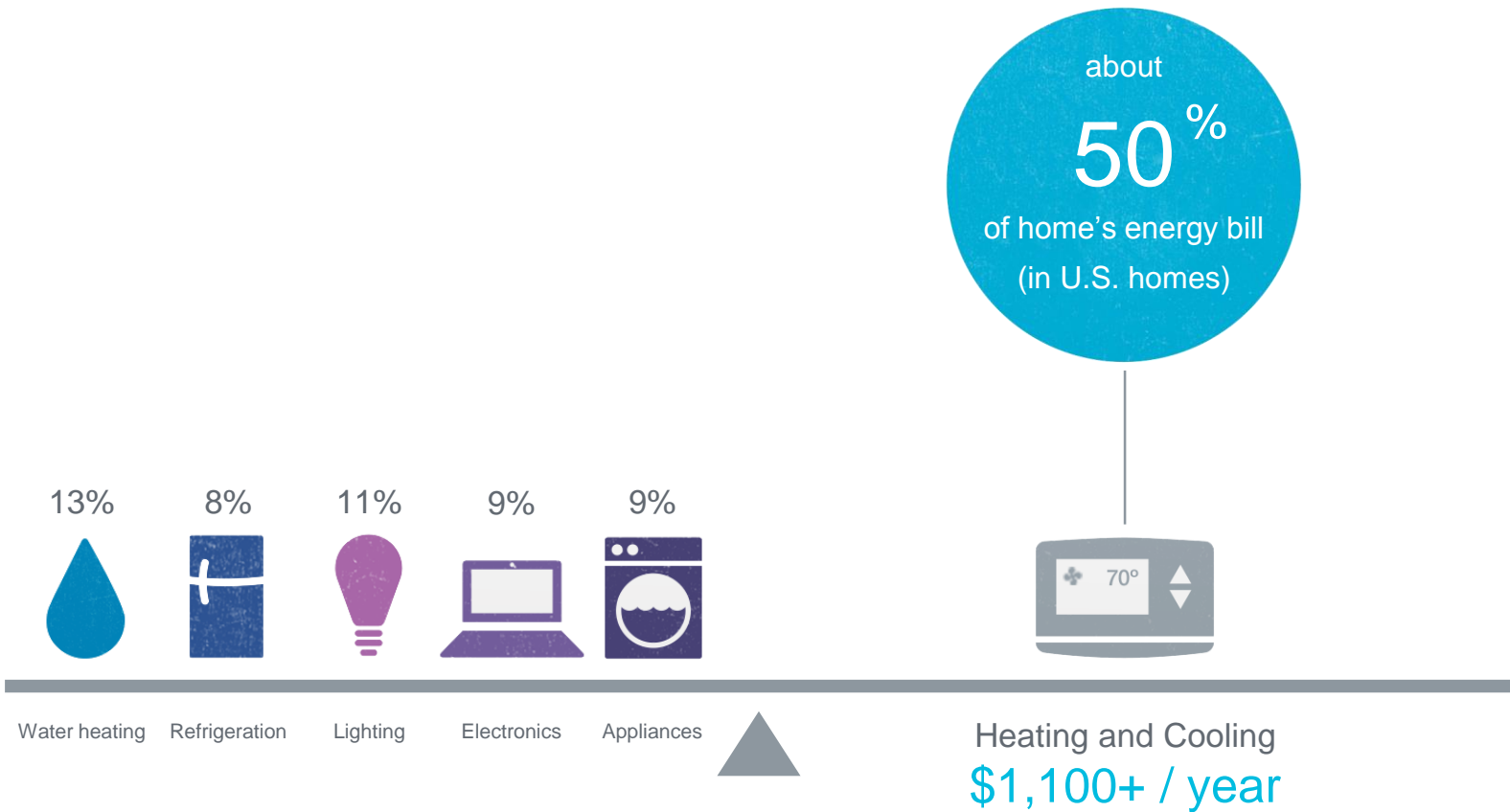
What's it like for a guy who worked at Apple to start making thermostats? A lot like this:

"So what are you working on lately?" a friend asks over lunch.

"I started a new company. We make thermostats."

*"We created Nest to reinvent such an important yet unloved device that would make people's lives easier and hopefully, **make the world a little better too.**"*





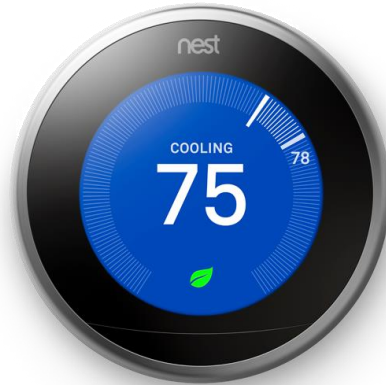




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# The Nest Learning Thermostat

# A new EE “measure”



# Not just thermostats any more . . .



Available  
2017



# The “thoughtful home” is becoming a reality



Available  
2017



# Nest's Mission Today

*“To create a home that cares for the people inside it **and the world around it.**”*



# NY Times Ads: Friday 4/22 and Sunday 4/24



**WE  EARTH DAY**

For us, every day is Earth Day. Every home can make a difference.

So every time you save energy, the Nest Learning Thermostat shows you a leaf, just one leaf. But they add up. All told, Nest Thermostats have saved 7.3 billion kilowatt-hours of energy.

And it starts one home at a time. One family at a time.

So this Earth Day we're working with Make It Right to build a home for a family in New Orleans.

It's going to be energy efficient and solar powered and beautiful, but it's also the start of something more.

Together with going to create a home that takes care of the people inside it and the world around it.

**nest**

nest.com

**WE  PLANET EARTH**



So far Nest Learning Thermostats have saved 7.3 billion kilowatt-hours of energy. That's enough to power every home in NYC for two years.

But what if everybody in America had a Nest Learning Thermostat?

Well, save enough energy to light up every home in this country for a year. Enough to take dozens of power plants off the grid.

Every time someone saves energy with the Nest Thermostat, a tiny leaf appears. They see it and think they're lowering their energy bills, saving a few bucks. And they are.

But we're saving something much bigger.

Earth Day was two days ago. But for us, it doesn't matter. Every day is Earth Day. Every day is our chance to do more.

**nest**

nest.com

# Validated Energy Savings



10-12% savings on heating bills

~15% savings on cooling bills

# Nest “Intelligent Efficiency” Services for Utilities



## Seasonal Savings

“Nest helps you save energy by making small tweaks to your schedule as seasons change.”



## Rush Hour Rewards

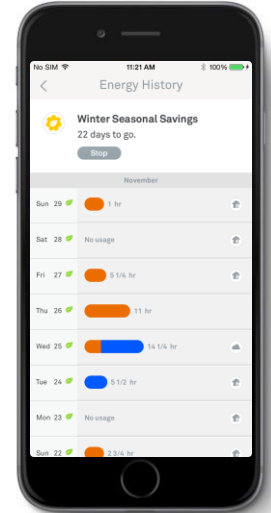
“Get paid to use less energy during peak periods.”



## Time of Savings

“Nest helps you save energy when it’s most expensive. Save more, worry less.”

# Seasonal Savings uses customized algorithms to boost efficiency



0.7° average temperature change

3-5% heating and cooling savings

72% reported temperature remaining comfortable

82% felt in complete control

# Rush Hour Rewards: bringing demand response to the mainstream



Shifts 55% of A/C  
usage during peak times

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Rush Hour Rewards

# Doing Demand Response Differently



Maximize load reductions while *optimizing* customer satisfaction

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Customers always in control

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Custom algorithms for each home



# Individual Thermal Models



# Personalized Load Control



# 2016 Rush Hour Rewards Partners



# Save more energy. And get paid \$85.

The Nest Learning Thermostat learns what temperatures you like, to keep you comfortable and help you save. And now we've partnered with Austin Energy to make an even bigger dent in your energy bill.

Yes – Austin Energy wants you to use less electricity.

Why? It's a win-win – a lower electricity bill for you means Austin Energy can avoid outages and the huge costs that come with them.

So together, Nest and Austin Energy are offering [Rush Hour Rewards](#). Sign up and Austin Energy will give you a one-time payment of \$85 per Nest Thermostat.

SIGN UP



# Smart thermostats can also facilitate TOU rates



# Nest plans to enlist 50K California customers in conservation program

The program could alleviate potential energy shortages, especially after a major gas leak in Southern California last year restricted supplies.

**Capital One** | 360 Money Market<sup>SM</sup> **1.00% APY** on balances of \$10,000 or more [LEARN MORE](#) Member **FDIC**

Tech Industry

August 26, 2016

7:48 AM PDT



by Ben Fox Rubin

[@benfoxrubin](#)



**Capital One** | 360 Money Market<sup>SM</sup> **1.00% APY** on balances of \$10,000 or more [LEARN MORE](#) Member **FDIC**

# Austin Requires Smart Thermostats In All New Homes

By SYEDA HASAN • OCT 17, 2016



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MATT LARGEY/KUT

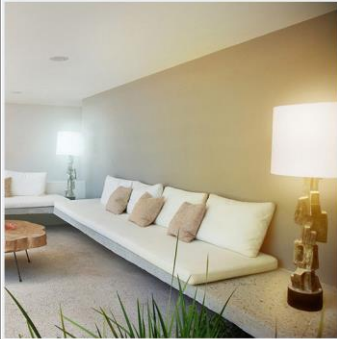


Thanks!

# Energy efficiency in the connected home

The thermostat can send an “away” signal to other devices

## Lighting



An enlightened way to save energy.

Forgot to turn the lights off on your way out the door? As soon as your Nest Thermostat goes into Away mode, your LIGHTIFY lights will automatically turn themselves off. [Learn More >](#)



## Appliances



Helps with chores. Even when you're away.

If your Nest Thermostat notices you're away, it can have Whirlpool switch to a refresh mode when your cycle ends, so your clothes stay fresh and wrinkle-free. [Get connected >](#)



Thoughtful appliances work with Nest.

Your LG appliances can work with Nest to help out when you're not home. Once your Nest Thermostat notices you're away, your fridge can go into an energy saving mode. Left in a hurry? LG will send you an alert if you accidentally left the oven on. [Get connected >](#)



## Load Switches



One app. For all your devices.

With Insteon, you can control your entire home – lights, appliances, cameras, sensors and Nest – all from a single app. [Get connected >](#)



## Smart Plugs



Be comfortable in every room of the house.

If you have a few Zuli Smartplugs around the house, they can help your Nest Thermostat know which room you're in and what temperature you want it to be. [Learn More >](#)





# Whole-home peak load management

The thermostat can send a DR signal to other devices

## Load Switches



240V, 30 AMP  
Switch



Water  
Heaters



Pool  
Pumps

One app. For all your  
devices.

With Insteon, you can control your  
entire home – lights, appliances,  
cameras, sensors and Nest – all from  
a single app. [Get connected >](#)

I N S T E O N<sup>®</sup>

## Smart Plugs



120 V, <1.8 kW  
Switch



Window  
A/C

Be comfortable in every  
room of the house.

If you have a few Zuli Smartplugs  
around the house, they can help your  
Nest Thermostat know which room  
you're in and what temperature you  
want it to be. [Learn More >](#)



Portable  
Heater



## EV Chargers



Take charge of your  
energy savings.

If you're signed up for Nest Rush Hour  
Rewards, your Nest Thermostat can let  
your ChargePoint Home EV charging  
station know when energy is in high  
demand and electricity is most  
expensive. [Learn More >](#)

**-chargepoint+**