



# **Counting On Consumers With TOU**

**#SECC2024** 





# **About PSEG Long Island**

PSEG Long Island is a subsidiary of Public Service Enterprise Group Incorporated (PEG).

PSEG Long Island operates the Long Island Power Authority's transmission and distribution system under a 12-year contract with ~1.1 million electric customers.

At PSEG Long Island, our mission is to build an industry leading electric service company that places safety first, in all we do, providing our customers across Long Island and the Rockaways with:

- Excellent customer service
- Best in class electric reliability and storm response
- Opportunities for energy efficiency and renewables
- Local, caring, and committed employees, dedicated to giving back to their communities



# **Utility 2.0 Rate Modernization**

- Our customers desire clear and consistent personalized information about their bills and rate options.
- Customers are looking for rate plan options that fit their lifestyle, are simple - easy to understand and easy to compare, and provide opportunities to save energy and money.
- Customers want PSEG Long Island to act as a knowledgeable source of personalized, actionable information to guide rate selection and the use of electricity in the most cost-effective manner.



# Investigating, Then Iterating

#### **Customer Centric – Lots of Research!**

#### Research & Evaluate

#### **Best Practices & Lessons Learned**

- Site visits and interviews with electric utility partners
- E-Source
- J.D. Power
- Smart Energy Consumer Collaborative
- Illume Advising
- MarketSmith
- Published papers & websites

# **Long Island Customer Research and Analyses**

- Early Focus Groups
- Ethnographic Interviews
- Quantitative Online Study (Rate Design, Segmentation, Adoption, Key Customer Requirements, Analytics)
- Concept Labs
- Intercept Interviews
- Bill Design Focus Groups
- Online Customer Panel Price
- Marketing Materials Messaging, Design, Website Quantitative & Qualitative
- Rate Comparison Tool Focus Group



## **PSEG Long Island Rates - Customer Personas**

#### TECH SAVVY (20%)



Early adopters
Concerned with money
Less concerned with env
Racially Diverse
Have payment reminders
SMS Alerts
Check their bills

#### SKEPTICALS (31%)



Least concerned with env Not worried about bills Well educated Fewer children Least diverse group Less willing to act Few smart thermostats

# PRICE CONSCIOUS (28%)



Concerned with money
Lagging tech adopter
Concerned for the env
Unsure of actions to take
Less educated
Lower and middle income
Uses paper bills

# ENVIRONMENTALLY CONSCIOUS (21%)



Concerned with env Takes env actions Moderately early adopter Highly educated Higher income Has smart thermostats Use paperless billing





# Intentional Design - Customer OPTIONS!

#### Residential

#### Late Peak (4 Hour)

- Late Peak Pricing Plan Residential Rate 191
- Peak 4 PM to 8 PM Mon to Fri, excluding holidays
- Off Peak All other hours
- Super Off Peak 11 PM to 7 AM every day

#### Early Peak (4 Hour)

- Early Peak Pricing Plan Residential Rate 192
- Peak 3 PM to 7 PM Mon to Fri, excluding holidays
- Off Peak All other hours
- Super Off Peak 10 PM to 6 AM every day

#### Short Peak (3 Hour)

- Short Peak Pricing Plan Residential Rate 190
- Peak 4 PM to 7 PM Mon to Fri, excluding holidays
- Off Peak All other hours
- Super Off Peak 10 PM to 6 AM every day

#### Overnight (Day/Night)

- Overnight Pricing Plan Residential Rate 193
- Day 6 AM to 11 PM
- Night 11 PM to 6 AM

#### Commercial

#### Small Peak (4 Hour)

- 4 Hour Peak Small Pricing Plan Commercial Rate 292
- Peak 3 PM to 7 PM Mon to Fri, excluding holidays
- Off Peak All other hours
- Super Off Peak 11 PM to 6 AM every day



# **Easy to Understand & Compare**

- During Off-Peak hours the customers rate is the same as the standard Non-TOU rate
- Overnight Super Off Peak periods 40% discount from standard rate!

Rate Code	Peak	Off Peak	Super Off Peak
190	199%	100%	60%
191	169%	100%	60%
192	177%	100%	60%
193	n/a	112% (Day)	60% (Night)
292	161%	100%	60%



# **Getting the Best Deal!**

• 88% of total annual hours are Off-Peak / Super Off-Peak

Rate Code	Peak	Off Peak	Super Off Peak
190	9%	58%	33%
191	12%	55%	33%
192	12%	55%	33%
193	n/a	71% (Day)	29% (Night)
292	12%	59%	29%





# **Meet Customers Where They Are**

#### **Focus on Connections with Your Customers**

# "Best Deal" Message with A Candid Tenor

Bargain Hunter Theme and Visuals



What is Time of Use (TOU)? the hours of the day when energy is cheaper for us

to produce so you pay less too.

Customers preferred the "techie" visuals but liked the "bargain hunting" message

Tech Savvy Theme and Visuals



Phase 2: Exploring Simple Themes

If you can shift your usage - you can save money on this rate

"If you can shift your usage you can save money, that gets me going..."

"Save money by shifting your usage of appliances. Take advantage of super off-peak reduced rates."

Help to reduce the stress on Long Island's electric system and improve reliability.

"You're telling me that I'm part of the problem."

"The stressed grid is your problem. If it's stressed, it's because of your own inefficiency."

Phase 3: Refining and Retesting Themes

Long Island straight talk

"Sorry, it's always about the money, LI is very expensive and we are always thinking about how to pay our bills."

"I feel guilty for how I've used energy."

Bargain hunter

"This is a good idea, this could work."

"This gets straight to the point."

One simple thing

"Stop the hyperbole. 'Fear, be afraid, fix it!"

"I feel misled, if I do my laundry at 8pm, it's just the same rate I have now."

Techie

"This has a plan of action, steps to take to analyze."

"I feel empowered."

"How exactly are we supposed to curb when we use our electric devices"

Survey tested bargain hunter and techie themes and associated visuals

Customers preferred the bargain hunter theme with the photographic "techie" visuals

Desire to be a smart, savvy shopper that enjoys the thrill of finding a good deal



## Rich Content – Website w. Search Engine Optimization



Time of Use Overview >

Compare Rates >

Tips & Testimonials >

FAQ >

# Why is TOU important? TOU shifts high energy demand off of more expensive peak hours and helps eliminate the need for what are called "peaker plants". Peaker plants are only used when demand for energy is high, but at a greater financial and environmental cost. By simply shifting energy usage to off-peak hours, we can use cleaner and more affordable power sources—helping you save in the process.



#### What will TOU do for me?

Use the calculator below to see how the new Time of Use rate plan lets you take advantage of the times of day when electricity is less costly for you to use. The calculator factors in your past usage and shows what your previous payments would have been with TOU. Once you've selected from the available rate plans, you can decide when to use your high-electricity-use devices (like electric car charger, pool pump, air conditioning, etc.) to avoid the high-cost (peak) times of day.

But that doesn't mean you can't use any power during peak hours. We all still have to live our lives. Things like using the oven, running smaller appliances and turning on lights won't have much of an effect, so you won't be inconvenienced. Finding the rate plan that best suits your lifestyle can make a difference for you and your family

#### Time of Use & EV Charging

In September 2020, Long Island native Ray F. decided to make the switch to an electric vehicle. Learn how he saves money each month with Time of Use

Make the Change to Time of Use

Learn more >



#### The "Best Deal" on Electricity

Doug C. of East Hampton got the best deal on electricity, saving almost \$250 in the first nine months of being on Time of Use (TOU). How did Doug get the best deal? What is he doing to save so much money? How can you get the deal Doug got?

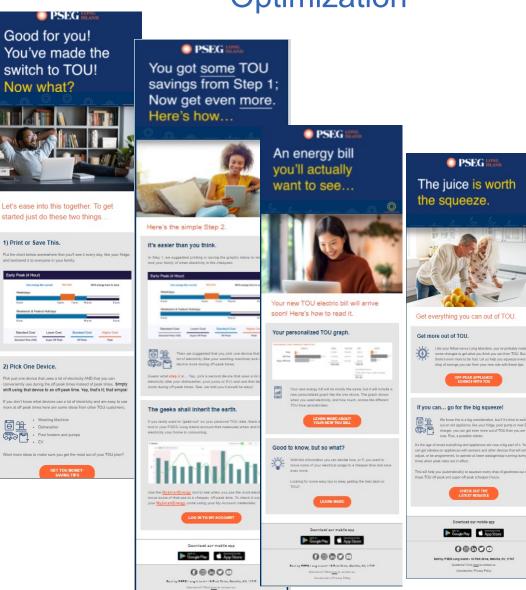
Learn more >



# Personalized Email Promo, Drip & Nurture Campaigns



# **Optimization**



# "1 Click" - Simple, No Log In - Best Rate Option



#### ...you're not getting the best deal on your electricity rates.

You're currently on Rate Plan [rate plan 4] at [home street name], but now there's a new deal on electricity that will work better for you.

We looked at your annual energy use and we did the math. With the new rate plan, called Time of Use (TOU), switching to Rate Plan [new rate code] will lower your annual energy cost and give you the equivalent of [#] week(s) in free electricity every year.

#### Make the switch to TOU

It's simple, all you need to do is click "Make the Switch." Try it out for a few months and see for yourself. Since switching is 100% optional, you can change from a TOU rate plan back to a flat-rate plan whenever you want.

MAKE THE SWITCH

#### How TOU works

Like the LIRR off-peak pricing, TOU gives you access to lower, off-peak electricity rates. If you want to save even more money, try shifting some of your energy use to off-peak times.

Watch this video to learn more.

#### What's in it for you; what's in it for us...

For you – lower electric bills.
For us – lower operating costs.
Shifting use to off-peak times means we can purchase more energy at a lower cost and pass the savings on to you.

Log in to compare for yourself.



#### You're making the right choice!

You're currently on Rate Plan 181 at 126 Main St.

With the new Time of Use (TOU) rate plan, switching to Rate Plan 192 will lower your annual energy cost and give you the equivalent of 3 week(s) in free electricity every year.

Service Address: 126 Main St.

Email Address: brian.kurtz@pseg.com

Customer ID: \*\*\*\*\*3693 New Rate Code: 192

#### Make the switch to TOU

Try it out for a few months and see for yourself. Since switching is 100% optional, you can change from a TOU rate plan back to a flat-rate plan whenever you want.



©2022 PSEG Long Island





#### Thank you for making the switch!

Congratulations on choosing a new pricing plan that lets you take more control of your energy bill.

We are processing your enrollment, which may take up to two billing cycles to complete. Upon enrollment, we will send a confirmation email and a bill up to the enrollment date to close out your prior rate. Normal billing will then resume on your new rate [new rate code].

New Rate Details:

Date: [date]

Service Address: [home street name]

New Rate Code: [new rate code]

Since switching is 100% optional, you can change from a TOU rate plan back to a flat-rate plan whenever you want.

If you have any questions about your new rate, please call our Customer Service Center, Monday to Friday, between 8:00 AM and 8:00 PM (800-490-0025).

Thanks for making the switch!

©2022 PSEG Long Island





# **Delivering Enhanced Insights**

# **Call Center Consults**

gridx





Rate Analysis Summary Rate Comparison Scenario Analysis

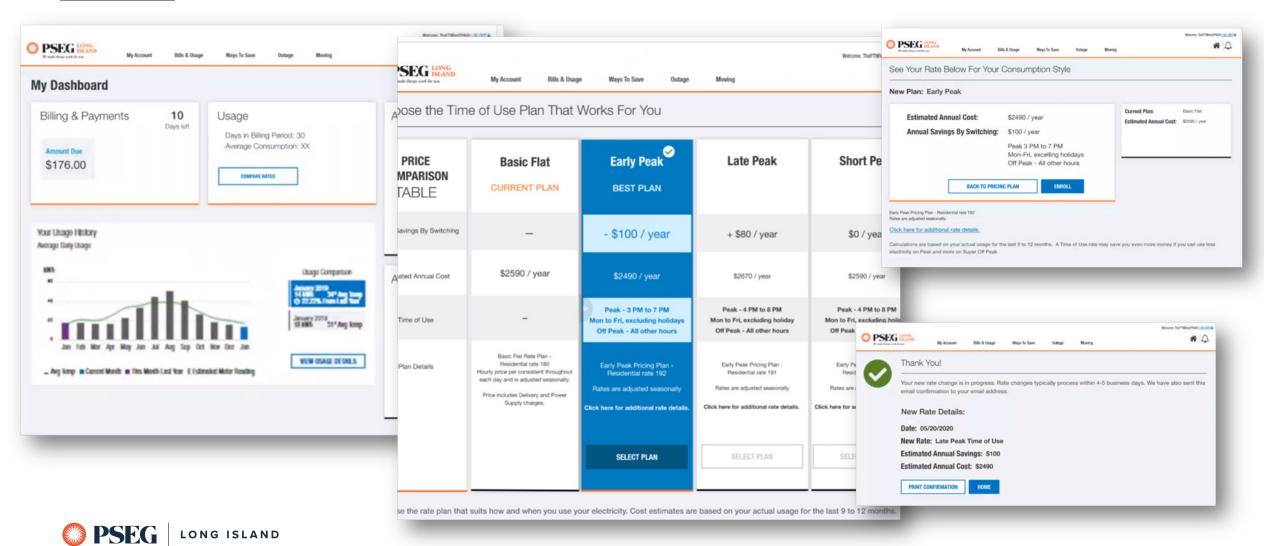
CAS ID: 6182088202	Analysis Date: 08	3/28/2023 Rate Effect	ive Date: 08/01/2023	Rate Code: 1	90 <b>Savings: \$</b> 6.19	Current Rate Cost	<b>\$</b> 4679.15
Rate	~	Marketing Name	~	Amount	~	Savings ↑	~
190		Short Peak (3 Hour)	:	4679.15		\$0.00	
191		Late Peak (4 Hour)	:	4672.95		\$6.19	
192		Early Peak (4 Hour)	:	4689.72		(\$10.58)	
193		Overnight	:	4742.57		(\$63.43)	
180		General Use		4873.87		(\$194.72)	

Rate Analysis Summary Rate Comparison Scenario Analysis

CAS ID: 6182088202	Analysis Date:	08/28/2023 Rate E	ffective Date: 08/01/2023	Rate Code: 190	Savings: \$6.19	Current Rate Cost: \$46	79.15
Start Date ∨	End Date	∨ 190	∨ 192	∨ 193	V 191	∨ 180	~
07-25-2022	08-24-2022	\$485.96	\$487.98	\$497.40	\$485.	94 \$512	.08
08-25-2022	09-22-2022	\$358.37	\$359.00	\$368.77	\$357.	06 \$379	.77
09-23-2022	10-24-2022	\$326.75	\$328.67	\$332.86	\$326.	68 \$338	.44
10-25-2022	11-21-2022	\$278.74	\$278.66	\$277.16	\$277.	50 \$280	.66
11-22-2022	12-21-2022	\$298.26	\$297.98	\$291.49	\$295.	62 \$296	.17
12-22-2022	01-24-2023	\$326.48	\$326.44	\$319.00	\$323.	73 \$324	.53
01-25-2023	02-21-2023	\$300.85	\$301.94	\$297.55	\$298.	62 \$299	.72
02-22-2023	03-23-2023	\$288.86	\$290.36	\$284.87	\$287.	52 \$289	.00
03-24-2023	04-23-2023	\$321.06	\$320.71	\$316.99	\$319.	39 \$323	.70
04-24-2023	05-22-2023	\$291.58	\$292,28	\$290.05	\$290.	18 \$296	.31
05-23-2023	06-22-2023	\$363.81	\$364.51	\$379.15	\$366.	26 \$392	.08
06-23-2023	07-24-2023	\$597.65	\$598.54	\$624.25	\$600.	30 \$653	.03
07-25-2023	08-23-2023	\$440.77	\$442.66	\$463.03	\$444.	15 \$488	.39
Total		\$4679.15	\$4689.72	\$4742.57	\$4672	2.95 \$48	73.87

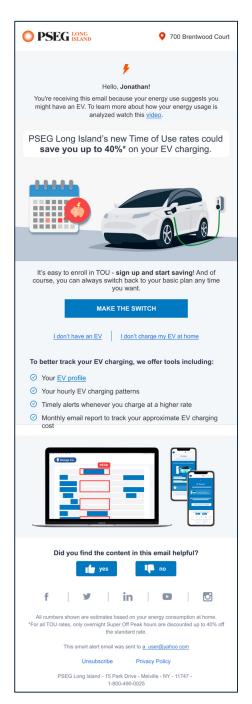
## **Personalized Rate Comparisons**



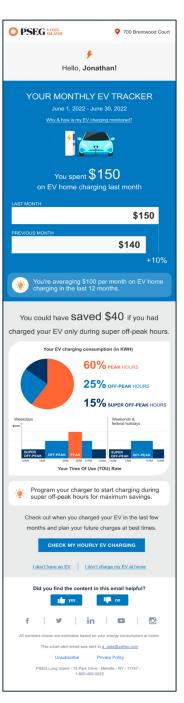


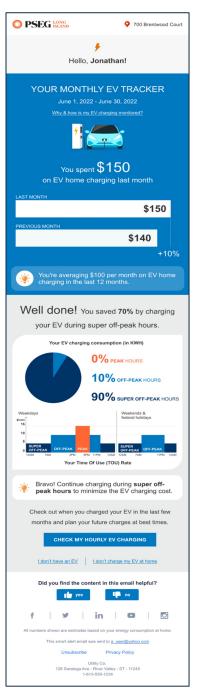
## **EV Charging Alerts**



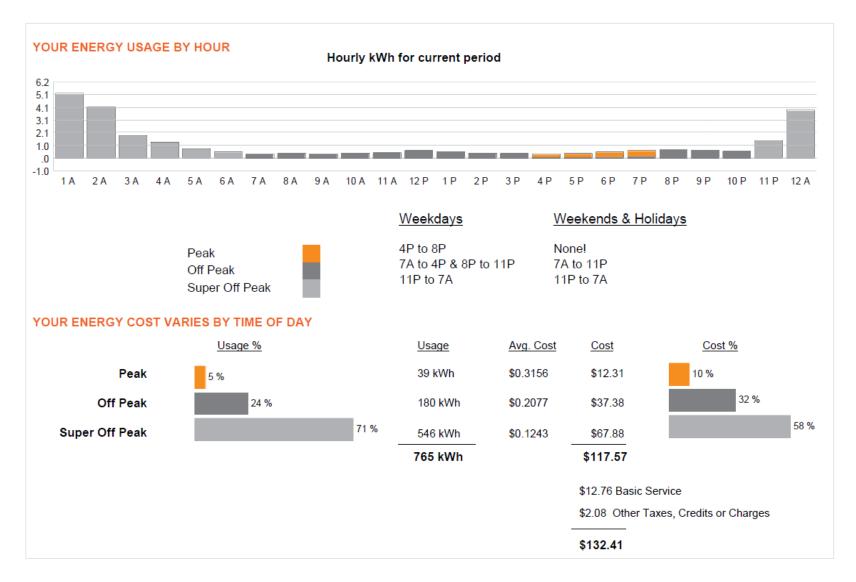








#### **New TOU Bill Content**







# **Best in Class Results**

# **Customers Shifted Load And Saved!**

#### SUMMER IMPACTS FOR CUSTOMERS ENROLLED BY JULY 1, 2022

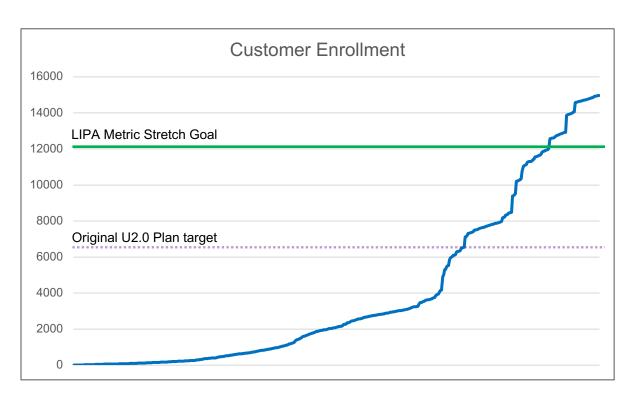
		то	U Custome	ers	Control Group			Impact	Impact		
Hour Start	Hour End	Before	After	Diff	Before2	After	Diff2	(kWh)	(%)	t-stat	n
12:00 AM	1:00 AM	2.13	2.48	0.35	1.98	2.12	0.14	0.21	9.2%	4.74	1,385
1:00 AM	2:00 AM	1.95	2.27	0.32	1.82	1.95	0.13	0.19	9.3%	4.96	1,385
2:00 AM	3:00 AM	1.81	2.08	0.28	1.68	1.80	0.11	0.17	8.7%	4.86	1,385
3:00 AM	4:00 AM	1.70	1.94	0.23	1.58	1.67	0.09	0.14	7.9%	4.37	1,385
4:00 AM	5:00 AM	1.62	1.81	0.19	1.50	1.58	0.08	0.11	6.4%	3.37	1,385
5:00 AM	6:00 AM	1.55	1.64	0.10	1.43	1.48	0.05	0.05	3.0%	1.70	1,385
6:00 AM	7:00 AM	1.49	1.45	-0.04	1.39	1.40	0.00	-0.04	-2.6%	-1.76	1,385
7:00 AM	8:00 AM	1.53	1.46	-0.07	1.42	1.40	-0.02	-0.05	-3.2%	-2.23	1,385
8:00 AM	9:00 AM	1.66	1.56	-0.11	1.57	1.55	-0.02	-0.09	-5.3%	-3.74	1,385
9:00 AM	10:00 AM	1.79	1.67	-0.12	1.72	1.72	-0.01	-0.11	-6.3%	-4.46	1,385
10:00 AM	11:00 AM	1.91	1.78	-0.13	1.90	1.91	0.02	-0.14	-7.4%	-5.08	1,385
11:00 AM	12:00 PM	2.03	1.90	-0.13	2.06	2.08	0.02	-0.15	-7.5%	-5.22	1,385
12:00 PM	1:00 PM	2.16	2.01	-0.15	2.19	2.22	0.03	-0.18	-8.0%	-5.90	1,385
1:00 PM	2:00 PM	2.26	2.10	-0.16	2.28	2.32	0.05	-0.21	-8.9%	-6.90	1,385
2:00 PM	3:00 PM	2.33	2.16	-0.17	2.34	2.37	0.03	-0.19	-8.1%	-6.53	1,385
3:00 PM	4:00 PM	2.39	2.21	-0.18	2.40	2.41	0.01	-0.18	-7.6%	-6.28	1,385
4:00 PM	5:00 PM	2.47	2.25	-0.22	2.48	2.48	0.00	-0.22	-9.0%	-7.47	1,385
5:00 PM	6:00 PM	2.56	2.34	-0.21	2.56	2.58	0.02	-0.23	-9.1%	-8.14	1,385
6:00 PM	7:00 PM	2.61	2.39	-0.21	2.59	2.63	0.04	-0.25	-9.6%	-9.12	1,385
7:00 PM	8:00 PM	2.62	2.42	-0.20	2.58	2.62	0.05	-0.24	-9.1%	-8.54	1,385
8:00 PM	9:00 PM	2.61	2.41	-0.20	2.54	2.58	0.04	-0.24	-9.0%	-8.23	1,385
9:00 PM	10:00 PM	2.57	2.39	-0.18	2.50	2.56	0.05	-0.23	-8.9%	-7.91	1,385
10:00 PM	11:00 PM	2.45	2.43	-0.02	2.36	2.42	0.06	-0.09	-3.4%	-2.61	1,385
11:00 PM	12:00 AM	2.32	2.60	0.28	2.19	2.30	0.11	0.17	6.8%	3.85	1,385

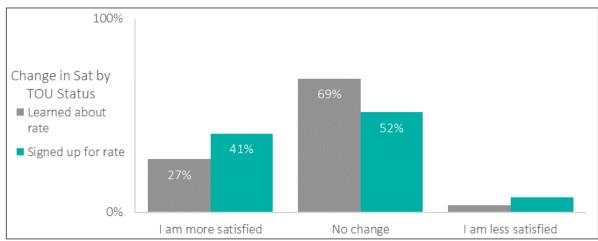
- Super Off-Peak in blue, Peak in orange
- Results:
- 1. û overnight
- 3.  $\oplus$  for all daytime hours
- No similar change for control group
- Results statistically significant for all hours

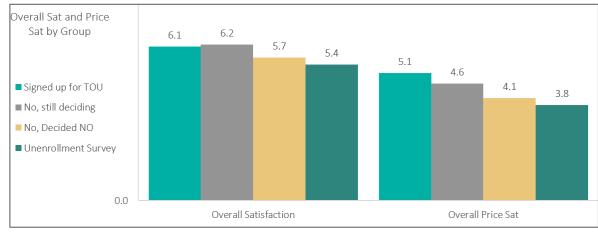
	<u>Bills Before TOU</u>			<u>Bills After TOU</u>			<u>lmpac</u>		
Month	TOU Customer	Control	Difference	TOU Customer	Control	Difference	\$ (Monthly)	%	n
June	\$324.88	\$318.26	\$6.62	\$267.26	\$295.38	-\$28.12	-\$34.73	-11.5%	1,276
July	\$358.05	\$351.14	\$6.90	\$367.04	\$404.74	-\$37.70	-\$44.60	-10.8%	3,819
August	\$377.16	\$371.60	\$5.56	\$348.31	\$384.52	-\$36.21	-\$41.77	-10.7%	5,040
September	\$265.85	\$262.21	\$3.63	\$222.12	\$242.19	-\$20.06	-\$23.70	-9.6%	6,431



#### **Pilot Success!**











# **Lessons Learned**



## What would we recommend?

- It takes a village involve all areas of the business
- Focus on your customers
- Start with Industry Lessons Learned & Best Practices
- Refine with local customer research.
- Understand internal systems and resources then optimize
- Create a robust vision and plan then iterate based on feedback and experiences
- Offer easy to understand and easy to enroll options
- Provide personalized insights both before and after enrollment

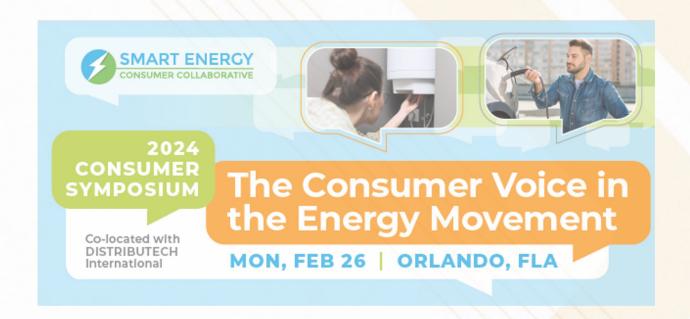




**JOU** 

Brian Kurtz (brian.kurtz@pseg.com)

Nayan Parikh (nayan.parikh@pseg.com)





GridX, PSEG Long Island, & Bidgely Joint Presentation



February 26, 2024

# gridx

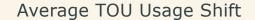
62%

TOU rates are available to 62% of U.S. residential customers

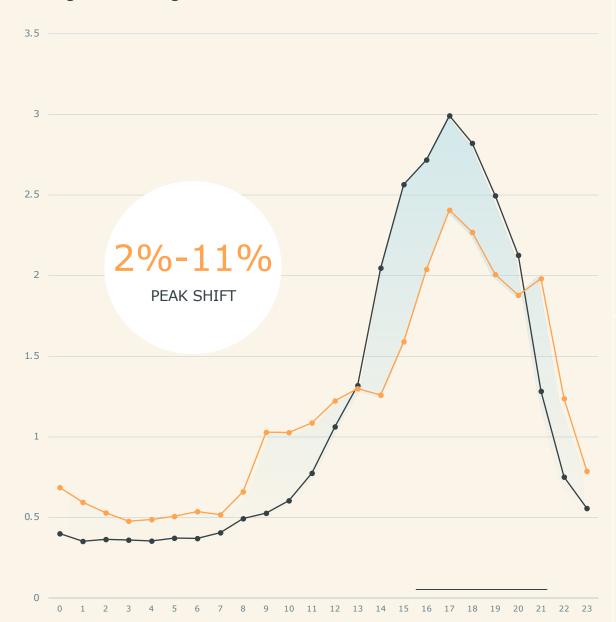
7.3%

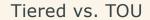
Only 7.3 of are enrolled

According to EIA data, while TOU rates are available to 62% of U.S. residential customers, only 7.3% are enrolled in these plans.

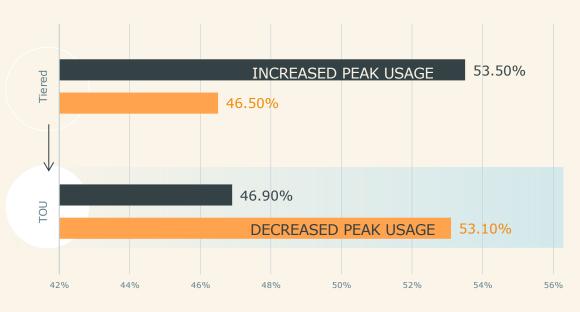


West Coast IOU - June 2021 vs. June 2022



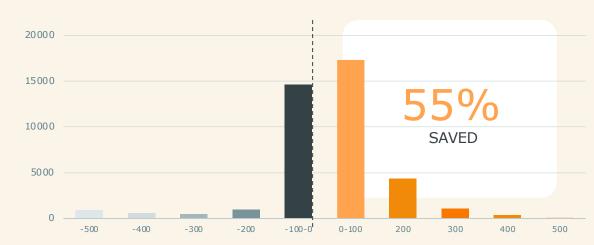


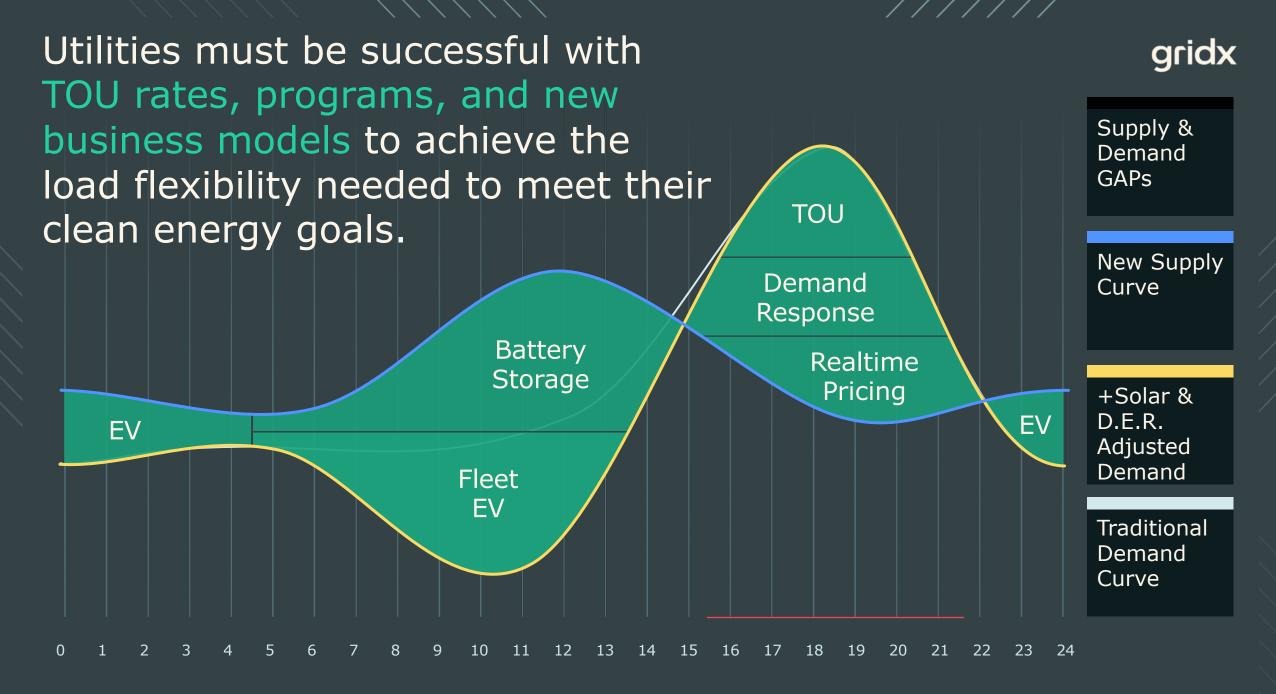
West Coast IOU - June 2021 vs. June 2022



#### LMI TOU Savings Distribution

East Coast Utility - 42K LMI Segment





©2024 GridX, Inc. / Private & Confidential

Success requires excellence across the entire utility product lifecycle

#### **RATE DESIGN & ANALYTICS**

Build and optimize products that benefit customers and support revenue goals

#### **CUSTOMER CONVERSION APIS**

Upgrade current customer experience with realtime, billing-grade conversion tools

#### **KEY ACCOUNT MANAGEMENT & SELF SERVICE**

Quickly access deep analysis and insights, and find best rates for most valuable customers

#### **ADVANCED BILLING ENGINE**

Augment billing systems with add-on billing engine for complex billing and calculation capabilities



## GridX overview



#### **ABOUT US**



GridX is the leading provider of Big Data Billing & Analytics technology for the new energy economy. Our technology enables utilities to better design, promote, operationalize, and drive adoption of emerging energy products and programs.

#### THE VALUE WE PROVIDE

- We enable the clean energy transition.
- We empower energy suppliers to swiftly design
   & deploy new rates & business models.
- We accelerate the adoption of renewables with billing-grade conversion tools.

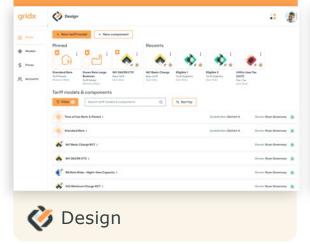
UNMATCHED SCALE		COMPANY				
26M Meters Under Contract	1T Intervals Under Management	15+ Large Utility Customers	Backed by EIP			
49M+	>500	135	2010			
Bills Calculated Each Day	Tariffs Modeled & Validated	Employees	Founded			

©2023 GridX, Inc. / Private & Confidential

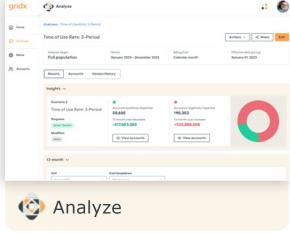
# The GridX Enterprise Rate Platform



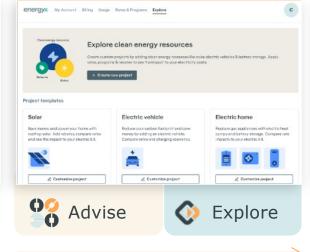




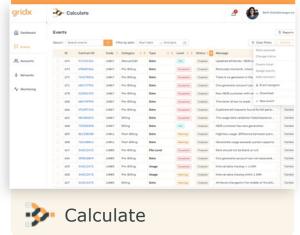
Segment & full population analysis



Accelerate rate adoption



Modernize complex billing



Design new rates that support the program and system goals

Make the most of your data, gain insights, improve decision making, consolidate access

Work with end customers to prepare and enroll them in new programs

Augment legacy systems and processes and prepare for the future

**Empower** 

REST APIS / WIDGETS

X Enterprise Rates Platform

DATA PIPELINE / RULES ENGINE

©2024 GridX, Inc. / Private & Confidential

## Our customers



























## But there is a problem...



According to TMG Consulting in their report, Bringing Stability to the Complex Billing Landscape...

"Utility billing is at a crossroads. While there are advances in core CIS capabilities, today's market realities demand a more powerful and agile solution to handle the complex billing needs that are cascading across the utility industry."

Get the report



And we are hearing about this pain loud and clear from utility executives...

"It cost us \$8 million to implement a single low-income rate"

"We pay an additional \$6 million per year to support manual billing of our complex rates"

"There are so many new programs we want to rollout but our CIS is holding us back"



bidgely

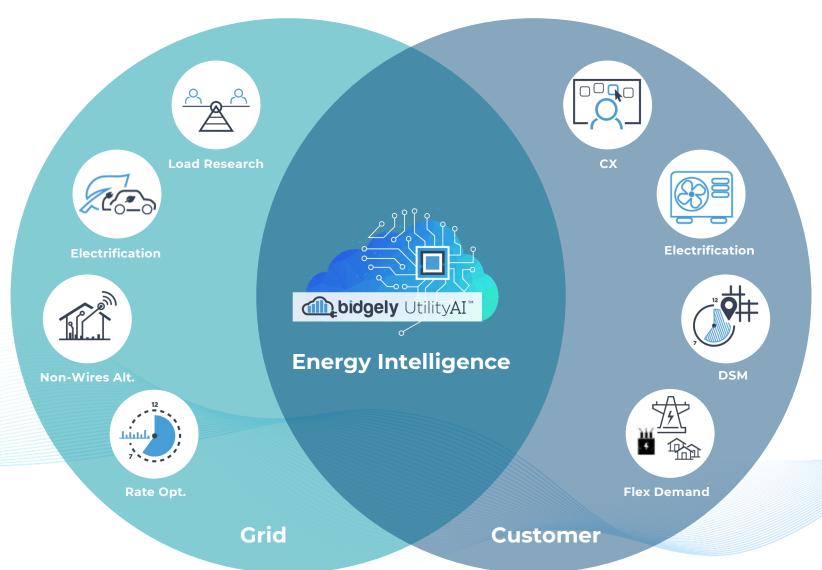
#### **Our mission:**

# To accelerate a clean energy future by enabling utilities and consumers to make data-driven energy decisions



## Our Vision:

## Customers Will Play a Key Role in a Grid Balancing



# UtilityAI: The Foundation of Personalized Energy

#### **Load Disaggregation**

Detects all major appliances (EVs, solar, HVAC, water heater, always on, ref, ...).
Identifies appliance inefficiencies and degradation.

#### **Next Best Interactions**

Hyper-personalized insights and tips, based on inefficient appliance disaggregated, energy



#### **Grid Optimization**



Capacity analysis for transformers, feeders, and substations Non Wire Alternatives, Ground up using AMI load research



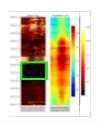
# **Customer Segmentation** & Targeting

Appliance Inefficiency, Low-medium income, Demand Response EV Adoption, Utility Program Enrollment



#### **Customer Bill Optimization**

Optimize the customer's Bill considering all impacting factors (weather, behavior, time of use, ...)



#### **Theft Detection**

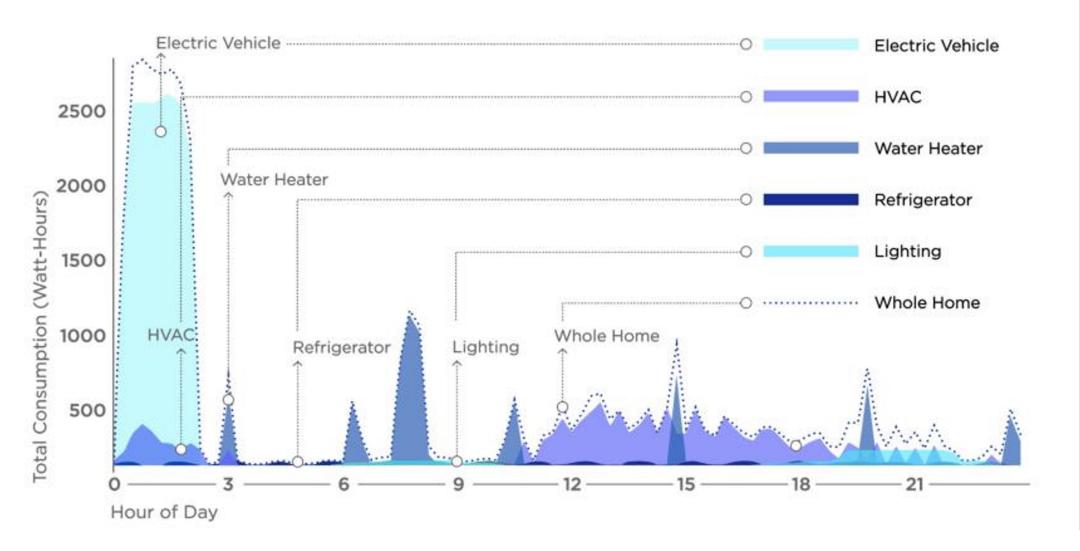
Deep Analysis of Meter Data to detect Meter Tampering, Direct Theft, Tariff misuse

#### Generative AI (2024)

Smart, natural language interaction combined with Bidgely Al



### TRUE DISAGGREGATION - UNDERSTANDING EACH CUSTOMER





## Solutions That Empower the Future of Energy

#### **CATEGORIES**

#### **SOLUTIONS**



EV Load Management



**Analytics** 



DER Grid Planning



**Customer Engagement** 

**Energy Efficiency** 

**EV Time of Use** 

**EV Managed Charging** 

**EV Intelligence** 

Behind-the-Meter (BTM) Targeting

Disagg as a Service

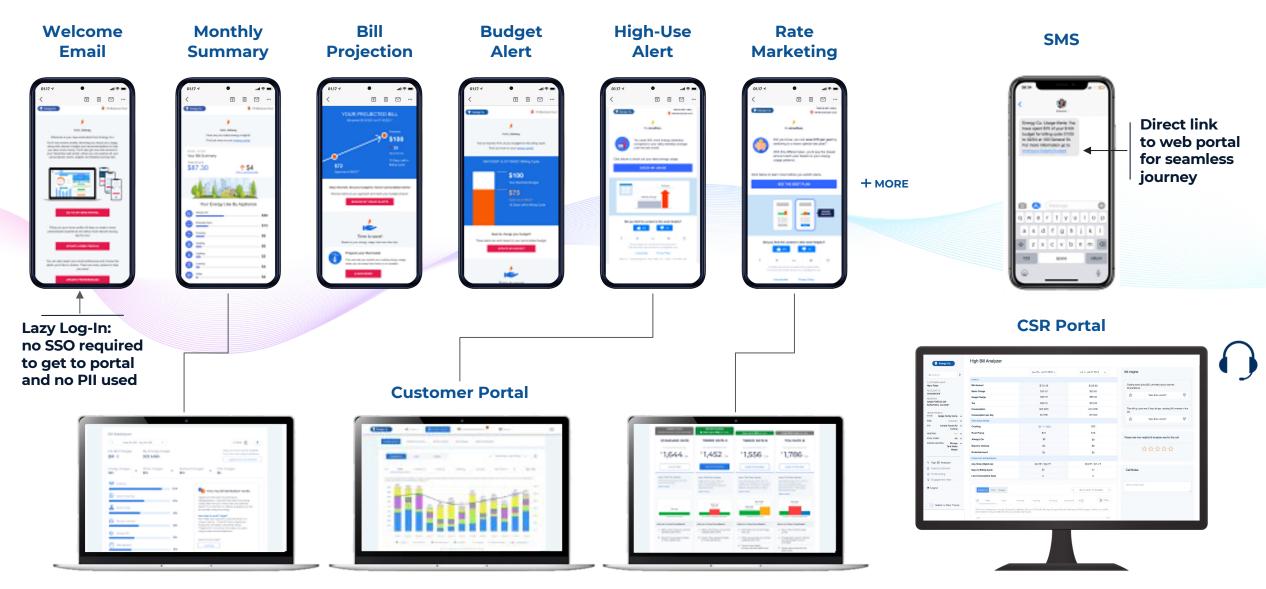
**Grid Planning** 

**Load Research** 

Bidgely is expanding its solution suite rapidly to offer plug-and-play Al-driven solutions for utilities, their customers and other energy partners.



## Hyper-Personalize Touch Points Across the Customer Journey







2024 CONSUMER SYMPOSIUM

Co-located with DISTRIBUTECH International The Consumer Voice in the Energy Movement

MON, FEB 26 | ORLANDO, FLA













# Thank You to Our 2024 Sponsors



**CLEAResult**®



ORACLE
Utilities



# Thank You to Our 2024 Sponsors











## See You in Dallas



