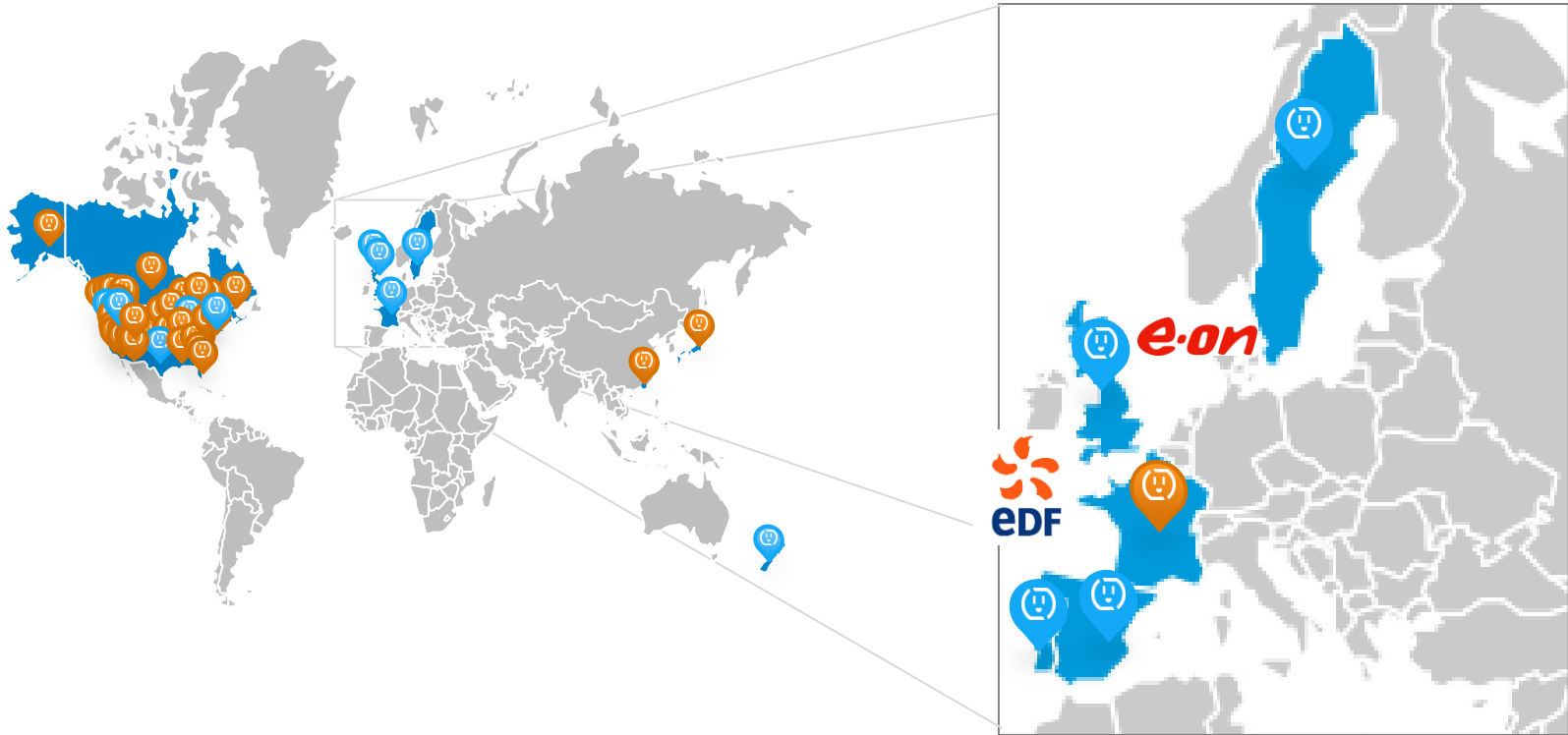




# Case studies of achieving energy savings by applying lessons from behavioural sciences

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# Opower works with 95+ utilities around the world to engage 55 million customers with their energy use



In regulated...



...and competitive markets



USA



Canada



France



UK



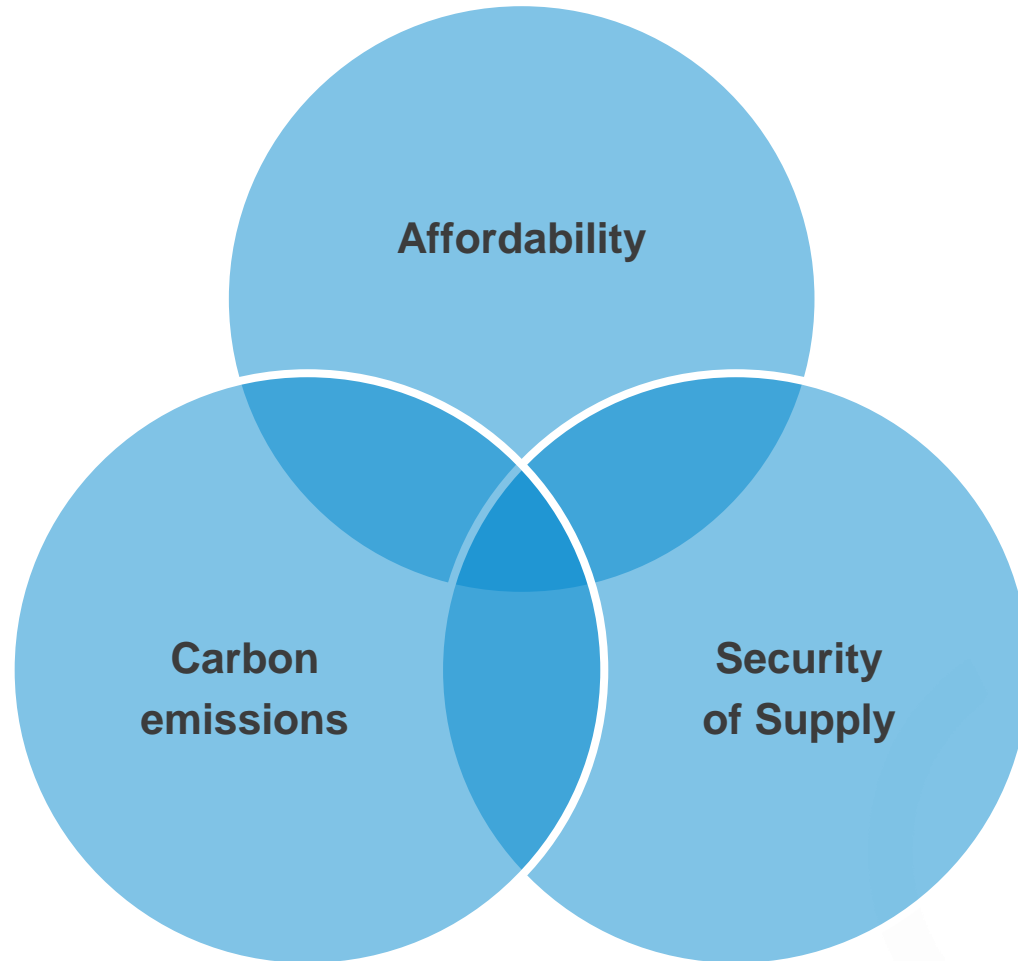
Mercury Energy

New Zealand



USA

# The energy industry is experiencing a fundamental challenge



**A societal tri-lemma**





**We know customers are the key..**



# An Introduction to applied behavioral science



Schultz & Cialdini (OPOWER Scientists)  
Hewlett Foundation San Marcos Study

# Applying behavioural science to motivate changes in energy consumption..



Proactive



Personalized



Motivating

**Unusual electricity usage**

Your last 14 days: **194 kWh**  
30 Dec-12 Jan

Your next bill could be **420 kWh**  
Projected for: 13-29 Jan

Your typical Dec bill: 402 kWh

Based on your usage since 30 Dec, you could be headed toward a bill that is **5% higher** than what you normally use this time of year.

**You still have time to minimise your next bill.**

**Steps to take**

- Unplug electronic devices
- Replace your lights with efficient bulbs
- Drip dry your clothes

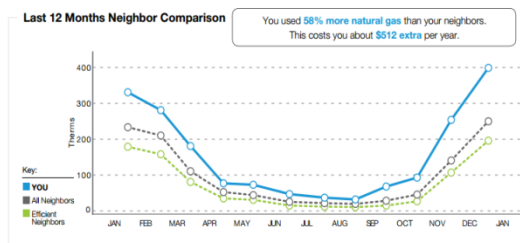
See more ways to save

Proactive usage alerts

**23% Lighting**

**Top 5 tips for your home**

- Switch to energy-saving light bulbs
- Look for the ENERGY STAR mark
- Turn off lights when they're not being used



Personal usage disaggregation

**on track**

Set a goal

Join your neighbors in setting a goal to reduce your usage. You'll meet your goal and track your progress. Customers who use less. [Learn more](#)

Set a goal

MAY 1 – 31  
You used more gas than your efficient neighbors.



Based on a 2710 sq. ft house. [change?](#)

**Great** 😊

Good 😊

More than average

Behavior Science



# Applying behavioural science to motivate changes in energy consumption..

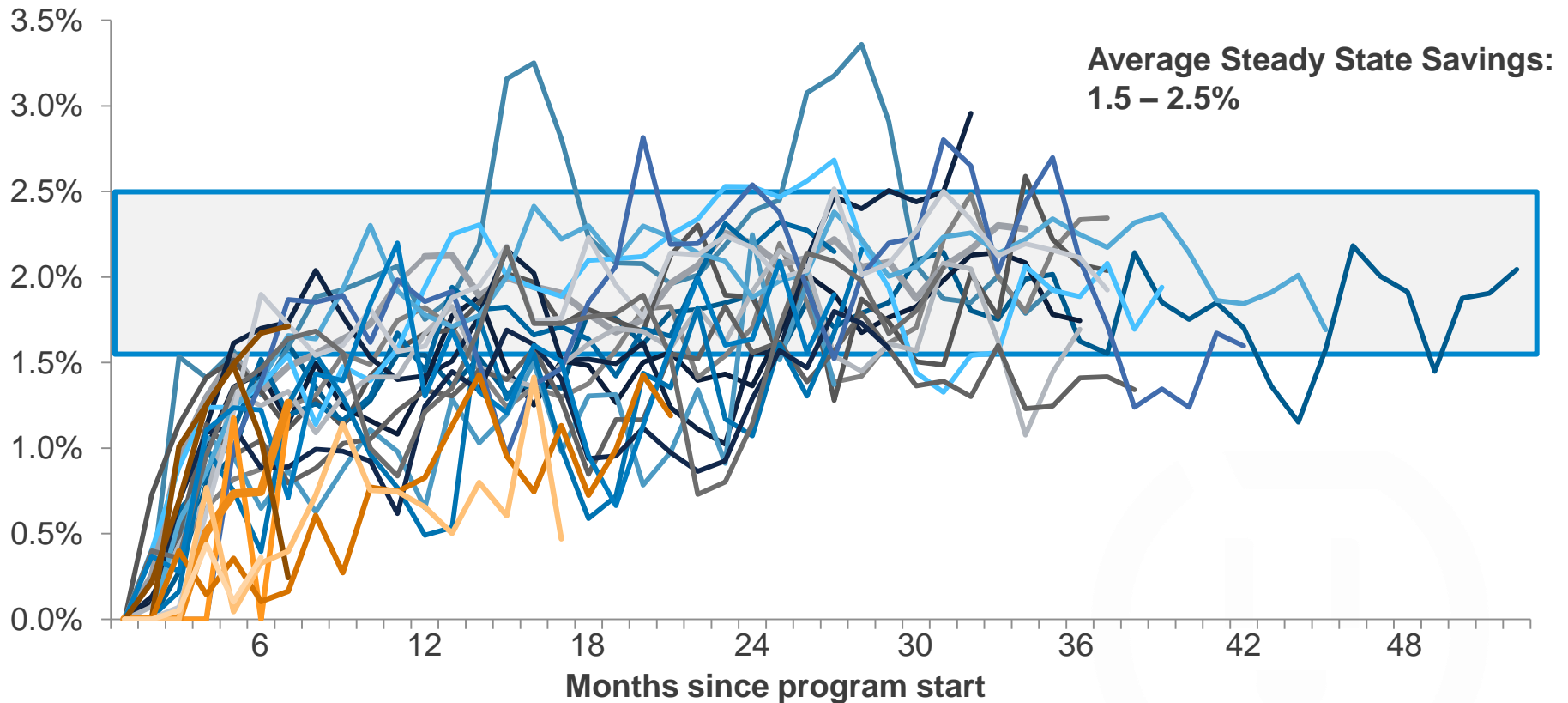


“They give us a really good comparison with other households. If I use a little more, I say ‘Ooh – what’s going on?’”

-Theresa Chen, Utility Customer

# Behavioral Energy Efficiency drives, reliable, persistent and scalable savings

Energy savings across utilities with Opower Behavioral Energy Efficiency programs







**Yeah.. Yeah... but this won't  
work in my country.....**



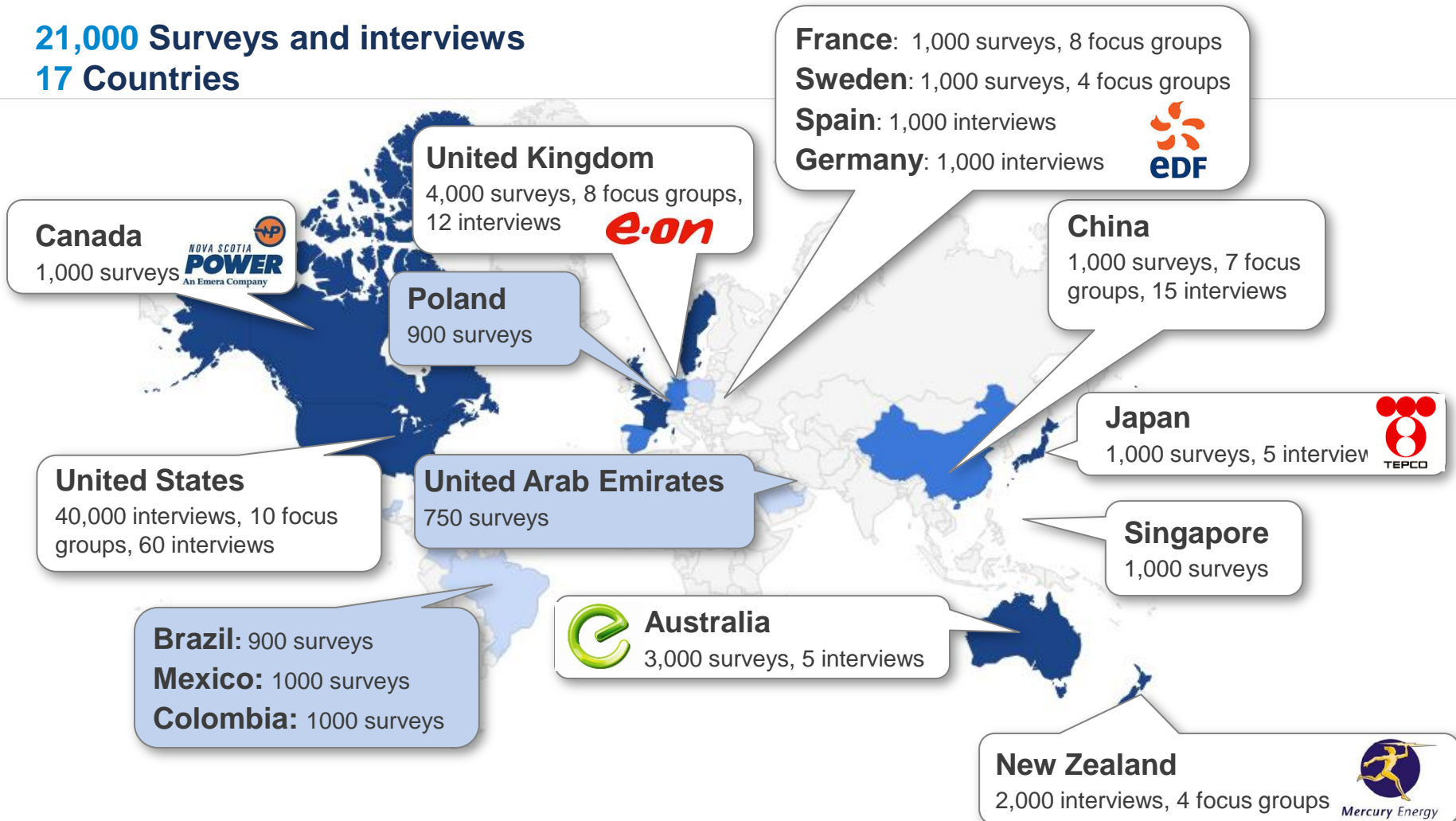
## **Five Universal Truths about Energy Consumers**

What research across 17 countries says about what customers expect from their utility companies



# We've done lots of research...

**21,000 Surveys and interviews**  
**17 Countries**



# And found people aren't as different as we thought





# We identified five universal truths of energy consumers

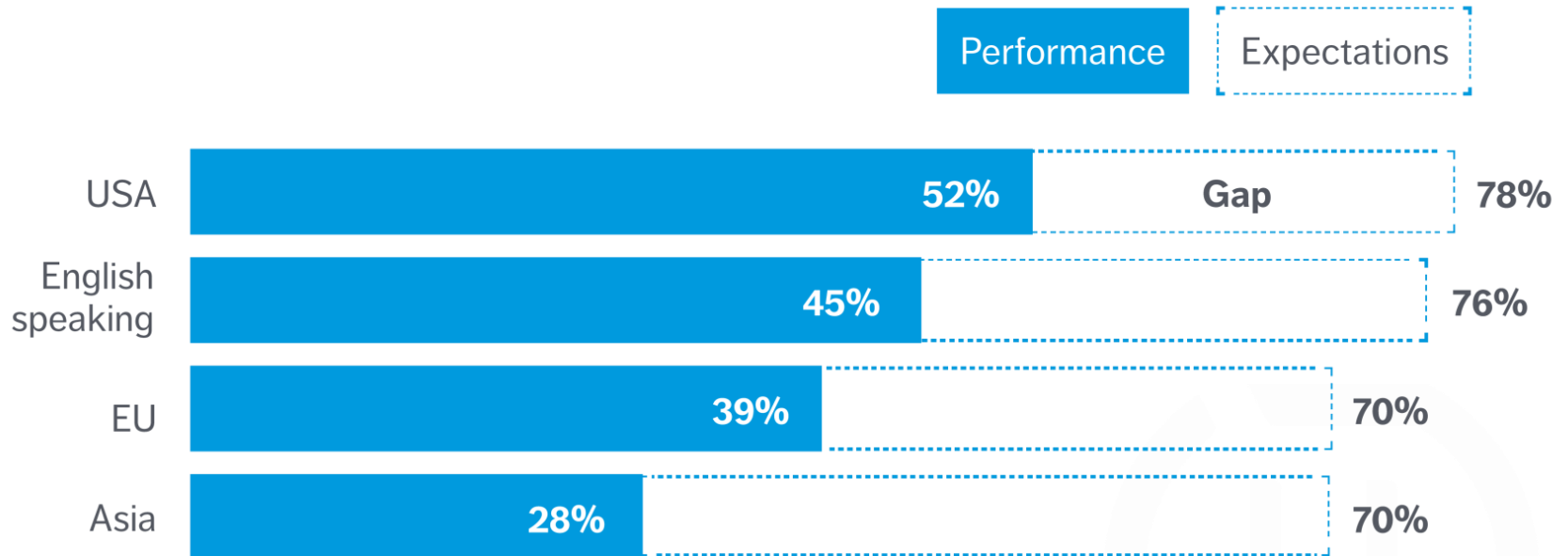
1. Utilities are not meeting customer expectations
2. Everyone wants lower bills
3. People look to their utilities first for energy information
4. Customers value personalized energy insights
5. Everyone wants to know how they measure up



# There is a gap between customer expectations and utility performance

1

## Customer expectations vs. utility performance on services



English speaking refers to the United Kingdom, Australia, New Zealand, and Canada

# Utility customers are among the least satisfied

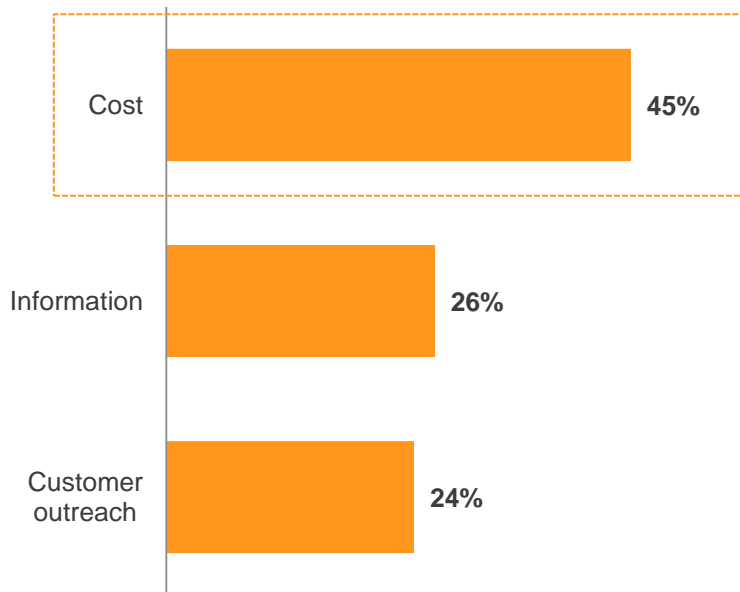
## Net Promoter Score for Different Industries



# Energy spend is the key concern

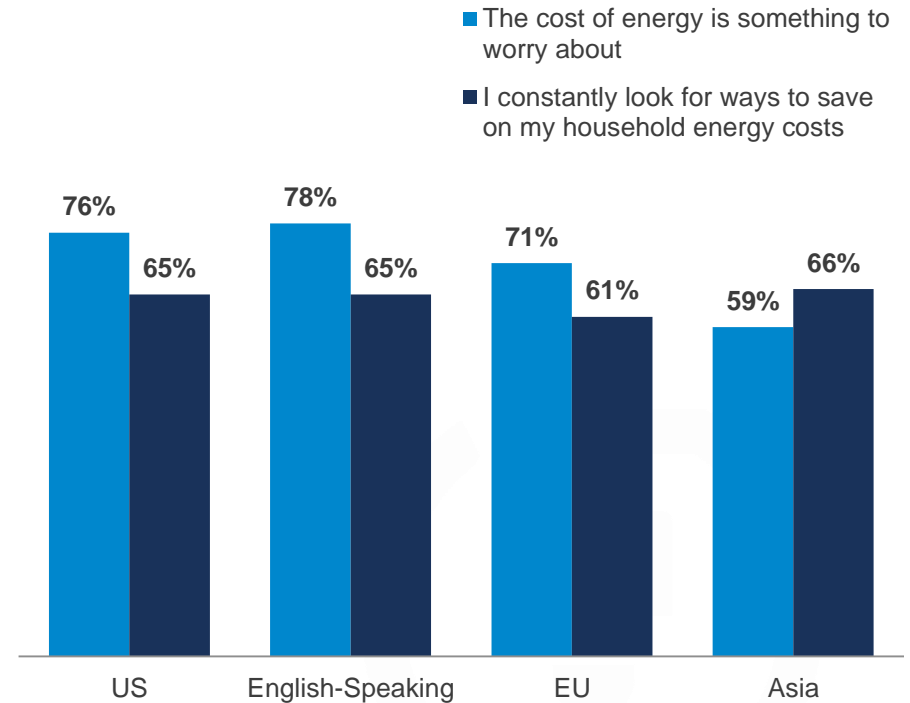
## The gap between customer expectations and utility performance on various services

12,000 respondents, 12 countries



## Customers want to manage their energy costs

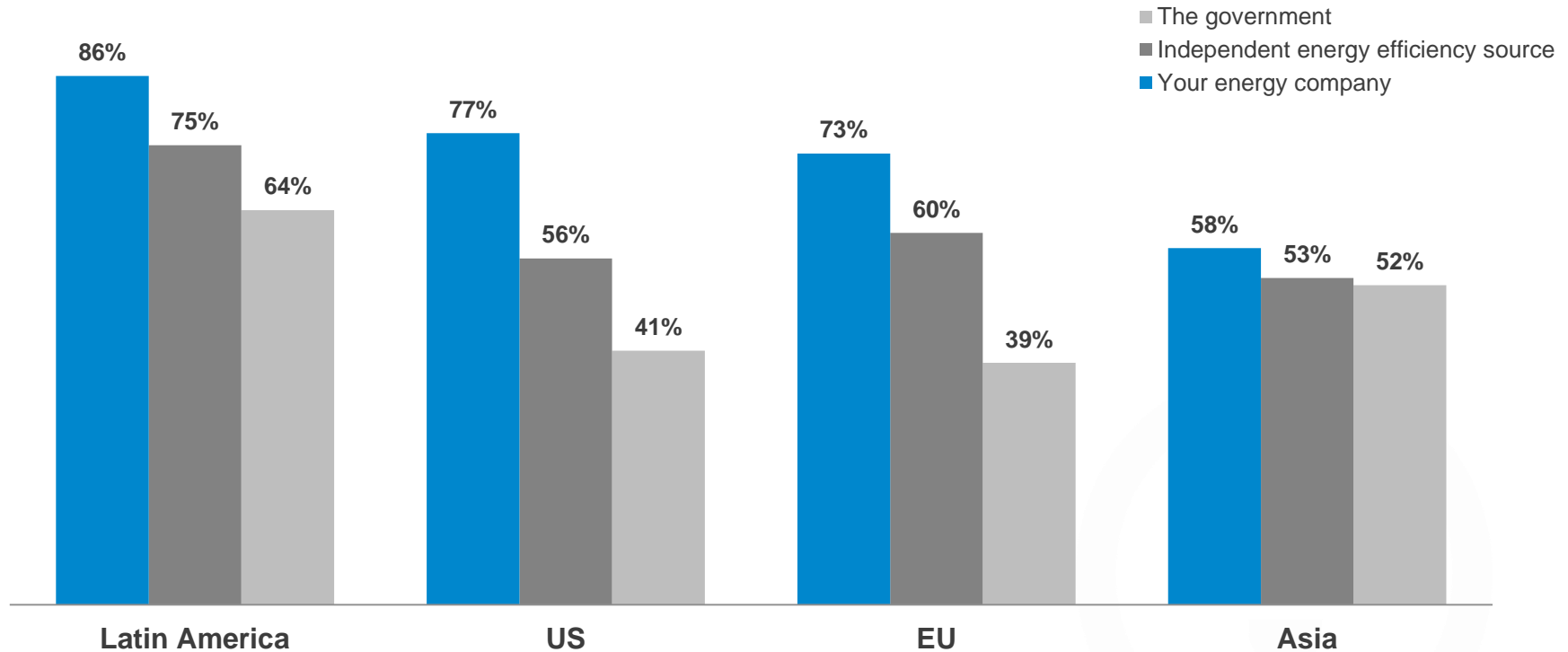
Percentage of customers who agree with the following





# People trust their utilities most to provide this information and these savings tools

Percentage selecting information from the specified source as valuable



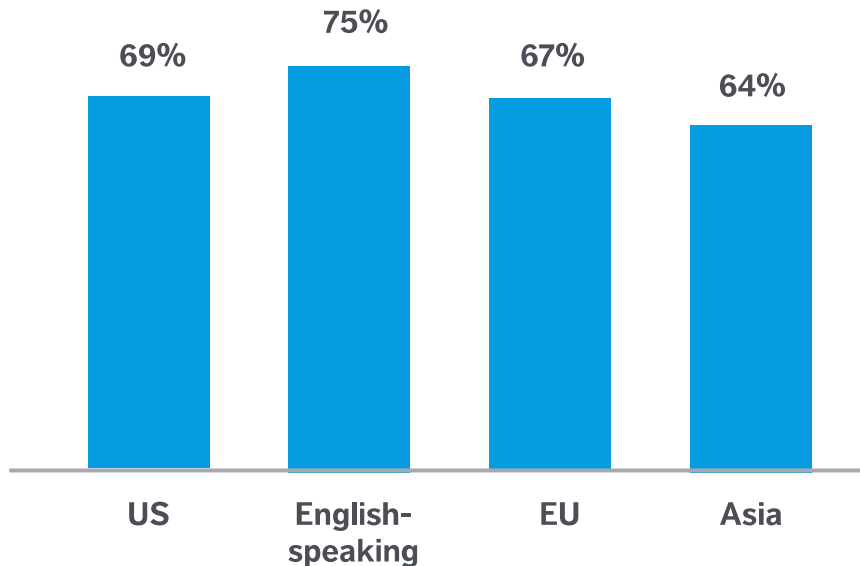
# Information alone is not the answer

B31																
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	<b>ELECTRICITY USAGE (kwh)</b>															
2																
3																
4	<b>YEAR</b>	<b>JAN.</b>	<b>FEB.</b>	<b>MARCH</b>	<b>APRIL</b>	<b>MAY</b>	<b>JUNE</b>	<b>JULY</b>	<b>AUGUST</b>	<b>SEPT.</b>	<b>OCT.</b>	<b>NOV.</b>	<b>DEC.</b>	<b>PER MO.</b>	<b>TOTAL</b>	
5	1988	718	610	532	578	534	459	742	692	662	538	713	686	788	9,452	
6	1989	792	642	601	573	480	793	511	629	715	661	675	791	821	9,852	
7	1990	811	634	605	554	518	533	753	522	679	657	649	777	807	9,682	
8	1991	681	742	667	546	592	561	629	465	720	598	769	718	807	9,679	
9	1992	664	576	608	620	548	512	453	777	659	522	617	729	773	9,277	
10	1993	616	564	510	518	447	439	468	630	516	553	599	731	715	8,584	
11	1994	636	521	592	586	491	574	933	675	529	564	604	836	795	9,535	
12	1995	655	510	630	547	561	686	795	677	533	511	570	745	785	9,415	
13	1996	905	882	580	666	706	532	572	593	572	639	695	793	844	10,131	
14	1997	596	608	592	591	530	516	622	581	488	549	555	697	744	8,922	
15	1998	483	481	468	474	443	500	555	510	609	537	561	678	691	8,297	
16	1999	465	528	437	489	553	552	718	728	695	598	689	710	763	9,161	
17	2000	620	559	533	616	568	507	922	842	914	558	630	654	827	9,923	
18	2001	540	618	453	488	534	669	792	678	680	500	593	596	762	9,142	
19	2002	549	561	426	447	429	574	705	643	611	551	552	673	727	8,723	
20	2003	554	491	376	377	478	516	639	925	633	445	409	459	692	8,305	
21	2004	416	431	393	454	452	447	639	917	559	415	506	455	674	8,088	
22	2005	505	414	438	410	485	507	579	655	729	692	679	664	730	8,762	
23	2006	565	550	344	455	423	526	612	602	565	507	545	531	686	8,231	
24	2007	653	584	405	587	489	655	783	788	513	456	582	763	772	9,265	
25	2008	525	472	531	514	492	643	587	551	701	489	726	654	741	8,893	
26	2009	645	817	518	550	623	481	525	499	361	507	617	656	567	6,799	
27	2010	645	472	481	516	453	460	505	419	467	460	574	623	506	6,075	
28	2011	672	610	458	509	534	384	514	472	451	464	533	703	525	6,304	
29	2012	565	484	529	452	420	408	490	458	460	453	473	561	479	5,753	
30																

SOURCE: Joseph Gracia's Dad

# Customers want personalized tools to manage their spend

## Percentage selecting personalised information as a valuable service



English speaking refers to the United Kingdom, Australia, New Zealand, and Canada

## A majority of customers want:

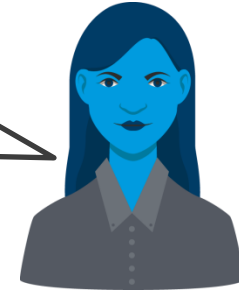
- » Progress on how much energy they saved compared to the last billing period
- » Explanation of how their energy use compares to that of utility customers
- » Advice on how to save energy as the weather changes
- » Personalized recommendations from the utility on how to reduce home energy use

# Everyone cares how they compare to their neighbors



"The first thing that jumped into my eyes was the chart. It said that I consumed more electricity than average, so I thought I have to reduce the use of electricity."

—Japanese Customer



"I believe its very beneficial to the customer, as this will give you a gauge on how much power is being used compared to your neighbor."

—New Zealand Customer



"it says that around 100 nearby homes use a heater and shows the average energy bill. I can see that my energy bill is much higher than the average, so I can say 'Oh! Seems like I am using a lot more than the average home.'"

—Chinese Customer







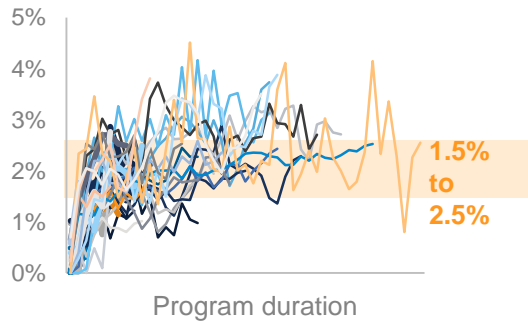


To Summarise

# Sustainable, verifiable results.. globally

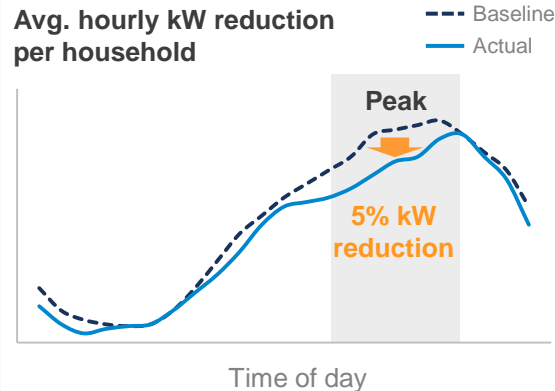
## Sustained energy efficiency

% kWh savings across programs



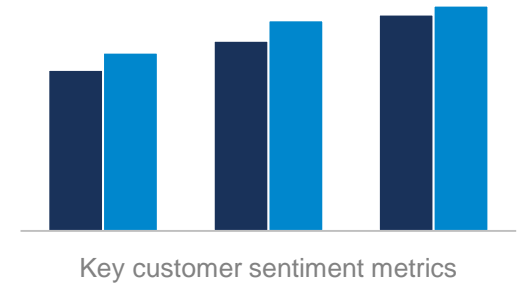
## Peak savings

Avg. hourly kW reduction per household



## Customer sentiment

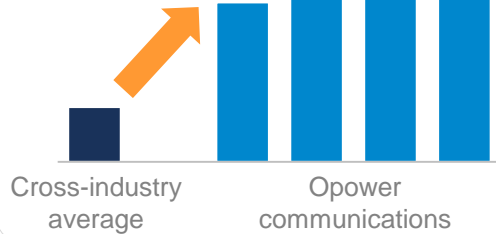
↑  
5% avg. increase



## Digital engagement

Email open rates

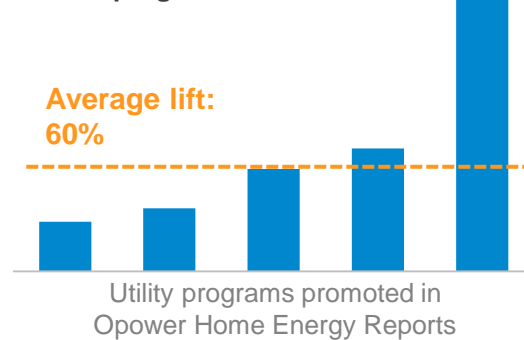
3-5x  
cross-industry  
average



## Customer acquisition

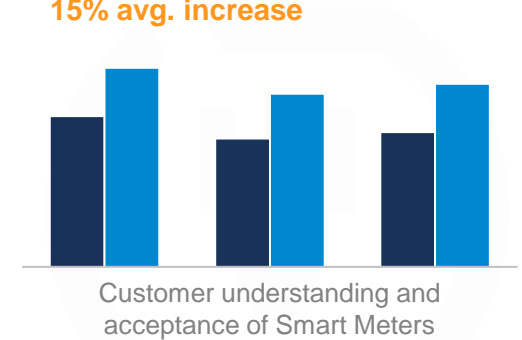
Participation lift in EE programs

Average lift:  
60%



## Smart Meter acceptance

↑  
15% avg. increase





Questions?

Thanks for your attention

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