



2015 ACEEE Intelligent Energy

The Role of Time Varying Pricing ICT to encourage Energy Efficiency

Everybody loves time variant rates

GRID OPTIMIZATION

Smart Utility Rates Could Slash Grid Investment Costs and Monthly Bills

California Rolls Out Default Time-Of-Use Rates

June 8th, 2015 by [Rocky Mountain Institute](#)

ENERGY STORAGE

How Solar, Batteries and Time-of-Use Pricing Can Add Up to Value

The future of rate design: Why the utility industry may shift away from fixed charges

RATE DESIGN FOR THE DISTRIBUTION EDGE

ELECTRICITY PRICING FOR A DISTRIBUTED RESOURCE FUTURE

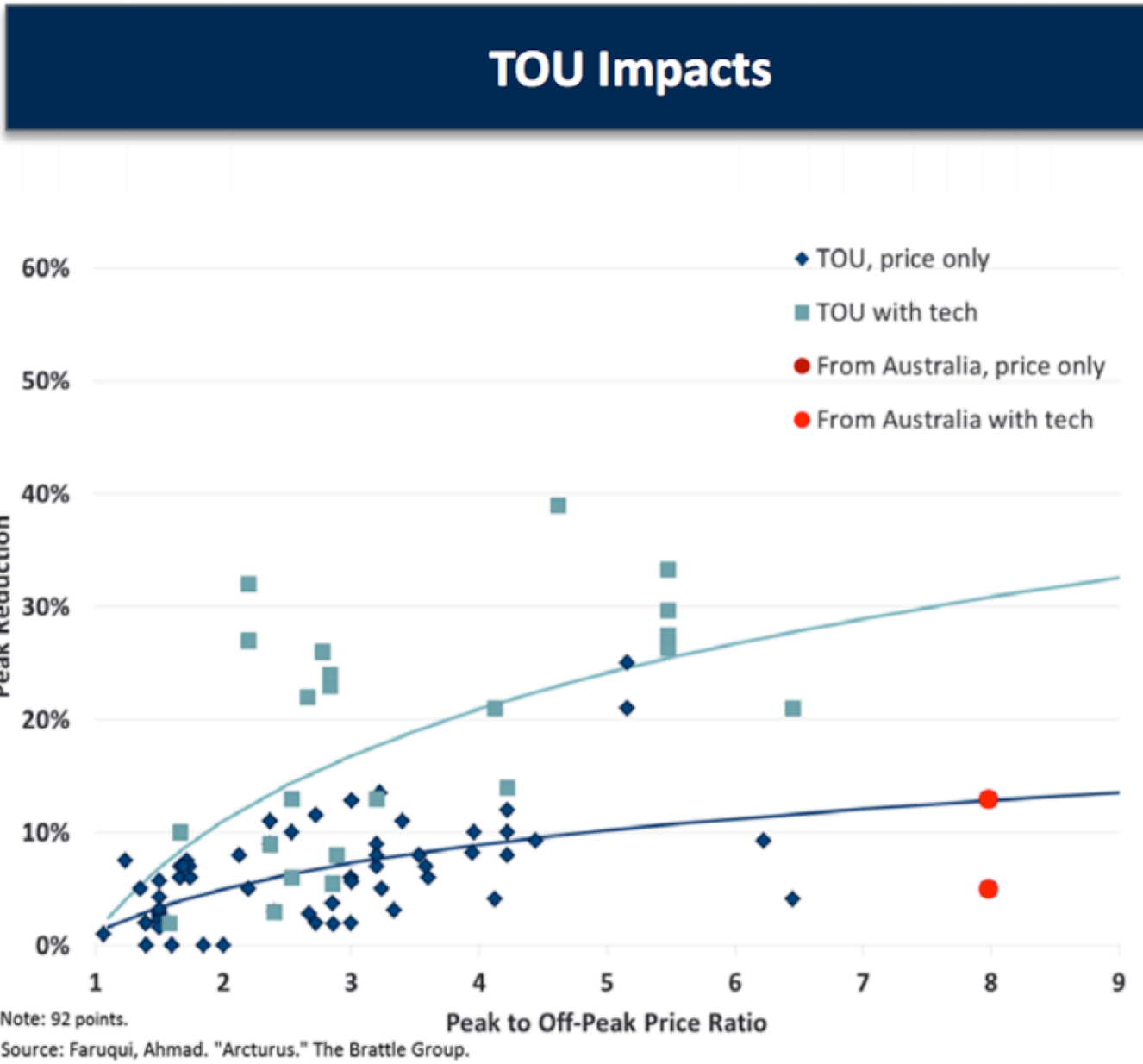
And for good reason!

Fairness - More accurately/fairly pass along true energy costs to customers

Cost Reduction (Short Term) - Shape load to generation to reduce overall costs

Cost Reduction (Long Term) - Avoid future infrastructure development

Pilots have proven that rates can shift load



~10%

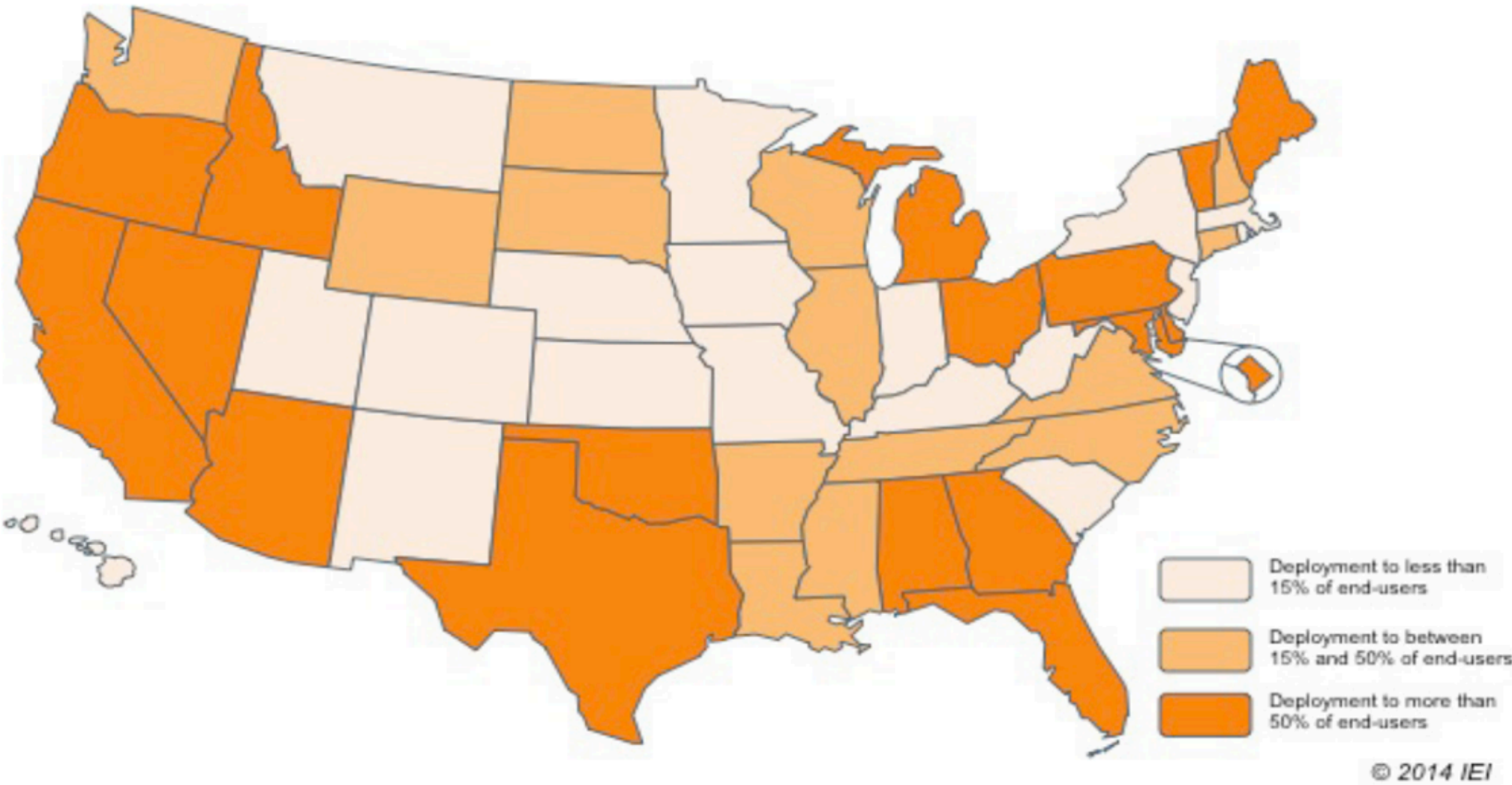
ToU, price only

~20%

ToU with Tech

And they're available to many Americans

Figure 2. Expected Smart Meter Deployments by State by 2015



65M

Access to ToU Rates

50M

Have Smart Meters

Note: Figure 2 shows the extent of smart meter deployments by state by 2015 that are either completed, underway, or planned. This map does not include automatic meter reading (AMR) installations.

But customers are historically resistant

43%

US households could be on ToU rates



3%

US households are on ToU rates



Why?

They are **just different** than what a customer is used to

Another thing to **worry about** /monitor

Could lead to **increased bills** - there are likely going to be losers

How do we drive
adoption?

Design principles that have worked for Nest

Make it familiar.

Simple customer promise.

Does it for you.

Customer always in control.

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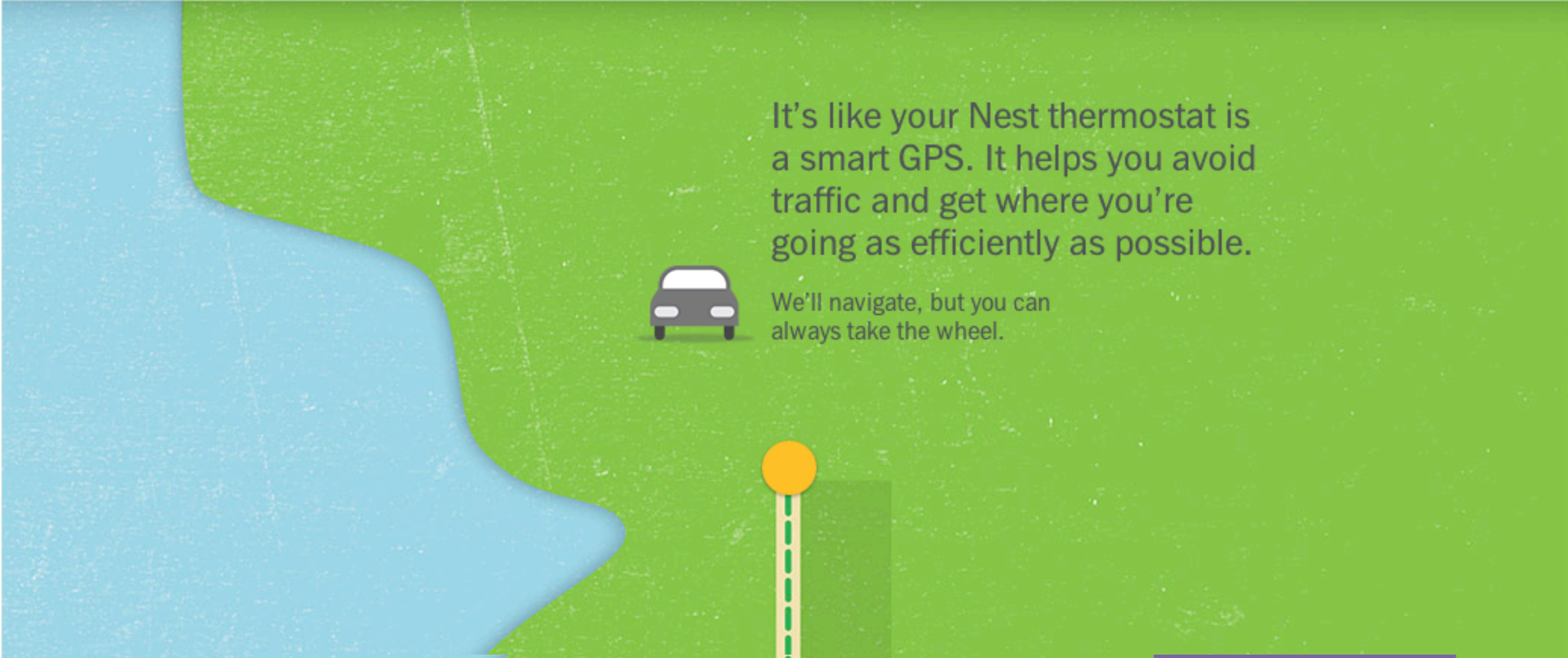
Rush Hour Rewards

Already have a Nest?

[SIGN UP >](#)

Air conditioning accounts for about half the energy used in a home. So when everyone cranks up the AC on hot days, demand for energy spikes and SCE has to bring on costly additional power to avoid outages.

Turns out, it's better for SCE to just pay you to use less energy on these days. Then Rush Hour Rewards steps in to help you maximize your earnings, while you stay comfortable and in control.



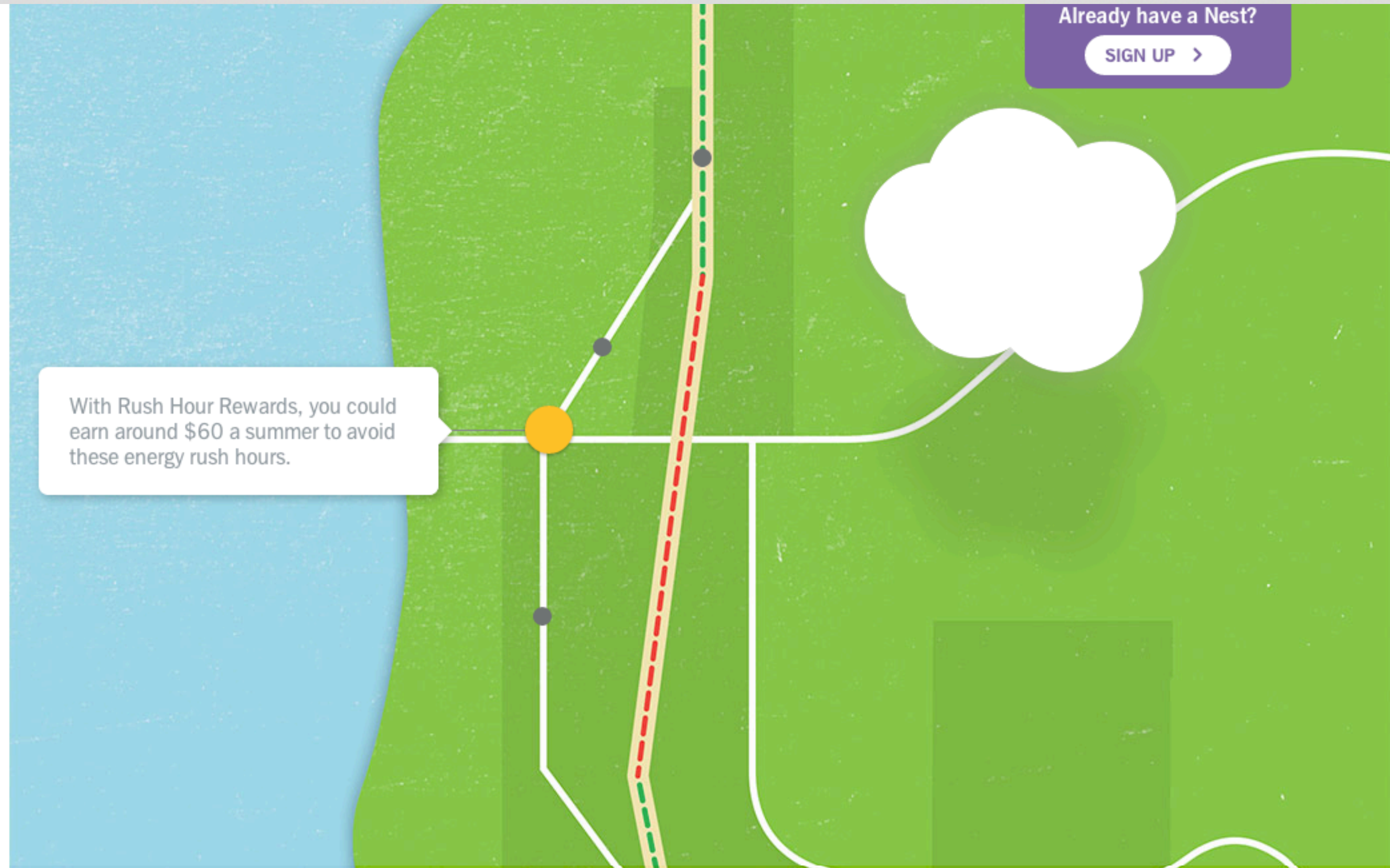
It's like your Nest thermostat is a smart GPS. It helps you avoid traffic and get where you're going as efficiently as possible.



We'll navigate, but you can always take the wheel.

Already have a Nest?
[SIGN UP >](#)

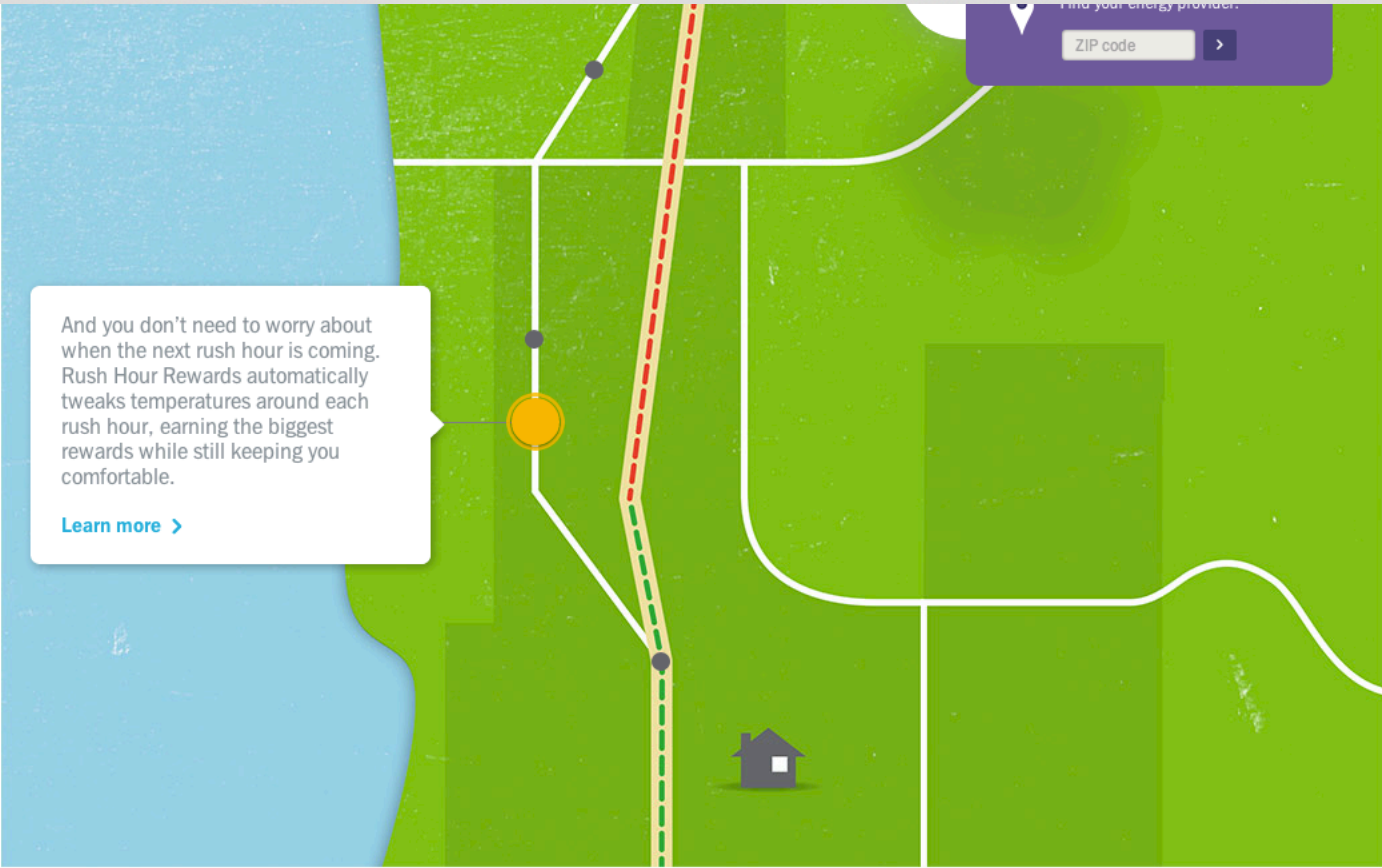
With Rush Hour Rewards, you could earn around \$60 a summer to avoid these energy rush hours.



Find your energy provider.
ZIP code >

And you don't need to worry about when the next rush hour is coming. Rush Hour Rewards automatically tweaks temperatures around each rush hour, earning the biggest rewards while still keeping you comfortable.

[Learn more >](#)



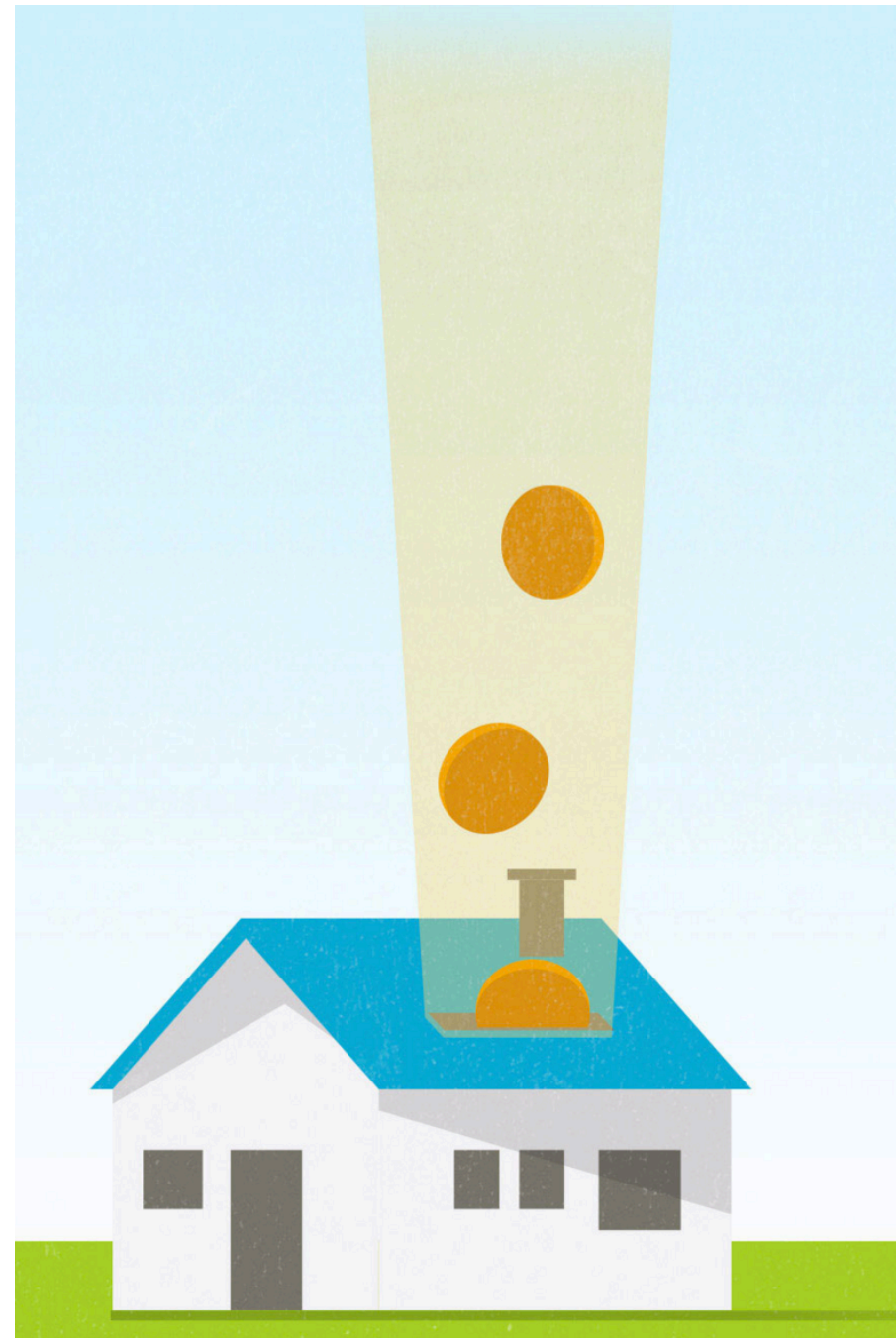
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Two simple value propositions

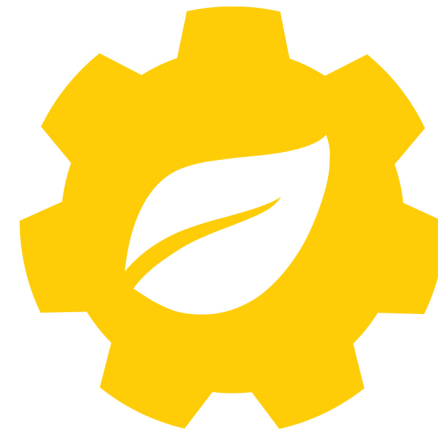
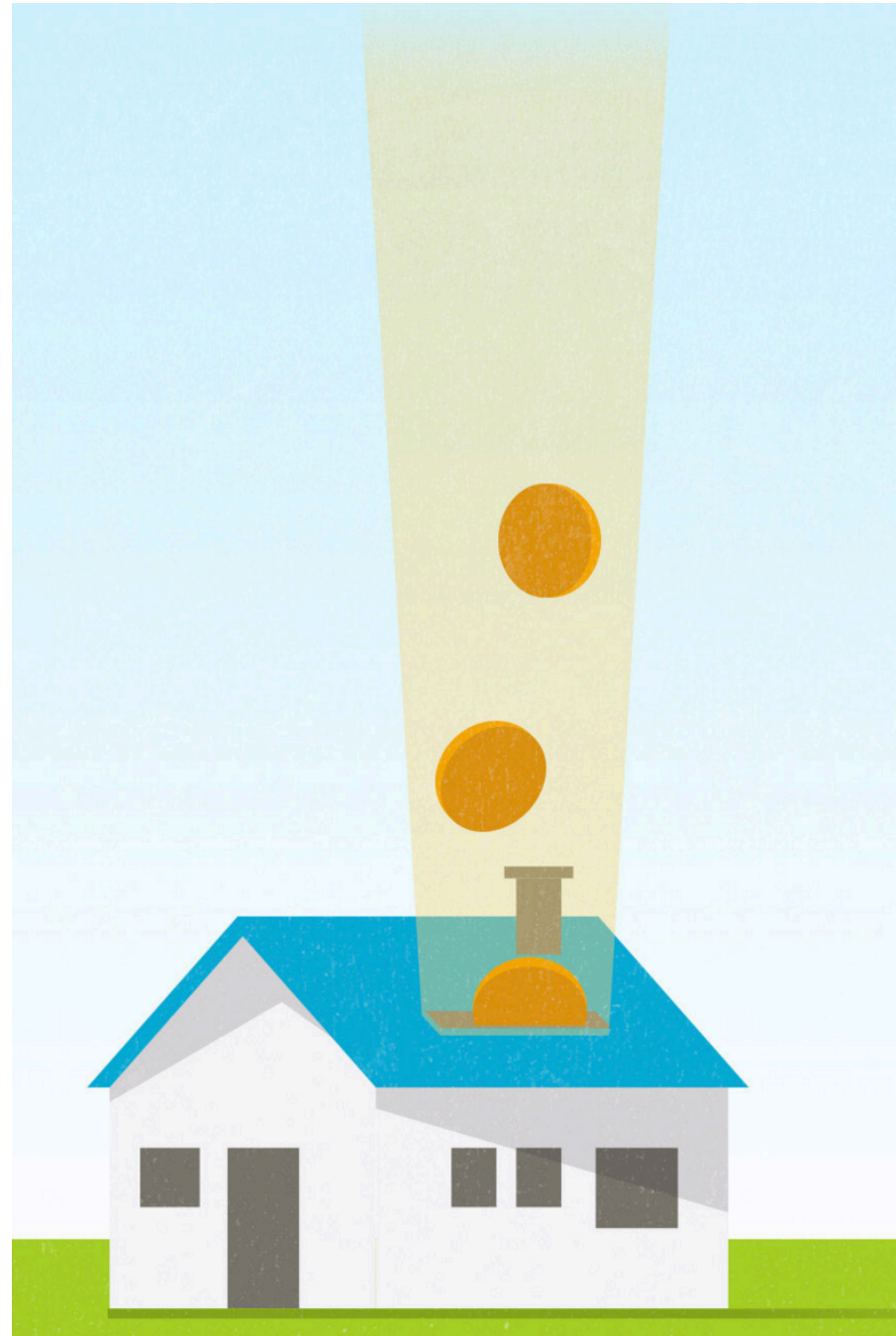


Rewards



Savings

Two simple value propositions



Get paid $\$XX/\text{year}$ to reduce during peak hours

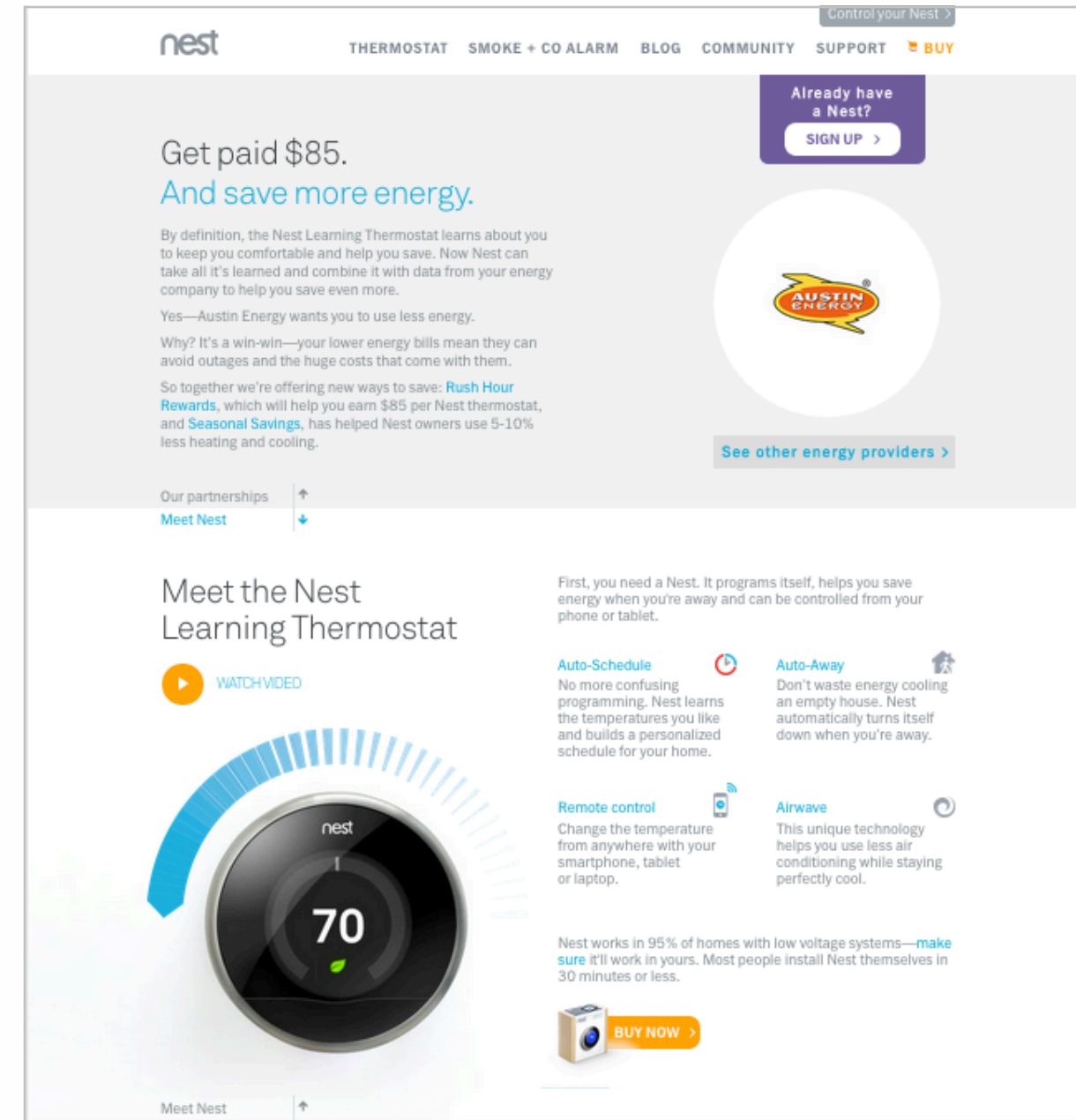
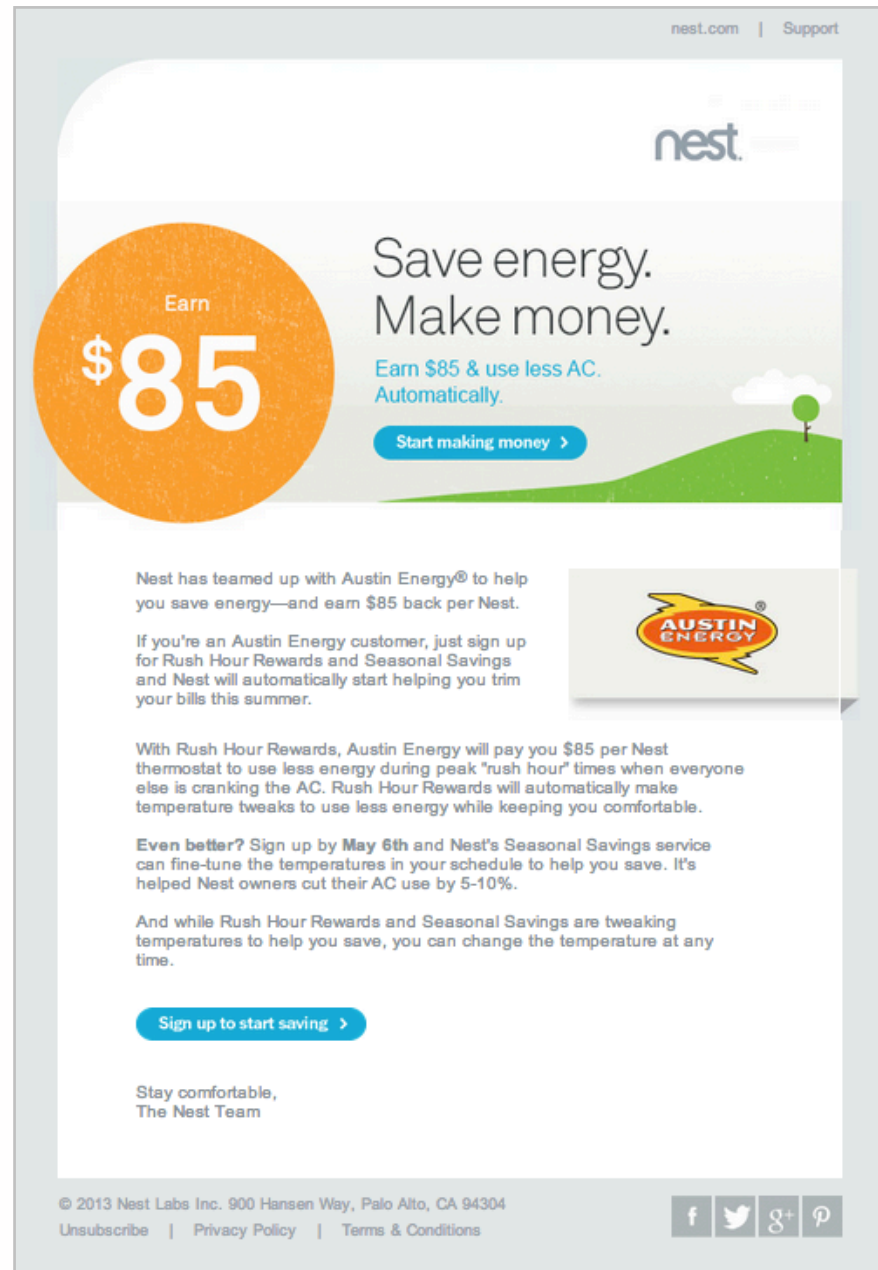
Rush Hour Rewards



Save 5-10% on your HVAC usage

Seasonal Savings

Austin Energy: RHR Case Study



70% Opened email

25% Clicked through to site

Make it familiar.

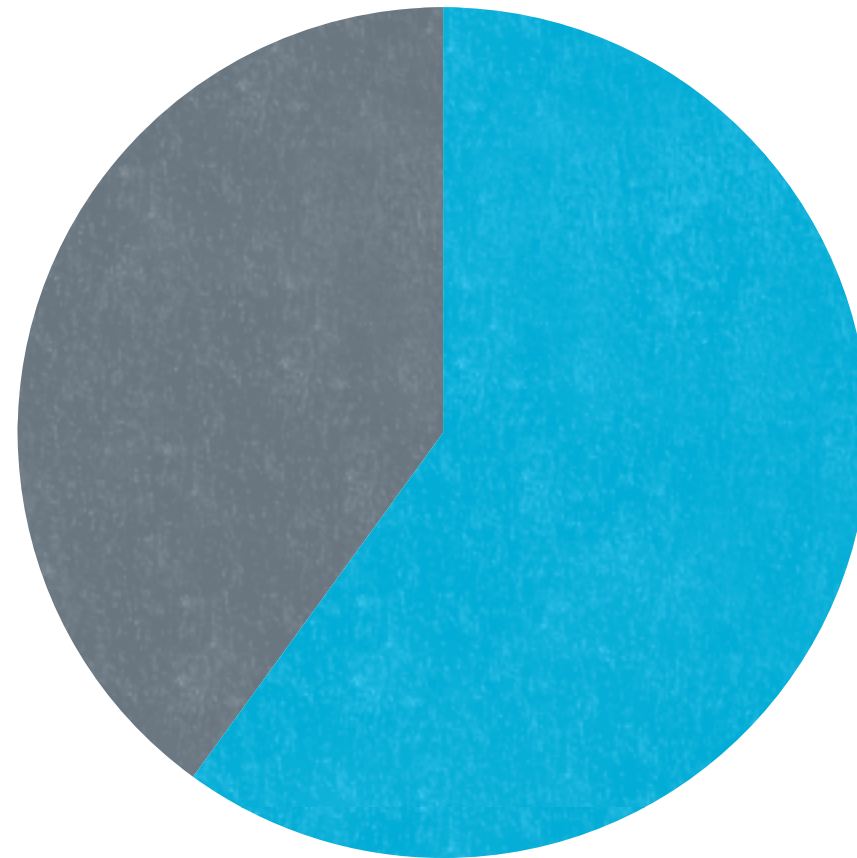
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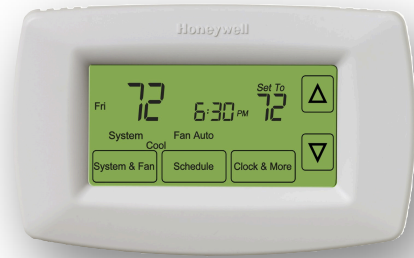
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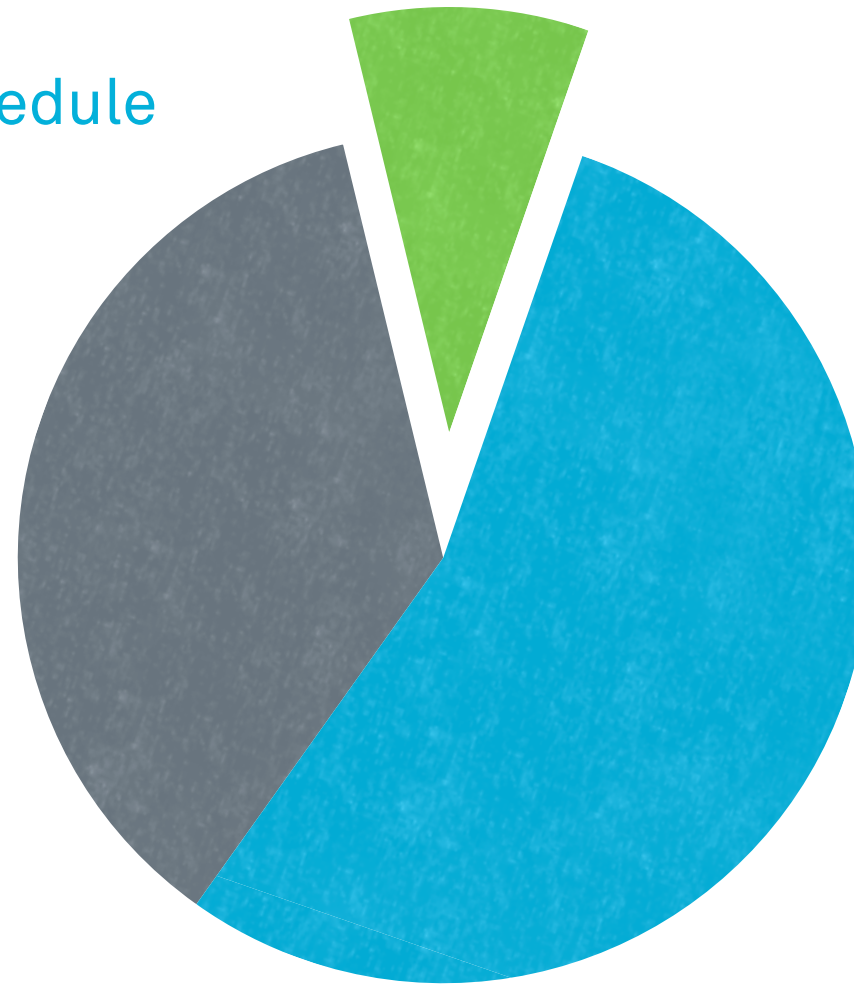
A programmable thermostat can save up to **20% more energy** than a traditional one



Less than half of homes have a programmable thermostat.



+ schedule



Only 10% have ever set a specific schedule.

Does the
thinking so you
don't have to



Auto-Schedule™

Just turn it up and down.
It learns the temperatures
you like and programs itself.



Auto-Away™

It automatically adjusts the
temperature after you leave.
So you don't heat or cool
an empty home.



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If a setpoint adjustment is made, the customer gets a chance to reconsider