

# Utility Industry Trends

## The Future Is a Bumpy Road

**Kenneth Black**

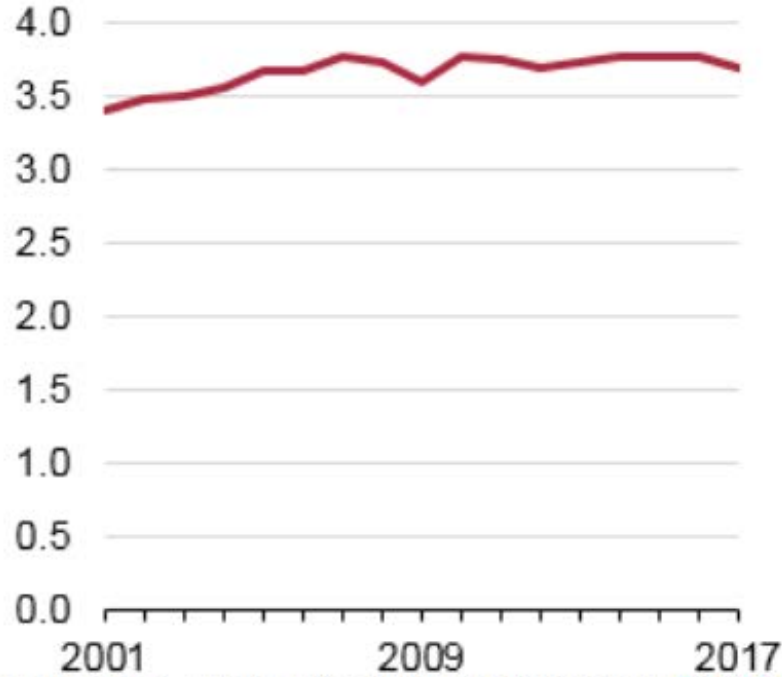
Chairman, E Source



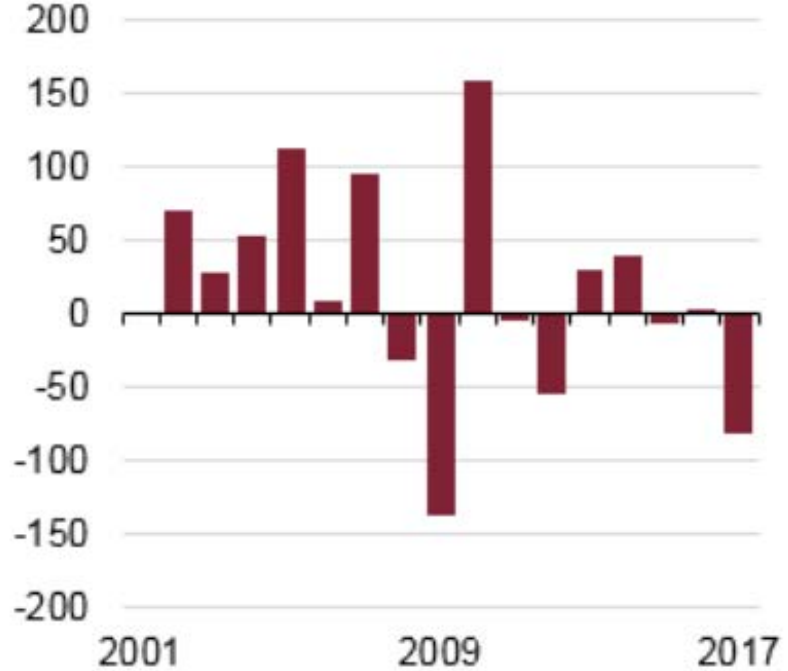
**E Source**

2018 E Source Summit for the Tennessee Valley

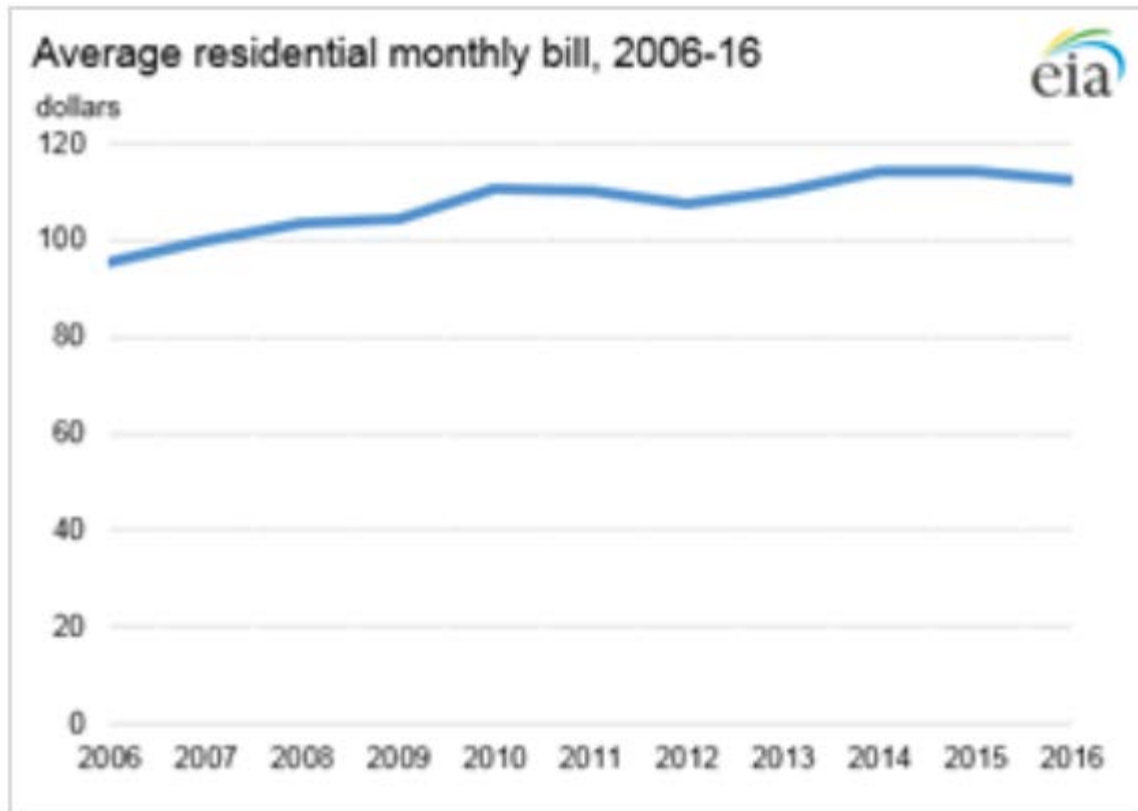
**U.S. retail electricity sales (2001-2017)**  
trillion kilowatthours



**Annual change**  
billion kilowatthours



Source: U.S. Energy Information Administration, [Electric Power Monthly](#)



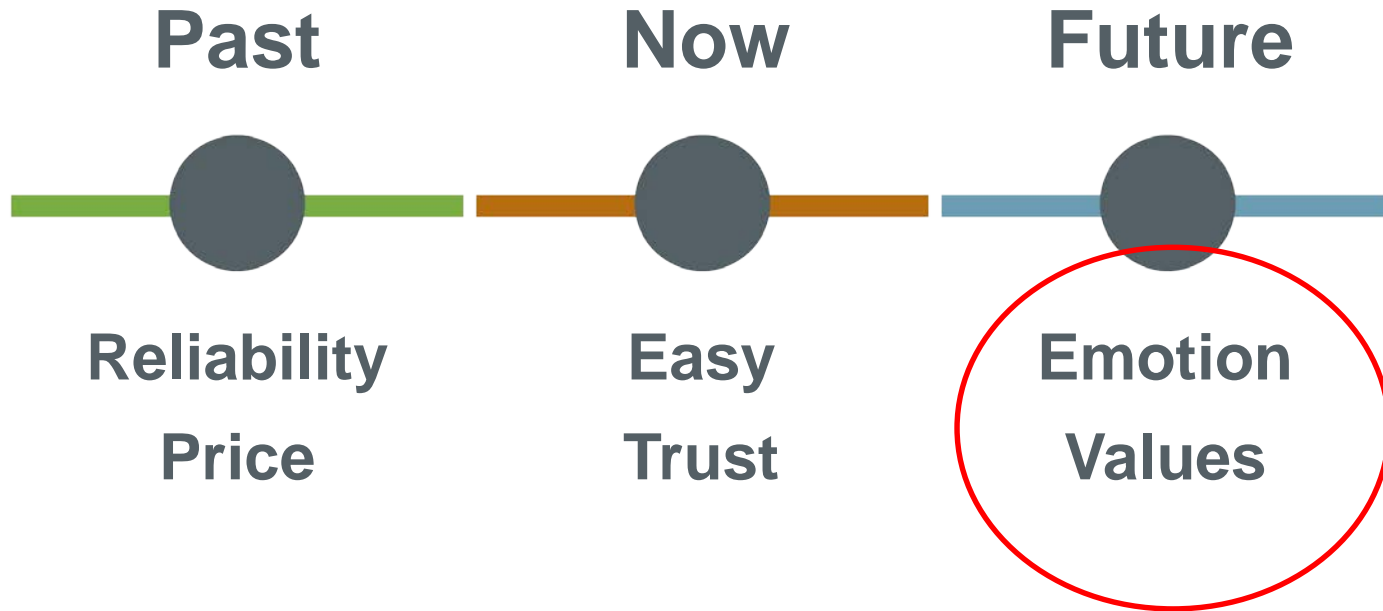
Source: U.S. Energy Information Administration, [Form EIA-861](#), Annual Electric Power Industry Report.



39



# Optimizing Your Brand for the Future



# The World of Energy Is Changing

# The Generation of Energy Is Changing

- Democratization of energy
- Distributed resources
- New possibilities for users to become producers
- Smart technology and blockchain will enable people to trade energy with their neighbors

# Transmission and Distribution Is Changing

- Priority access to renewables
- Balancing and ancillary markets growing in importance
- Resiliency
- Smart technologies abound
- NIMBY issues continue



# Storage Is a Game-Changer

Energy storage is moving from the mountains to the garage and the living room

# New Power Sources Continue to Emerge

- On-site generation
- CHP, MCHP, fuel cells
- Biogas
- Fusion power

# Brands from Other Sectors

- Retailers with extensive knowledge of branding and customer care will add electricity to their value chain. So will other beloved brands.
  
- Who will the **consumer** choose?

# How Energy Is Consumed Is Changing

Electricity is not just used for the oven or to light the home. It's flowing into the car and even from the car to the grid.



Courtesy: iStock

# Electricity Is Becoming Exciting Again

- Electricity is more visual
- Electricity is becoming more tangible
- Electricity is becoming easier to understand
- Electricity offers more engagement



Courtesy: iStock

# Even IKEA Is in the Game

- IKEA is now producing energy
- Selling solar panels and battery storage systems



# Viral Solar: Panda Green Energy



Source: United Nations Development Program

- 50 MW plant now on line as of summer '17
- First of over 100 to be built across Asia
- How? Darker monocrystalline silicon cells and light-colored thin film solar cells

New and Emerging  
Competition for  
Your Customers and  
Your Services



# New Types of Competitors



# Competitive Headwinds Will Continue

European energy companies are looking for global growth and see North America in their crosshairs

## Total Eclipse: Oil Giant Sees Its Future in Electricity

Sensing a peak in demand for crude oil, France's Total is betting it can also produce and sell electricity to businesses and consumers

WSJ: 6-14-17



## Oil Giant Shell Wants to Sell You Electricity

Investments in utility, car-charging business, solar firm come as British-Dutch company is planning for changing energy consumption trends

WSJ: 3-30-18



# Customers Are Changing

- Population and demographic shifts; ethnicity the new normal
- Households and families are changing
- Women becoming the majority of head of households
- Millennials now the largest bubble
- Baby boomers are retiring at a fast pace
- Growth in stay-in-home seniors



DIAGEO

# RE 100

Kellogg's

citi



MARS

facebook

Johnson & Johnson  
FAMILY OF COMPANIES

Google



Walmart

RICOH



PHILIPS



EQUINIX



Carlsberg  
Group

Adobe



Bank of America



Microsoft

ebay



Infosys



ING



AB InBev



BMW  
GROUP

Bloomberg

Steelcase

Coca-Cola Enterprises

TESCO  
hypermarket

Goldman  
Sachs



PEARSON

WELLS  
FARGO



# A Growing Landscape of Collaboration



WORLD  
RESOURCES  
INSTITUTE



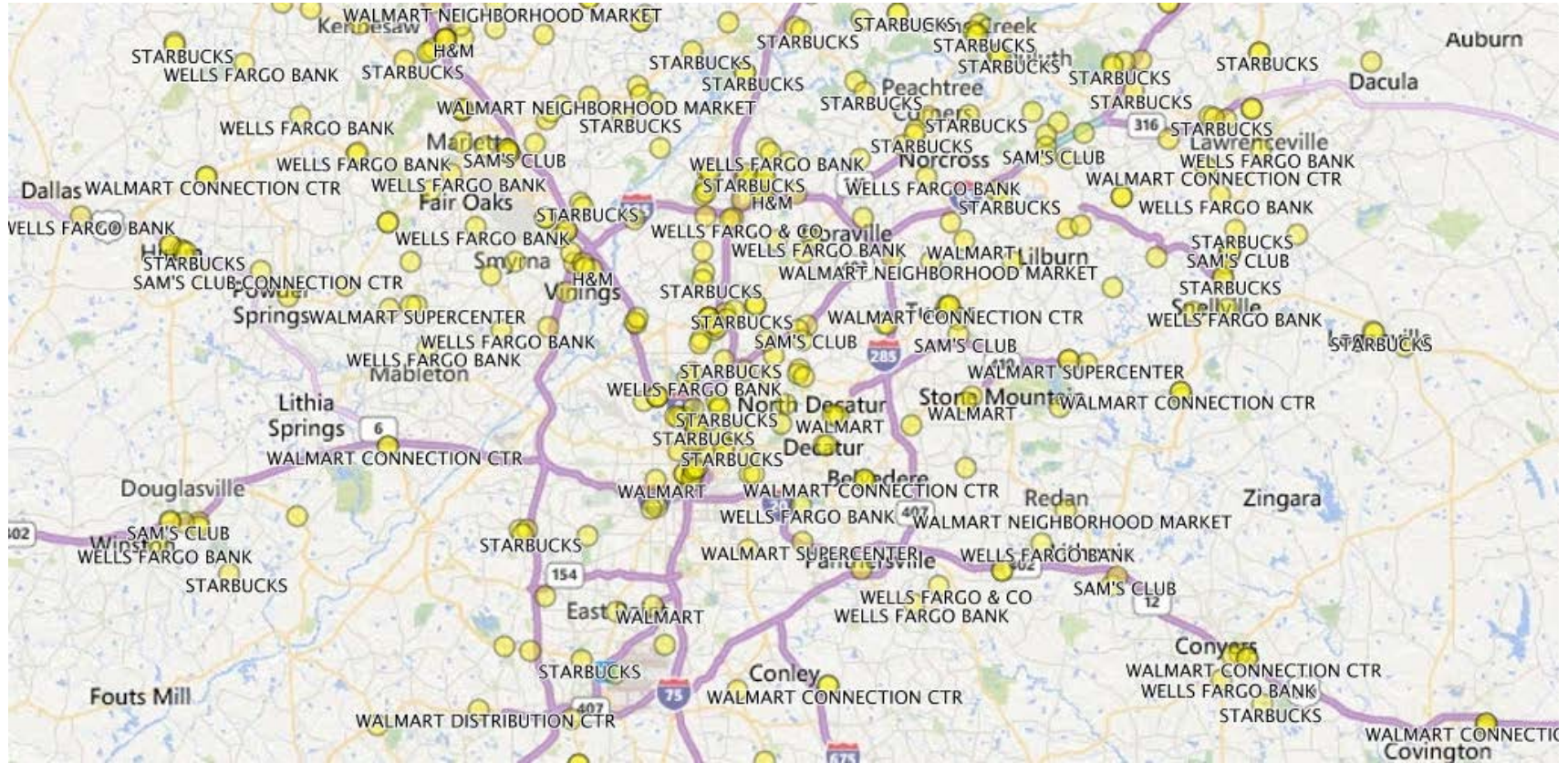
Future of Internet Power



Utility/Corporate Buyer Collaborative Forum

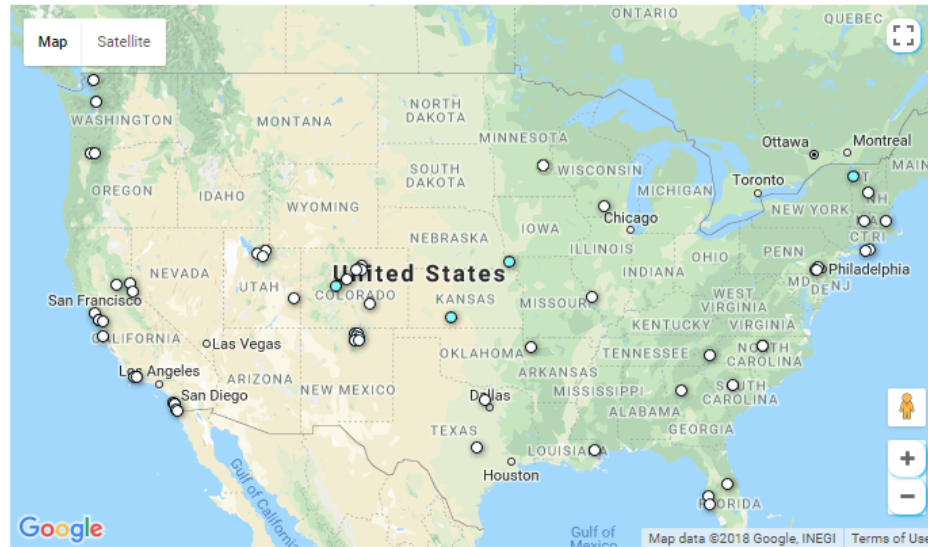



# You Serve Many of Their Facilities




# Cities and Communities Are Taking Action\*

53 US cities have committed to 100% renewable power under [www.sierraclub.org/ready-for-100/commitments](http://www.sierraclub.org/ready-for-100/commitments)



 **Powered by 100% Renewable Energy:** These communities have fully transitioned to 100% clean, renewable energy sources to power the community's electricity needs.

 **Committed to 100% Renewable Energy:** These communities have made community-wide commitments to transition to 100% clean, renewable energy no later than 2050.

\*as of April 2018

# Blockchain Is Poised to Be a Major Disruptor

- Peer-to-peer electricity trading is already here
- At least 125 start-ups doing energy blockchain initiatives (54 in the past 12 months)





# Lots of Froth, but Lots of Opportunity Too



Courtesy: iStock

# Why You Should Pay Attention to Blockchain ... or Not

- Blockchain will democratize the grid
- Many blockchain concepts could be done via a centralized database
- Regulator approval needed in most cases, but not all
- Protect the grid strategy or embrace being a transportation, delivery, and logistics business
- Grid balancing and flexibility market

# We Need to Think Like Competitive B2C and B2B Companies

- Energy retailers need to connect consumers with more than just a power cable or a pipe
- Retailers have to connect with their minds and emotions to understand and anticipate their needs
- Consumers are individuals with different needs

# Today's Mostly Utility-Centric Program Design & Marketing Strategy

1



Load-shape goal or cost-cutting goal



2



Target customers



3



Sell and bribe

# Shift to a **Customer-Centric** Product Design & Marketing Strategy

1



Research & target customers

2



Incorporate customer value & attractive attributes

3



Bake in utility goals & marketing

Think Beyond the Meter;  
Change Focus from  
Commodity to Customer

# Solutions & Value As a Service

**Comfort**  
(heating/cooling)

**Efficiency**



**Transportation**

**Productivity**

**Refrigeration**

**Lighting**

**Financing**

**Reliability**



**Hot water**

**Solar/renewables**

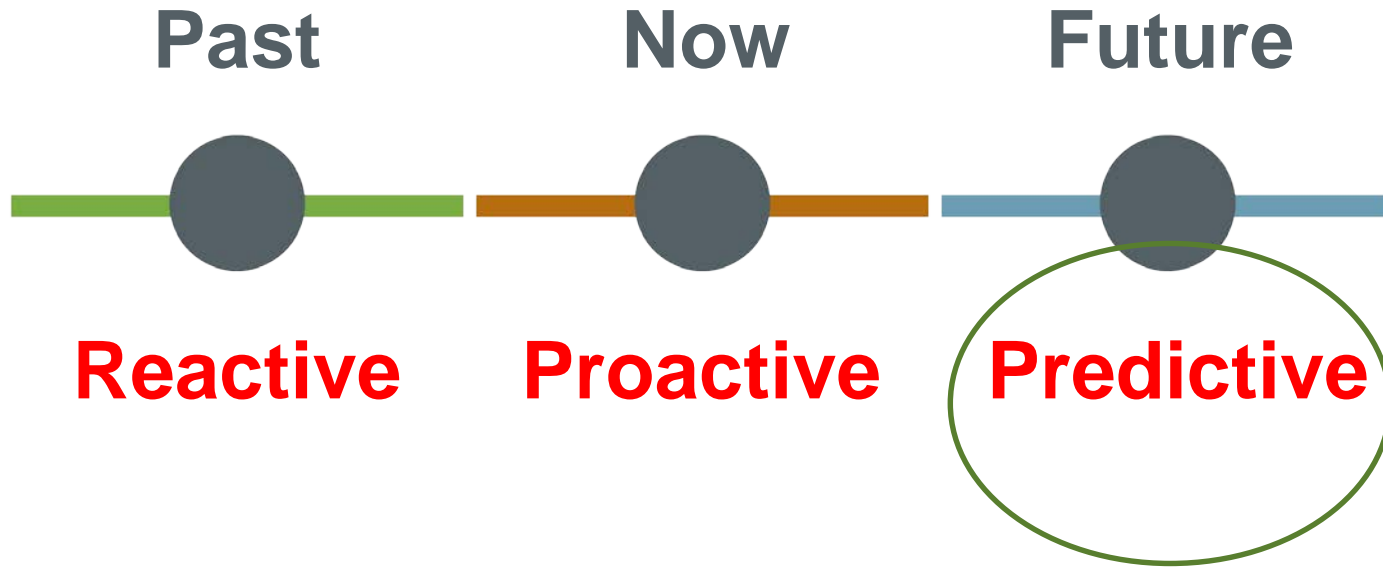
**Storage**

# Focus on the Customer Experience

- Customers' overall experience is more important than any single attribute, including price, in their view of companies
- [Re]Design business processes and policies with the customer in mind
- Make your website and IVR more user-friendly and make it easy for customers to do business with you
- Self-service is especially effective for some segments

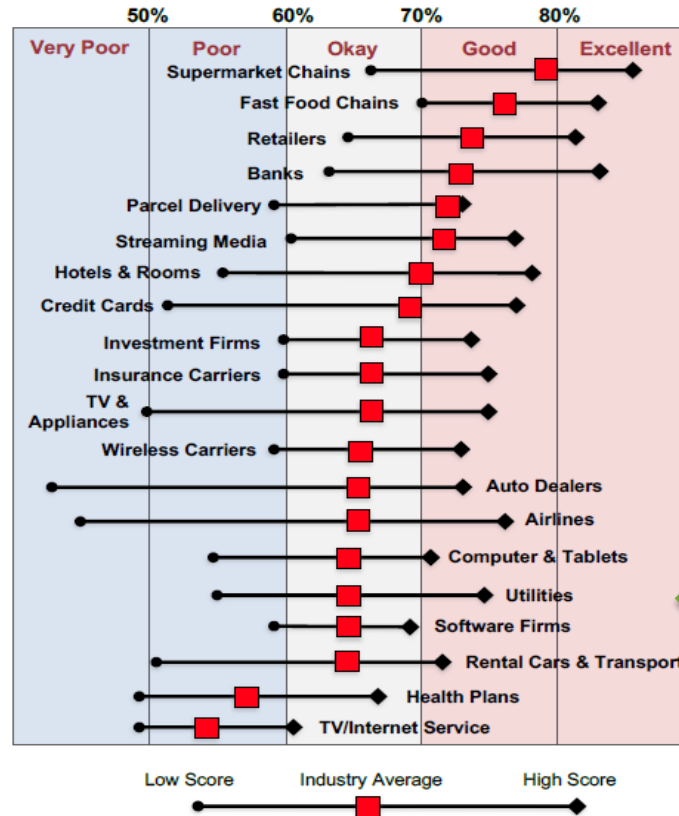


# Customer Experience for the Future



# Experience Ratings for Some Service Industries

2018 Temkin Experience Ratings (TxR),  
Range of Industry Scores



Base: 10,000 U.S. consumers  
 Source: Temkin Group Q1 2018 Consumer Benchmark Survey  
 Copyright ©2018 Temkin Group. All rights reserved.



# Which Retailer Gets the Highest Experience Ranking? (Temkin 2018)

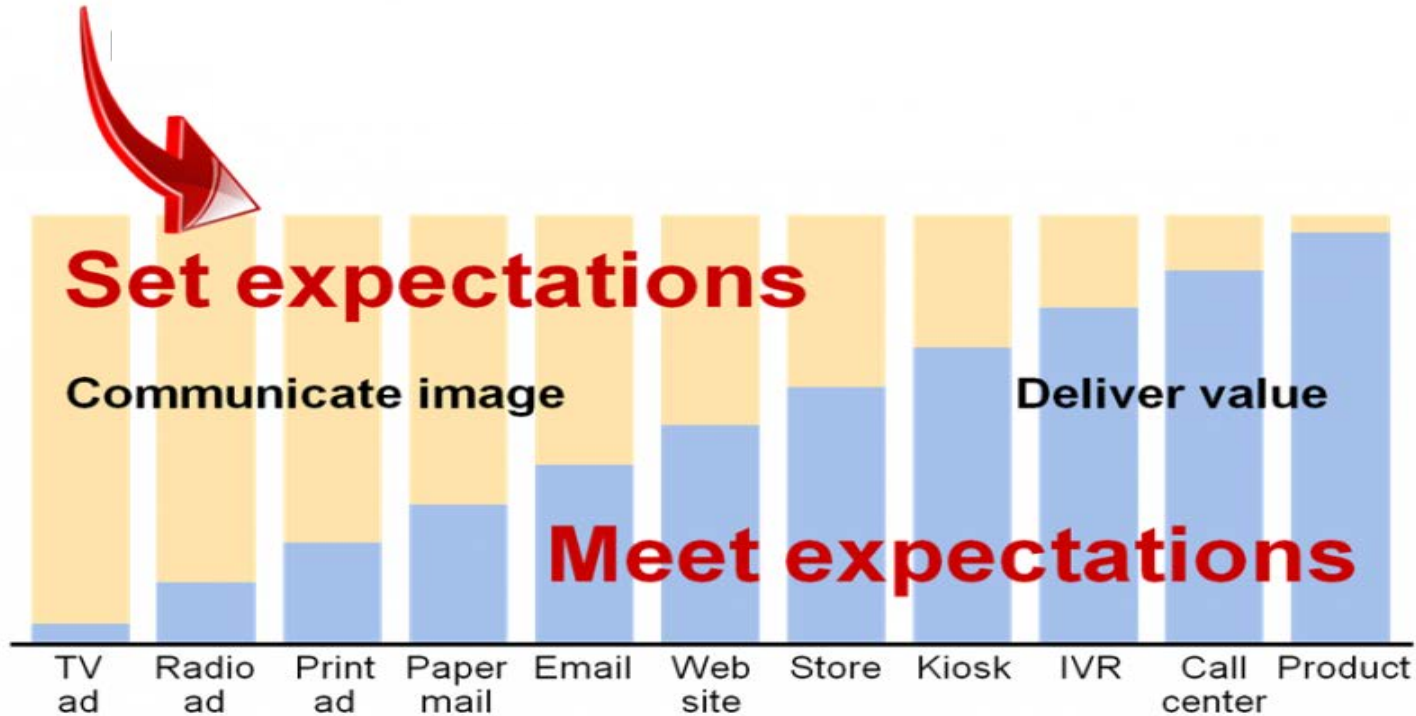
- Home Depot
- Nordstrom
- Dollar Tree
- Costco
- Apple Store

# Retailer Experience Ranking (out of 318 companies)

	Trust
#7 Dollar Tree	#150
#42 The Home Depot	#86
#65 Costco	#34
#124 Nordstrom	#47
#184 Apple Store	#15

Source: Temkin Group Q1 2018 Experience Rating Customer Benchmark Survey

# Two Primary Elements: Brand Expectations Versus Delivery on Expectations



Source: Customer Experience Defined ([http://blogs.forrester.com/harley\\_manning/10-11-23-customer\\_experience\\_defined](http://blogs.forrester.com/harley_manning/10-11-23-customer_experience_defined))

# Human- Centered Design

“Deep empathy for people makes our observations powerful sources of inspiration. Being human-centered is at the core of our innovation process.”

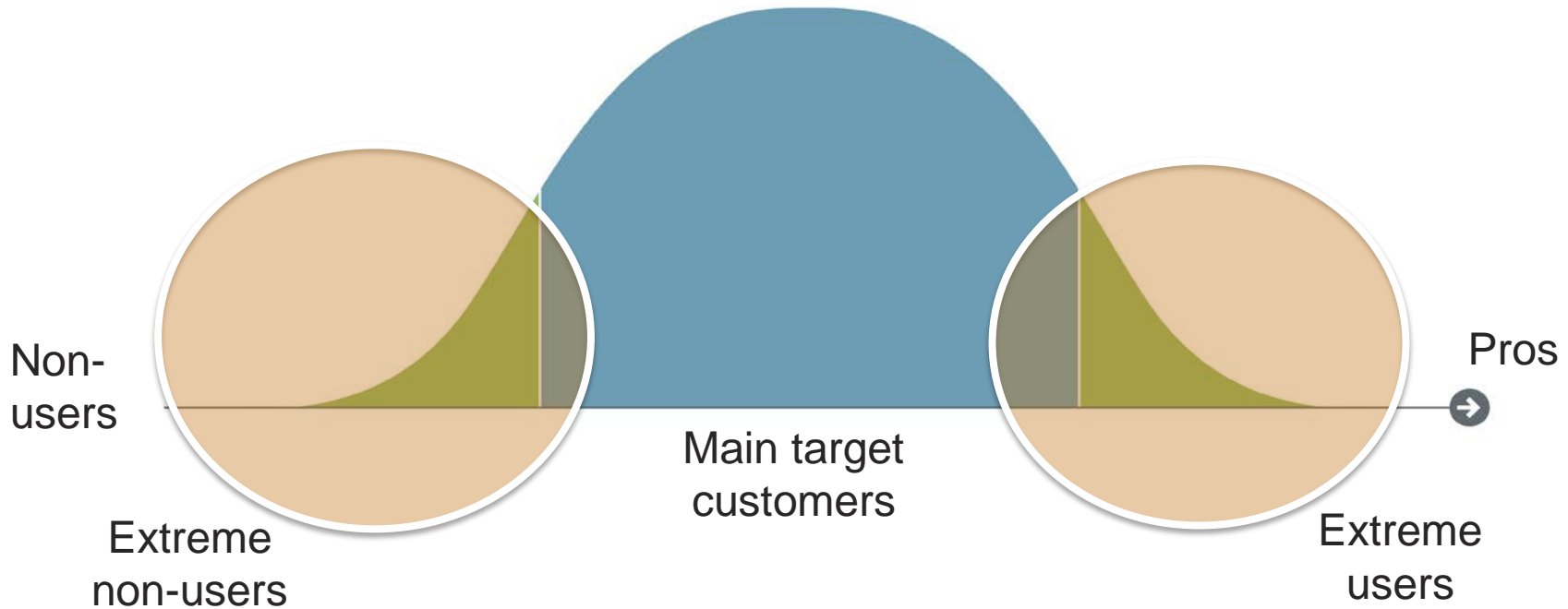
—David Kelley, IDEO

“Design thinking provides an immediate **framework** and approach for **becoming customer-centric**, as well as pushing **innovation boundaries.**”

—*Harvard Business Review*



# Discovery and Insight by Looking at Extreme Users and Non-Users



Courtesy: <http://weunleash.co/blog/2015/01/22/extreme-user-research-the-case-of-nintendos-wii/>

# Research into Extreme Users and Outliers Can Help Reveal New Solutions

## Ford Fusion Hybrid Smart Gauge with EcoGuide



Source: Ford Motor Co.

Researchers:

- Found a group that called themselves “hyper-milers”
- Watched their actions
- Then designed automated interaction, coaching, and feedback into the dashboard

# Another Example

## Bank of America: Design Discovery

Introducing a whole  
new kind of change jar.

Keep the Change™



Source: Bank of America

Researchers:

- Found a woman who was really stretching to save
- Watched her actions: balancing her checkbook
- Designed a whole program around that inspiration

**Design**  
**+ Service**  
**+ Experience**  
**=**  
***BRAND***

# The Utility Bill Is Your Brand

Acct # : 1234567890 Bill # : B150322222 Bill Date : 03/24/15 Page: 1 of 1

John Doe Service at ES1 ID # 10090000000  
 John Doe 1234 XYZ DR  
 1234 XYZ DR CITY, TX 75000-0000  
 City, TX 75000 Email: ABC@XYZ.com

17154 Butte Creek Rd, # 250  
 Houston, TX 77090  
 PUC License No. 10170

Questions or Comments  
 281-552-8390  
 1-888-545-4OUR(687)

Email: CustomerService@OUREnergyLLC.com  
 Web: www.OurEnergyLLC.com

For Outages / Emergencies Call:  
 Oncof Electric Delivery 888.313.4747  
 (24 hours a day)

Outages and Emergencies  
 24 Hours/day 7 days/week  
 1-888-545-4887  
 Or call your local utility directly  
 ONCOR  
 888-313-6862

For more information  
 about residential electric  
 service please visit  
[www.powertochoose.com](http://www.powertochoose.com)

Usage History

17154 Butte Creek Rd, # 250  
 Houston, TX 77090

John Doe  
 John Doe  
 1234 XYZ DR  
 City, TX 75000

Our Energy, LLC  
 17154 Butte Creek Rd, # 250  
 Houston, TX 77090

Bill Date: 03/23/15 Bill Period - 02/19/15 thru 03/20/15

Previous Balance	New Charges	Payments/Adj.	Due Amount	Due Date
\$4.49	\$51.01	\$0.22	\$55.72	04/08/15

Meter	Type	Dates	Current Meter Read	Previous Meter Read	Multiplier	kWh Usage	kVAkW Demand	Energy Cost
1100000001	AC1	03/19 - 03/20	2244	2102	1	571.00		

**Current Charges**

City	Rate	Amount
Electric Service		
Energy Charge	571.00 0.04360	\$24.90
PASSCHG - TDSP Passthru Charge		\$24.90
Sales & Gross Receipt Taxes		
City Tax		\$0.75
Gross Receipt Reimb.		\$0.98
PUCRA Reimb.		\$0.08

**Payments and Adjustments**

Previous Balance	\$4.49
Payments and Adjustments	
Late Payment Charges on 03/12/15	\$0.22
Total Payments/Adjustments	\$0.22
Total Current Charges	\$51.01
<b>Total Amount Due</b>	<b>\$55.72</b>

**Contract Details**

Usage kWh	Avg Rate	Amount
02/19/15 - 03/20/15 Fixed Rate (Base - 0.04360)	571.00 0.04360	\$24.90

The average price you paid for electricity this month is 8.6¢/kWh. If you believe this bill is incorrect please contact OUR ENERGY to dispute the charges. If we fail to resolve the problem to your satisfaction you may file a complaint with the Public Utility Commission of Texas, PO Box 13306, Austin, Texas 78711-3306. Call(888) 793-8477 toll free or in Texas call (512) 996-7100. Hearing and speech impaired individuals with text telephones (TTY) may contact the commission at (512) 996-7106. You have a contract valid from 02/19/2015 to 02/18/2016.

Act # : 1234567890  
 Bill Date: 03/23/15 Bill # : B150322222  
**Amount Due: \$55.72 Due by: 04/08/15**  
 Amount Due After 04/08/15 \$58.18  
**Amount Enclosed : \$**  
 Make check payable to: Our Energy, LLC  
 Yes, I would like to donate \$\_\_\_\_\_ to Our Energy Electricity Payment Assistance Program

What's a therm or mcf?  
 What's a kilowatt-hour?  
 What's a kilowatt?

<http://ourenergyllc.com/help-tools/>



shared on December 1, 2017 ·  63 views ·  start a discussion ·  report ·  follow

# “What do I owe?” Hydro One unveils simplified electricity bills

The change, prompted by complaints from customers that bills were difficult to understand, follows more than a year of research through surveys of 5,000 customers and testing with focus groups.



**CUSTOMER NAME**

Your account number is:

**1234 5612 3456**

This statement is issued on:

**December 28, 2017**

## Your Electricity Statement

 For the period of: **November 23, 2017 - December 21, 2017**
**What do I owe?**

# \$149.<sup>77</sup>

See reverse for a summary of your charges

**How much did I use?**

You powered your home with



# 1,000 kWh

 of electricity this period

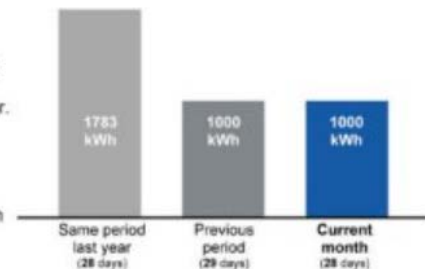
**When is it due?**

# Jan 16, 2018

**What does my electricity usage look like?**

Your usage has decreased by **44%** compared to the same period last year.

Find out more by logging into **myAccount** at [www.HydroOne.com](http://www.HydroOne.com)


**What do I need to know?**

Ontario's Fair Hydro Plan saved you **\$67.77** on your bill. This amount includes the **8% Provincial Rebate**.



For billing, quick answers and much more, visit [www.HydroOne.com](http://www.HydroOne.com)



For emergencies or reporting outages **1-800-434-1235** (24 hrs)



For service inquiries and payment **1-888-664-9376**  
Mon to Fri 7:30 a.m. - 8 p.m.



Hydro One Networks Inc.  
PO Box 5700  
Markham, ON L3R 1C8

Please return this slip with your payment.

 Your account number: **1234 5612 3456**

# ComEd Used Crowdsourcing to Help Design Its New Bill



ComEd shared a link.  
August 22, 2013

Calling all designers... ComEd is partnering with crowdSPRING to redesign ComEd's utility bill! \$5,000 in prize money will be awarded. Get the details and submit your great ideas using the provided link. The deadline for submission is Friday, August 31st Good luck! <http://bit.ly/1astm0Y>



crowdSPRING  
[www.crowdspring.com](http://www.crowdspring.com)

ComEd Residential Billing Statement | a crowdSPRING Print design project

Like · Comment · Share



**ComEd**  
An Exelon Company

Issued 11/12/13 • Account # 0000000000

**SERVICE FROM 10/10/13 THROUGH 11/8/13 (29 DAYS)**

• Retail Delivery Service - Res Heat Multiple

• **Total Amount Due by 12/4/13 \$87.60**

• Thank you for your payments totaling \$47.55.

**CUSTOMER**  
ADDRESS 1  
ADDRESS 2  
CITY, STATE ZIP  
PHONE #

**TOTAL USAGE (kWh)**

Month	Usage (kWh)
NOV	100
DEC	150
JAN	200
FEB	250
MAR	300
APR	250
MAY	200
JUN	150
JUL	100
AUG	100
SEP	100
OCT	100
NOV	100

Current month's reading is actual.

**AVERAGE DAILY USE** (monthly usage per day in period)

Period	Avg Temp	Usage (kWh)
Current Month	49° avg temp	28.6 kWh
Last Month	63° avg temp	13.3 kWh
Last Year	49° avg temp	22.0 kWh

↑ 30% from last year

↑ Ten 100W light bulbs for 1 hour = 1 kWh

**CURRENT CHARGES SUMMARY**  
See reverse side for details

Category	Amount
SUPPLY	\$59.20
DELIVERY	\$20.63
TAXES & FEES	\$7.77

**Current Charges \$87.60**

XYZ Energy Services provides your energy.  
[www.xyzenegy.com](http://www.xyzenegy.com)  
1 111 111 1111

You can choose at [MyGridNow.com](http://MyGridNow.com)

Return only this portion with your check made payable to ComEd. Please write your account number on your check.

**ComEd**  
An Exelon Company

ComEd delivers electricity to your home.  
ComEd # 1.800.314.7601

Pay your bill online, by phone or by mail.  
See reverse side for more info

Account # 0000000000

**Total Amount Due by 12/4/13 \$87.60**

Payment Amount:



# The Smart / Connected Home



Courtesy: iStock



# Alexa Brings Smart Home to Life



Source: Amazon

# Customers Like Smart Controls



[www.esource.com/videos](http://www.esource.com/videos)

Either Disrupt Yourself or Be  
Disrupted by Someone Else

# Need to Remove Your Filters

- We're blinded by our past memories, experiences, mores, culture, etc.
  - Selective attention
  - What color are yield signs?
- Stockholm Syndrome
- Need to embrace ambiguity and experiment
- Consider reverse mentors and pre-mortems



Television won't be able to hold to any market it captures after the first six months.”

—Darryl Zanuck, *Executive at 20th Century Fox, 1945*



Cellular phones will never  
replace local wire systems  
... even if you project it  
beyond our lifetimes, it  
won't be cheap enough.”

—*Marty Cooper, Motorola's Director of  
Research and the “Father of the Cell  
Phone,” 1981*



There's no chance that the iPhone is going to get any significant market share. No chance."

—*Steve Ballmer, CEO of Microsoft, 2007*



# When Competition Begins ...

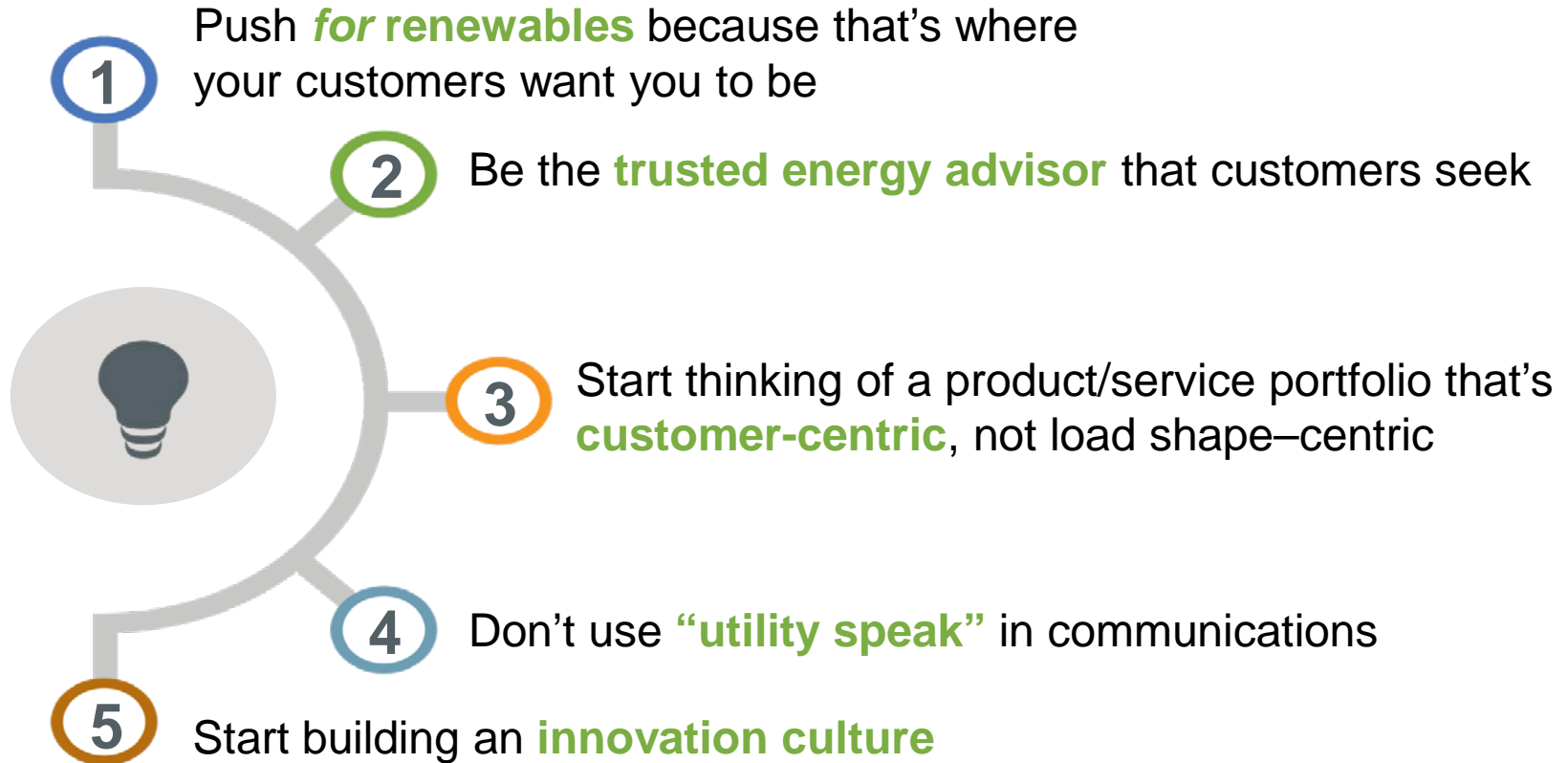
- First, we compete on price
- Then we compete based on better service
- Ultimately, we'll compete based on product and service innovation to increase the “stickiness” of your product and the loyalty of your customers

“Never ever compete on prices; instead compete on services and innovation.”

—*Jack Ma, Chairman of Alibaba*

The future competitor  
will not be your friendly  
next door utility  
neighbor

# Positioning the Utility of the Future



# Easy to Do Business With



Source: Rocketdock.com

# Engage Customers



- Many opportunities to engage
- Connect with customers
- Map the customer journey
- Offer an omnichannel experience
- Culture is everything

# Have You Heard These Phrases at Your Company?

*“We tried that X years ago and it didn’t work.”*


*“There are too many hurdles to jump over.”*

*“That wouldn’t get approved by the boss.”*

***“Why we can’t”***

Wall  
of ~

EXCUSES

let's hear 'em! 



Virtually no support from IT for identifying/  
developing/implementing tools necessary for customer  
experience.

CAN WE GET  
COST RECOVERY??

"They" don't want to  
do that / did it and it  
failed

not tied  
to capital  
projects... sorry...

The **REGULATORS**

will **NEVER** approve that

"... but we have  
always done it  
this way."

"We want the most  
True  
Innovation. Our  
Customer Demand it"

we need to have a  
business case before  
we can consider it.



Not enough  
time!

other  
priorities ✓

Small, even tiny,  
Comfort Zone

That's not how we  
have always done it

We tried  
that once

Bad data/  
No data

It's not in  
the plan.

BUT... That's not  
in my job description!

My Legal team  
won't let me

"But ~~at~~ All our  
customers do not that."

Was that budgeted?

No one will buy into that!

People won't change - customers +  
employees  
Don't want to try new shit

"our 'legacy' systems prevent us from doing that...."  
Ditto! x2x3 "T&D says No" Budget

Vertex will take too long. x2 + cost too much!  
LEGAL SAYS "NO"  
REGULATORY SAYS "NO"  
CUSTOMERS SAY "YES"  
w Ho wins?  
Bring it in house? this!

Too much negative press so we can't do anything. Fear.

IS that legal?  
can we do that?  
Budgets can't be co-mingled so we can't offer fully integrated solutions. I.e. EE + EV + solr

\$58K requires Board approval  
7 month minimum purchasing process

Lack of IT resources ✓

No money \$ ✓  
No savings so we can't do it. ✓✓

too costly  
No Budget - Finance says NO.

"... Um... there may be too many risks involved..."

"We tried that XXX years ago, and..."  
x10

We're different.

Not enough buy-in (from execs &/or employees)

This will NOT work!

-SCARED TO FAIL AND BE SEEN TO WASTE \$\$



# Closing Thoughts

- Remain relevant. The world is changing so much, and that needs to be reflected in what you do and don't do.
- Your brand is *very* important.
- New Age of Storytelling; Marketing for a Visual World; and with emotion
- Be purpose-driven



# If Your Utility Were an Animal ...



[www.esource.com/videos](http://www.esource.com/videos)

“

**HOPE  
IS NOT A  
STRATEGY**

*—Vince Lombardi*

# Thank You !



## Kenneth Black

Chairman, E Source

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**Have a question? Ask E Source!**

Submit an inquiry: [www.esource.com/question](http://www.esource.com/question)