SMART ENERGY CONSUMER COLLABORATIVE

SECC Research Brief WEBINAR SERIES

Beneficial Electrification:

The Voice of the Consumer

June 18 at 1 p.m. (ET)

Today's Presenters

Nathan Shannon
Deputy Director
Smart Energy Consumer Collaborative

Sara Cappe
SVP and Managing Director
Maru/Matchbox Public Service Practice

Lee Ann Head
Senior Software Product Manager
Franklin Energy

Name	Background
Sara Cappe 	**SVP and Managing Director, Maru/Matchbox Public Service Practice** • Sara leads a team of consultants who are all passionate about utilizing technology and System 1 solutions to deliver impactful outcomes • She has over 15 years of experience consulting NFPs, utilities, governments and telecommunications firms across North America. • Sara has led numerous brand building, stakeholder engagement, reputation management, loyalty and retention, customer experience and thought leadership programs • She specializes in understanding the voice of stakeholders to all areas of the practice.

“Beneficial Electrification” Consumer Research

GOAL: Investigate consumer interest in transitioning to electricity from natural gas, petroleum or other fossil fuel sources in transportation, space heating, cooking and water heating.

Multi-Phase Research Project

SMART ENERGY CONSUMER COLLABORATIVE

Industry Scan White Paper

11 industry interviews
Literature review

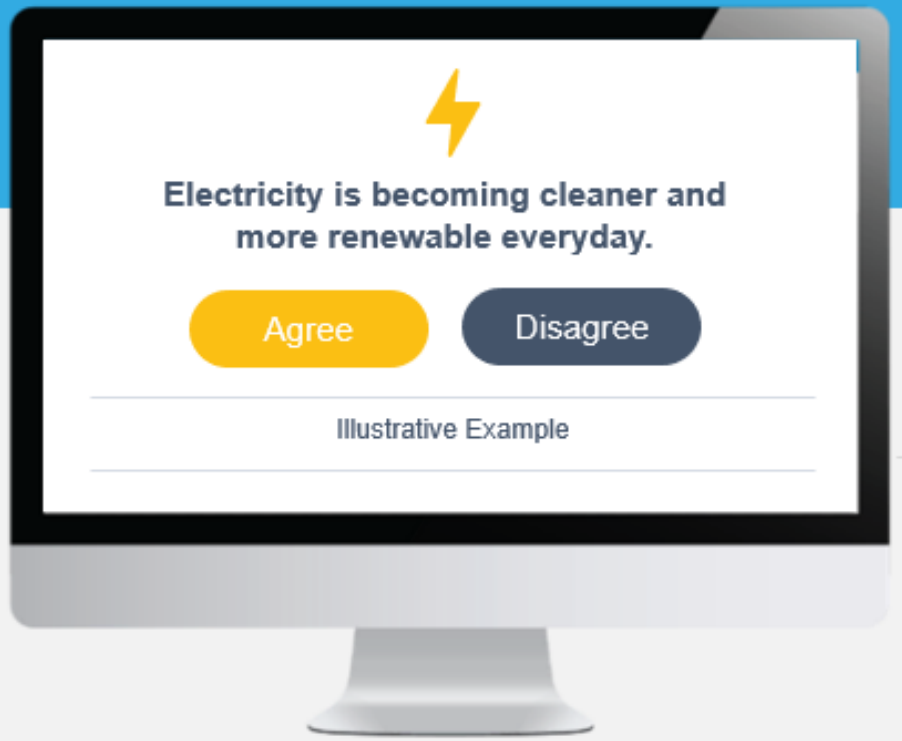
Consumer Research Report

Online survey with
1,200 Consumers

What is Crossroads Analysis?

SMART ENERGY CONSUMER COLLABORATIVE

Crossroads analysis incorporates our **Implicit Association Testing (IAT) with a MaxDiff exercise** to holistically understand consumer attitudes and behaviors.



What is Implicit Association Testing (IAT)?
In IAT, respondents are shown a series of statements and asked if they agree or disagree whether each statement applies to them. A short reaction time to agreeing or disagreeing with a statement shows implicit association with an instinctive reaction and strong connection (System 1). A longer reaction time is an explicit association, as it requires slower and more rational thinking (System 2).

Reaction time testing provides the means by which psychologists can discriminate subconscious brain processes from conscious thoughts or decisions. This is because conscious and subconscious mental processes occur within different timeframes, allowing for two distinct paths for decision making:

System 1

- Unconscious Emotions
- Very Fast
- Involuntary
- Associative
- Implicit Responses

System 2

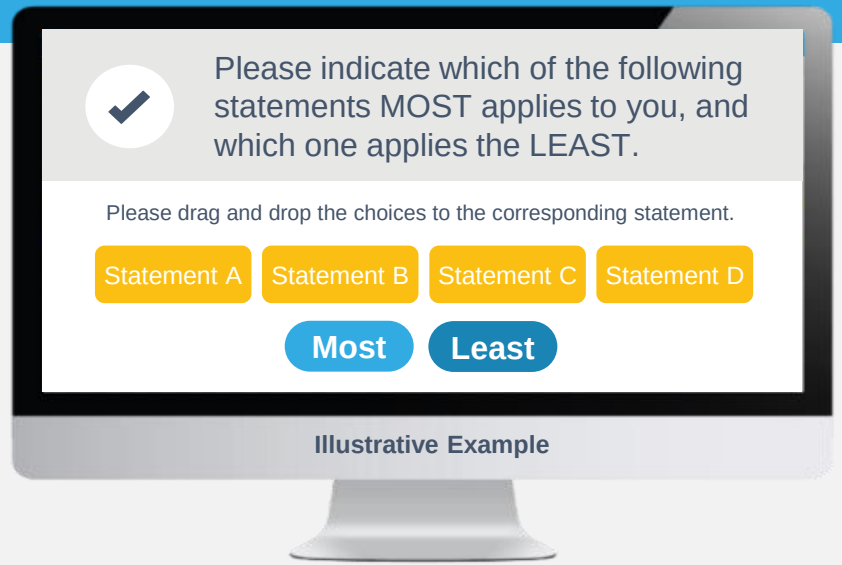
- Conscious Thinking
- Slow
- Controlled
- Rule Following
- Explicit Responses

What Does it Help Us Understand?

SMART ENERGY CONSUMER COLLABORATIVE

What is MaxDiff?

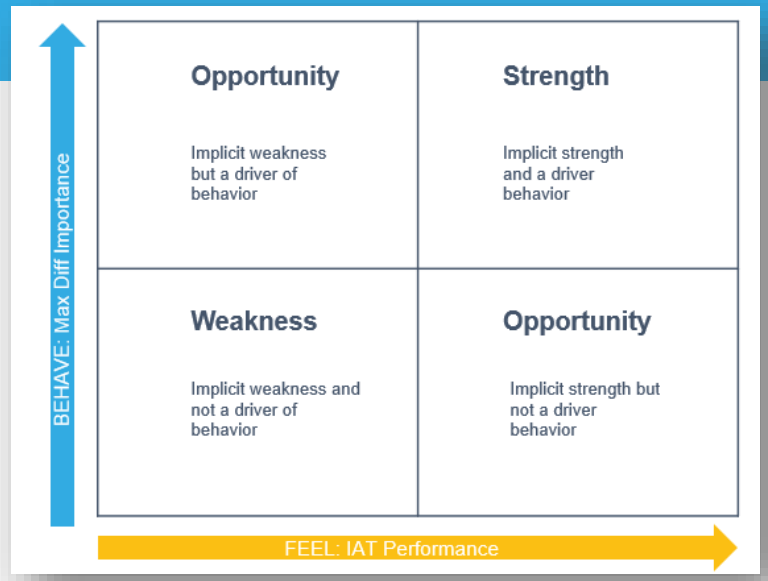
MaxDiff is a choice-based methodology that forces consumers to trade-off items that influence their decision process, which results in rank order data that can then be modeled to further derive the degree of importance.



Illustrative Example

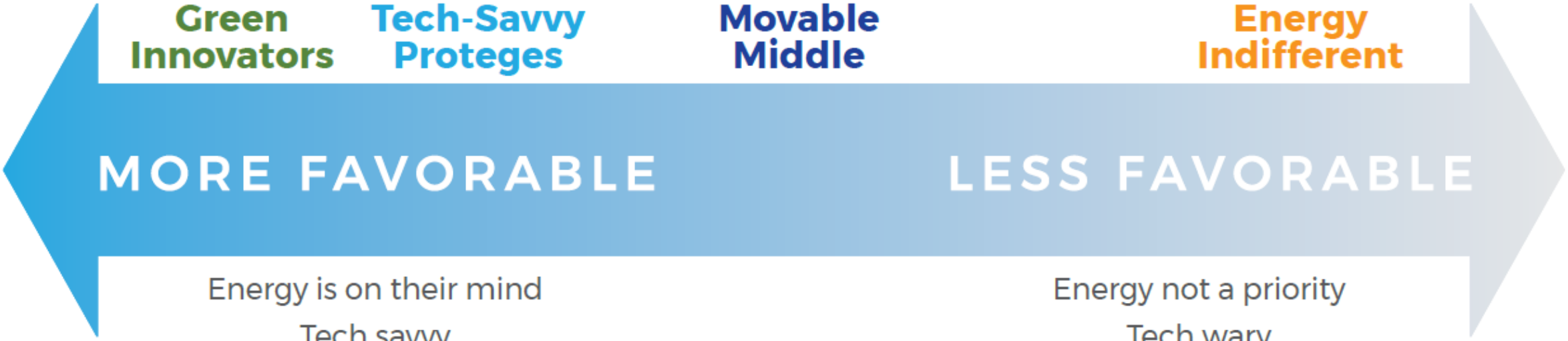
How does it come together?

The combined MaxDiff exercise and IAT results provide us with a white space opportunity map. This intersection of behavior and emotion uniquely unlocks the System 1 pathway to behavior.



SECC's Consumer Segmentation

SMART ENERGY CONSUMER COLLABORATIVE



Characteristics of SECC's Segments

SMART ENERGY CONSUMER COLLABORATIVE

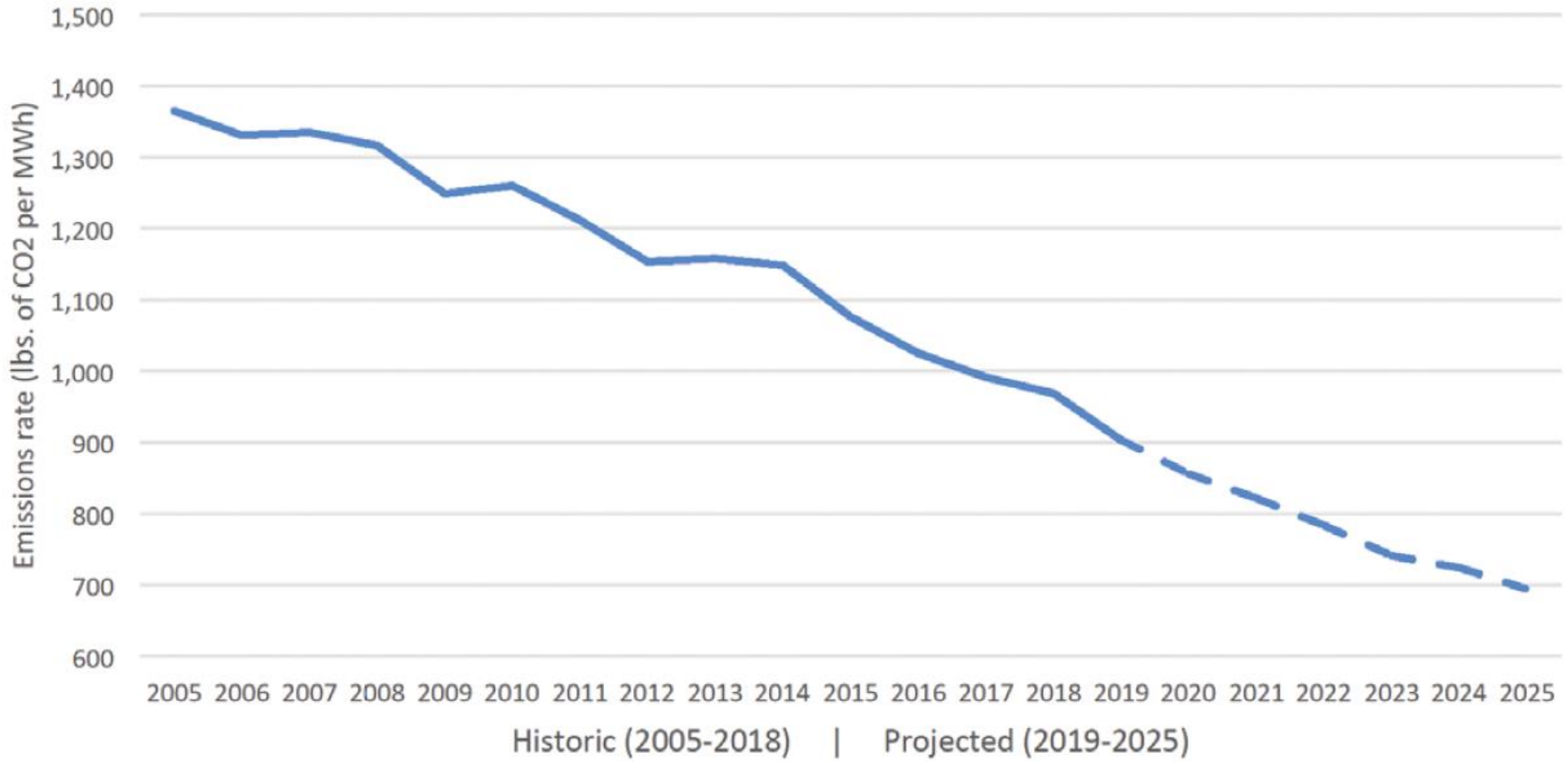
Segment Name	Proportion of Consumer Market	Age			Household Income*			Electricity Bill (Mean)
Green Innovators	20%	18–34 (29%)	35–54 (40%)	55+ (31%)	</=$50K (47%)	$50–$99K (29%)	$100K+ (20%)	$121.7
Tech-savvy Proteges	25%	18–34 (35%)	35–54 (35%)	55+ (30%)	</=$50K (37%)	$50–$99K (42%)	$100K+ (17%)	$132.0
Movable Middle	29%	18–34 (17%)	35–54 (32%)	55+ (51%)	</=$50K (52%)	$50–$99K (31%)	$100K+ (11%)	$117.0
Energy Indifferent	26%	18–34 (16%)	35–54 (25%)	55+ (59%)	</=$50K (57%)	$50–$99K (29%)	$100K+ (9%)	$112.8

*4–5% of respondents did not answer the income question, hence percentages do not add to 100.

Why Beneficial Electrification?

SMART ENERGY CONSUMER COLLABORATIVE

The grid's emissions rate is going down



What Makes It Beneficial?

Regulatory Assistance Project's Three Conditions

1. Saves Customers Money Over Long Term

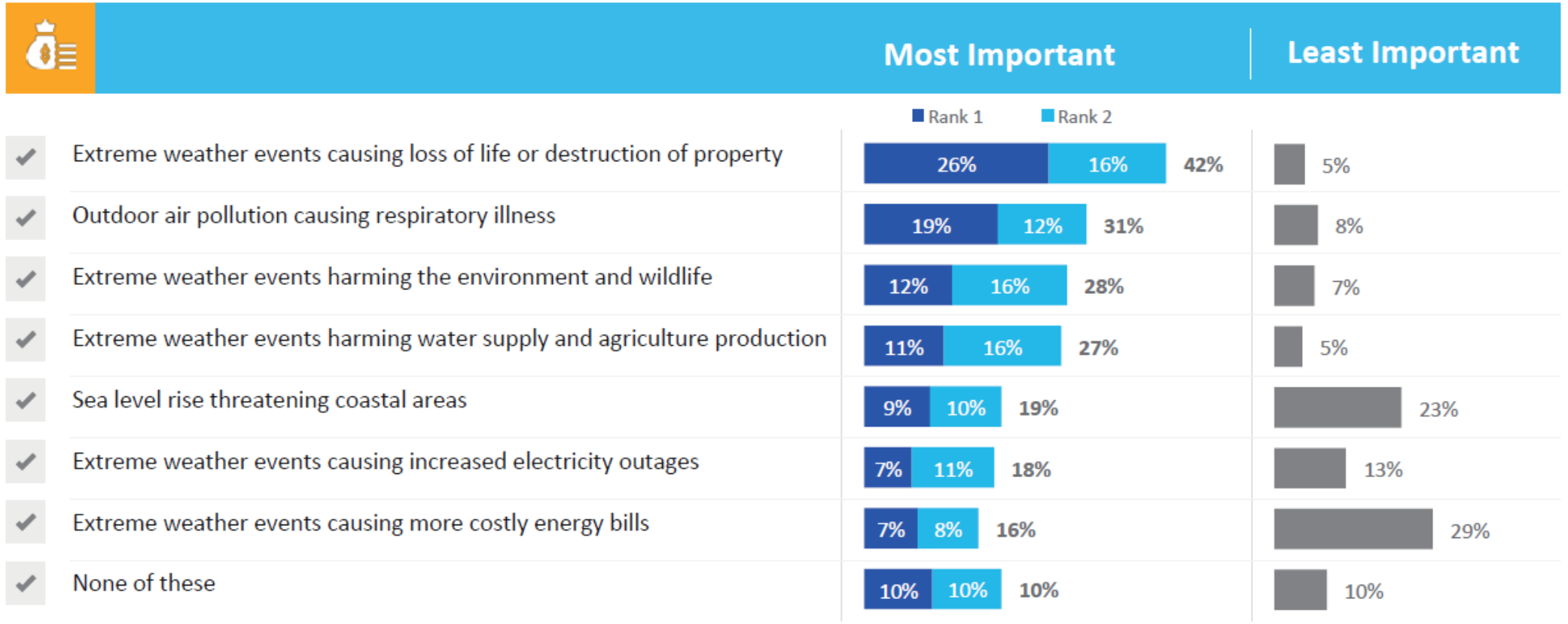
2. Reduces Environmental Impacts

3. Enables Better Grid Management

Underlying Consumer Motivations

SMART ENERGY CONSUMER COLLABORATIVE

Figure 4: Importance for Political and Community Leaders to Prioritize



Base: All Respondents (n=1201)

Q_ClimateChange. Please drag and drop the "Most important" and "Second most important" statements from the list below.

Q_ClimateChangeLeast. And which of the following issues is the LEAST IMPORTANT for political and community leaders to prioritize?

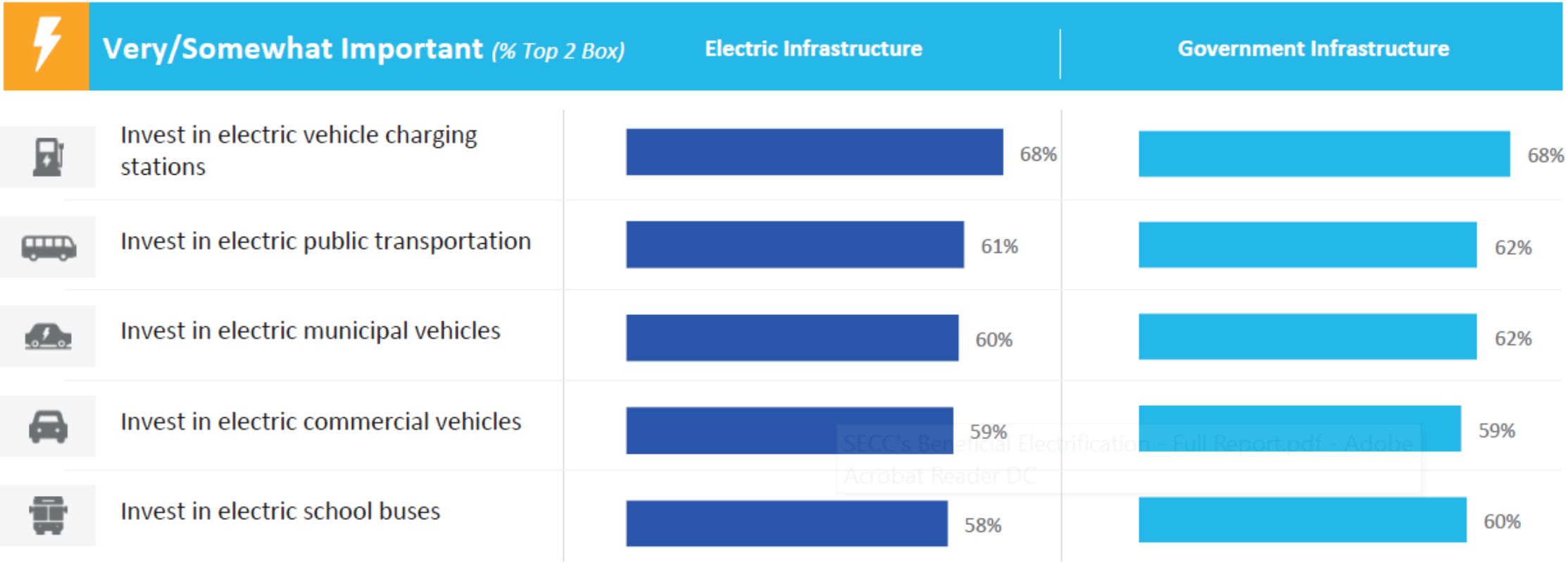
Electrification on the Road

Electric Vehicles **Public Transportation** **Municipal Fleets** **School Buses**

Consumer Support for Infrastructure

SMART ENERGY CONSUMER COLLABORATIVE

Figure 5: Support for Government and Utility Investment in Transportation Electrification Infrastructure

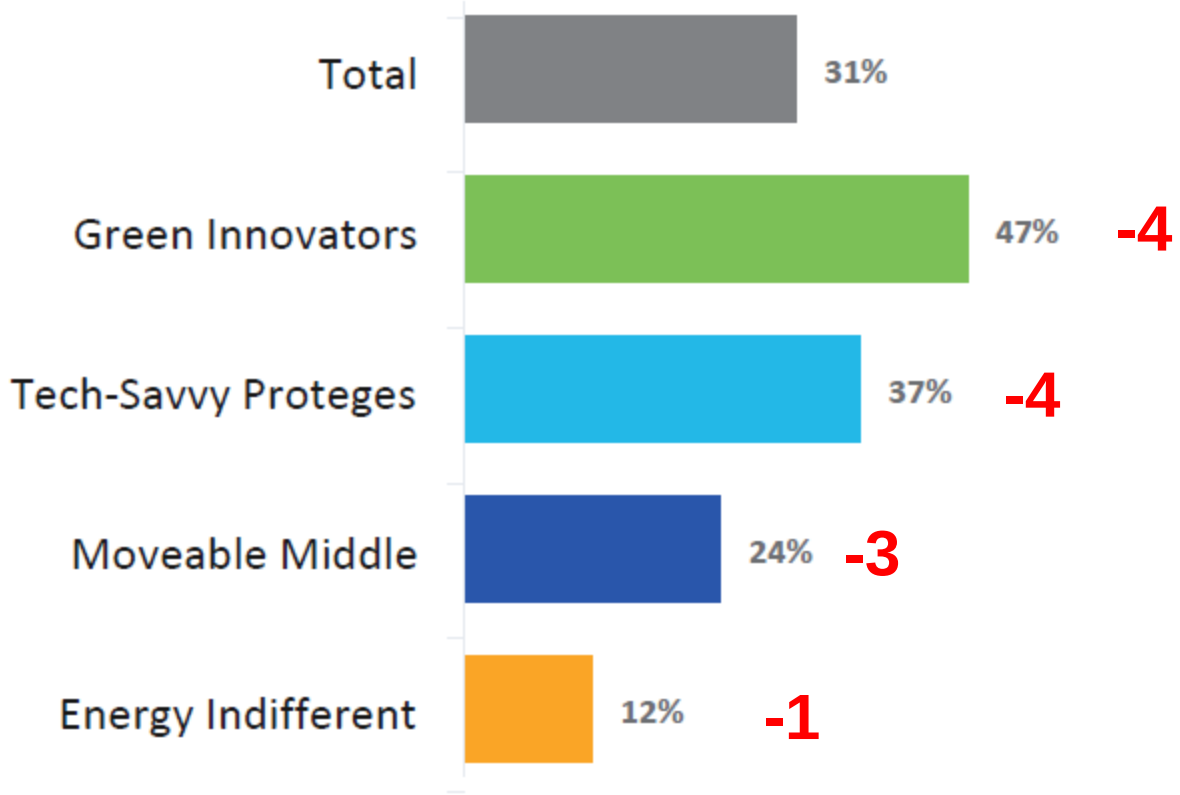


Base: All Respondents (n=1201)
Q_ElectricInfrastructure. Thinking about your community, how important is it for your electricity provider to invest in each of the following?
Q_Govt_Infrastructure. Thinking about your community, how important is it for your government to invest in each of the following?

Impact of Cost Increase on Interest

SMART ENERGY CONSUMER COLLABORATIVE

10% Higher *(Interested in Next Vehicle as Electric/Plug-in Hybrid)*



Assume that using electricity from your local power grid emits fewer greenhouse gas emissions than an equal amount of energy from fossil fuels. Would you make the following purchases if the price of electricity use were 10% more than the equivalent in liquid or gas fuels?

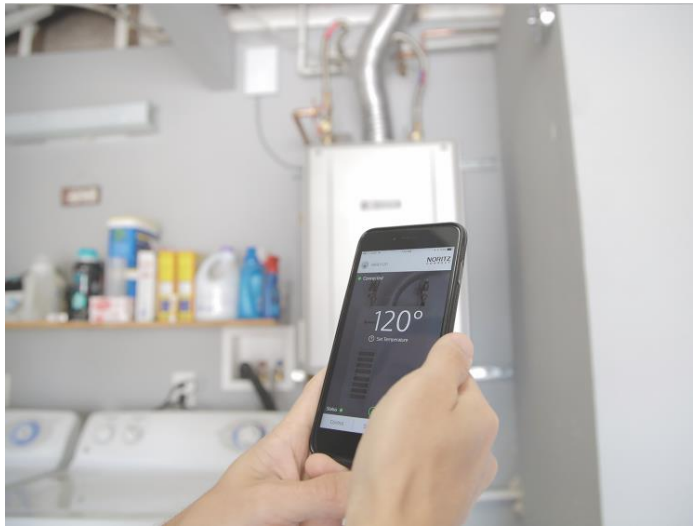
Electrification at Home

SMART ENERGY CONSUMER COLLABORATIVE

Cooking

Space Heating

Other Tools

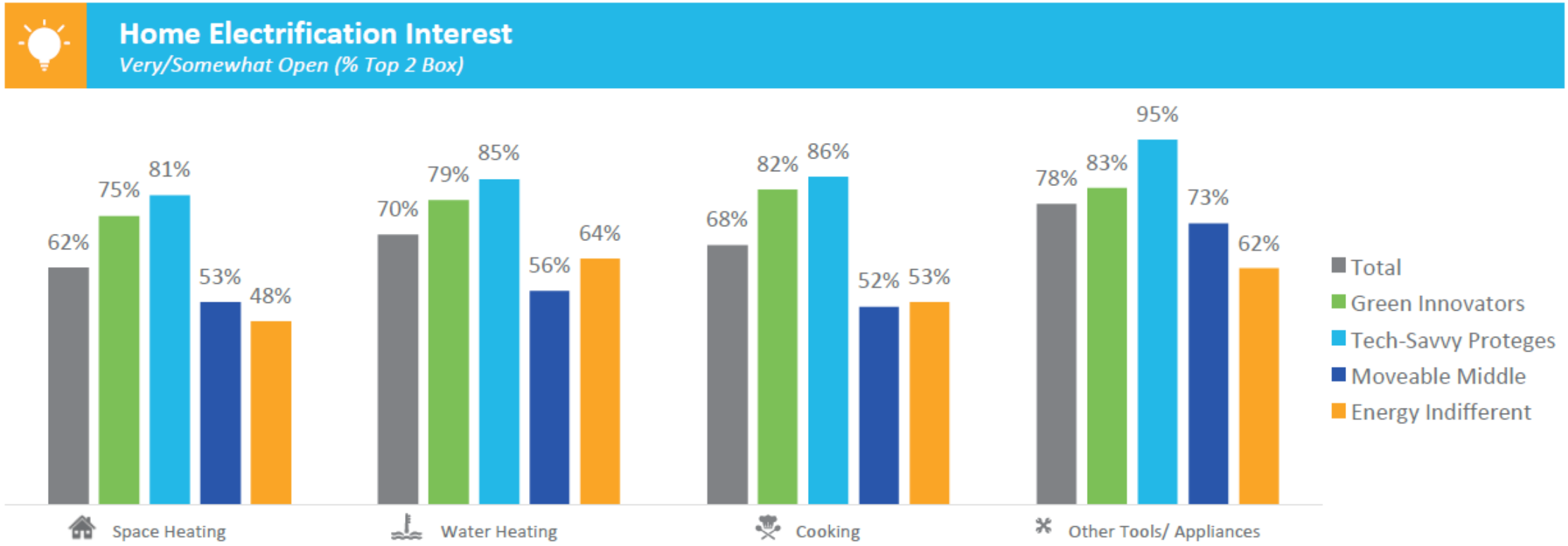


Water Heating

Are Consumers Interested in Switching?

SMART ENERGY CONSUMER COLLABORATIVE

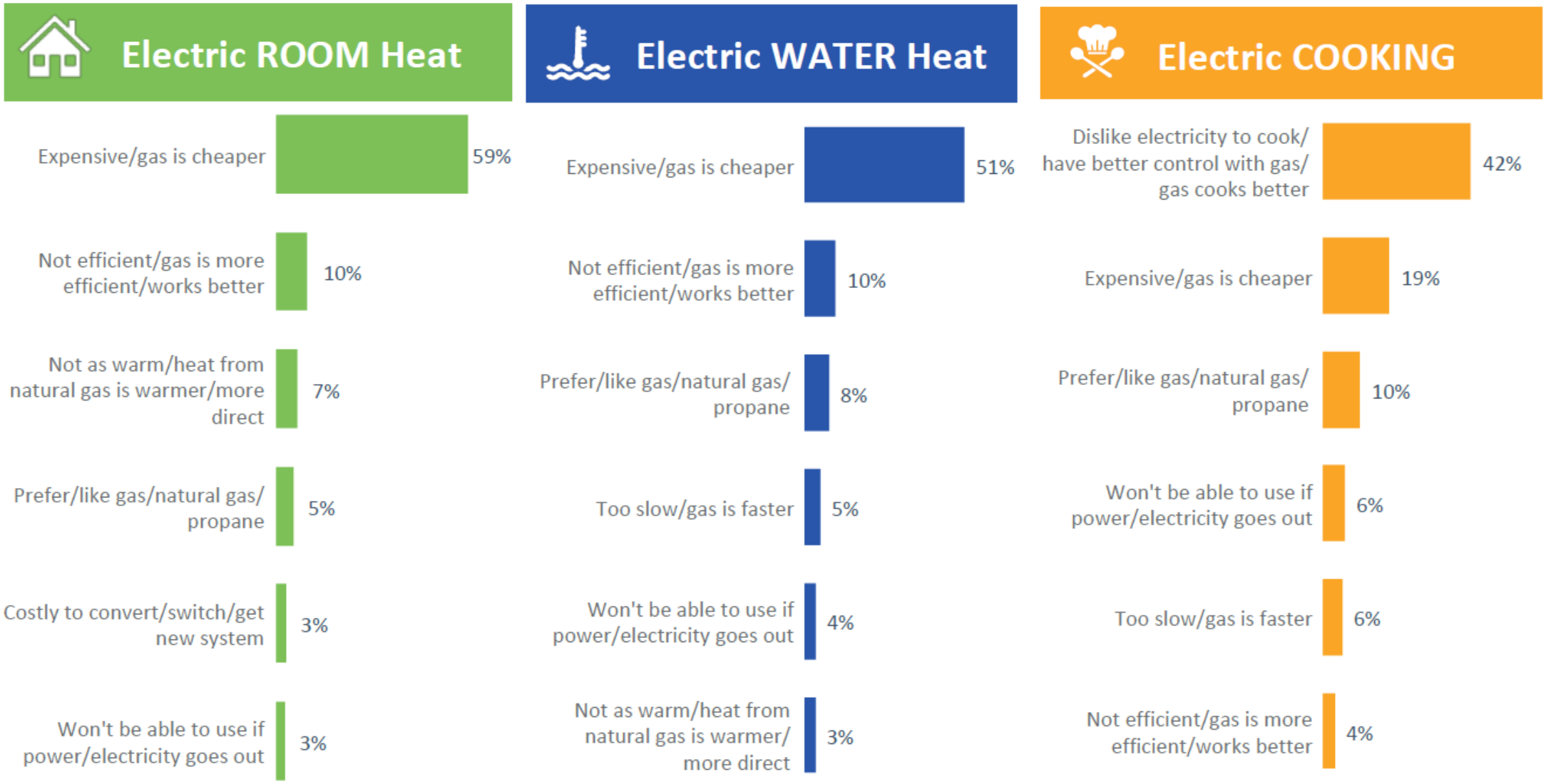
Figure 9: Interest in Home Electrification Among Consumers with Other Fuels



Base: Have "Other" Source in area of home (n=287); Energy Indifferent (n=43*), Green Innovators (n=67), Moveable Middle (n=49*), Tech-Savvy Proteges (n=128)
Q_ElectricInterest. How open are you to using only electricity for each of the following?

Barriers for different types of electrification

SMART ENERGY CONSUMER COLLABORATIVE



What Messages Did We Test?

SMART ENERGY CONSUMER COLLABORATIVE

1. I am trying to reduce my greenhouse gas emissions
2. I am concerned about air pollutants inside my home
3. I am concerned about my community's air quality
4. Saving money is more important to me than saving the environment
5. Saving money is more important to me than improving the air I breathe
6. Electricity from renewable sources reduces greenhouse gas emissions
7. The government isn't doing enough to reduce greenhouse gases
8. The increase in extreme weather is concerning to me
9. Climate change is impacting how I use energy
10. Electricity emits more greenhouse gases than natural gas
11. Electricity is becoming cleaner and more renewable everyday
12. Banning natural gas will help reduce greenhouse gas emissions
13. Buildings should favor electricity over natural gas to reduce greenhouse gas emissions
14. Any little bit of renewable energy helps prevent climate change
15. I am concerned about the safety of natural gas in homes
16. I am concerned about the safety of electricity in homes
17. If my electricity provider switched to using renewable sources, this would increase my bill
18. Buying electric vehicles is for the wealthy
19. New homes that are 100% electric are often more expensive than new homes that are not 100% electric
20. EVs reduce greenhouse gas emissions compared to gas-powered automobiles
21. I would only reduce my greenhouse gas emissions if it saves me money
22. Moving to electric vehicles and all-electric buildings will strain the power grid, potentially impacting reliability

Getting the Message Across

SMART ENERGY CONSUMER COLLABORATIVE

Crossroads Analysis *(Total)*

Base: All Respondents (n=1201)
Q_IATPersonal. Does this statement describe how you feel about energy and the environment?
Q_MaxDiff1. Please indicate which of the following statements MOST applies to you, and which one applies the LEAST.

The Most Effective Message

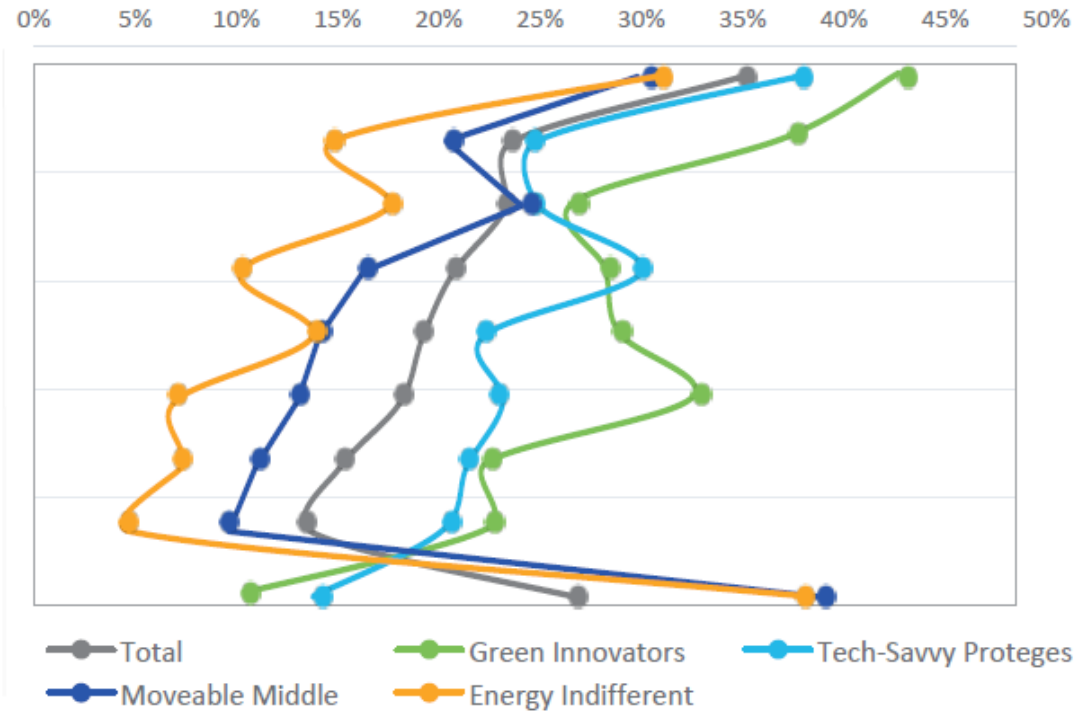
"Electricity is becoming cleaner and more renewable everyday" addresses consumer values across segments. With the addition of cost information, even less-engaged consumers can be encouraged to take notice and act.

What Statements Motivate Consumers?

SMART ENERGY CONSUMER COLLABORATIVE

Figure 15: Statements That Would Motivate Consumers to Electrify

Benefits to Using Only Electricity



Base: All Respondents (n=1201); Energy Indifferent (n=204), Green Innovators (n=318), Moveable Middle (n=218), Tech-Savvy Proteges (n=461) Q_Electrification. And which of the following statements, if any, makes you want to only use electricity as an energy source?

How to Optimize Messaging by Segment

SMART ENERGY CONSUMER COLLABORATIVE

Green Innovators

Emphasizing positive environmental changes appeals to the core beliefs of Green Innovators. Statements that showcase **putting forth any little bit of effort** to reduce environmental impact strongly resonate with this segment. Although, Green Innovators are the most likely to act, they **should not be taken for granted**. Messaging still needs to be tailored to them.

Tech-Savvy Proteges

Tech-Savvy Proteges place high importance on environmental concerns and putting in any bit of effort. However, these concerns are not as implicitly agreed with as Green Innovators. Rather, the Tech-Savvy Proteges **need to think about these statements** a bit more. Messaging should clearly **emphasize how** doing anything can help to engage their explicit or rational side. Employing technology could also be used to appeal to this segmentation. With clear and consistent ongoing messaging, this can become more implicit.

How to Optimize Messaging by Segment

SMART ENERGY CONSUMER COLLABORATIVE

Energy Indifferent

The Energy Indifferent not only state they value monetary savings, but it also comes through in their decision-making. Additional statements that resonate with this segment focus on the **importance of money over the environment** and concern of cost increases. To create longstanding success, the winning message should **include wording about ensuring cost savings** as electricity becomes cleaner and more renewable.

Movable Middle

Although the Movable Middle state money is a concern, they place high importance on doing 'any little bit' to prevent climate change and are concerned 'the government is not doing enough'. There tends to be a **say versus do gap with this segment,** as they do not prioritize saving money over saving the environment but show some cost concerns. Messaging to this group needs to **emphasize environmental action**, but also incorporate some **wording on cost mitigation.**

Five Key Takeaways

SMART ENERGY CONSUMER COLLABORATIVE

01

‘Electricity is becoming cleaner and more renewable everyday’ best conveys the urgency of climate change.

02

To streamline messaging, segments can be grouped as less or more engaged when it comes to beneficial electrification.

03

Cost increases have little impact on electrification adoption for more engaged segments.

04

Climate change messaging needs to account for cost sensitivities among the Energy Indifferent.

05

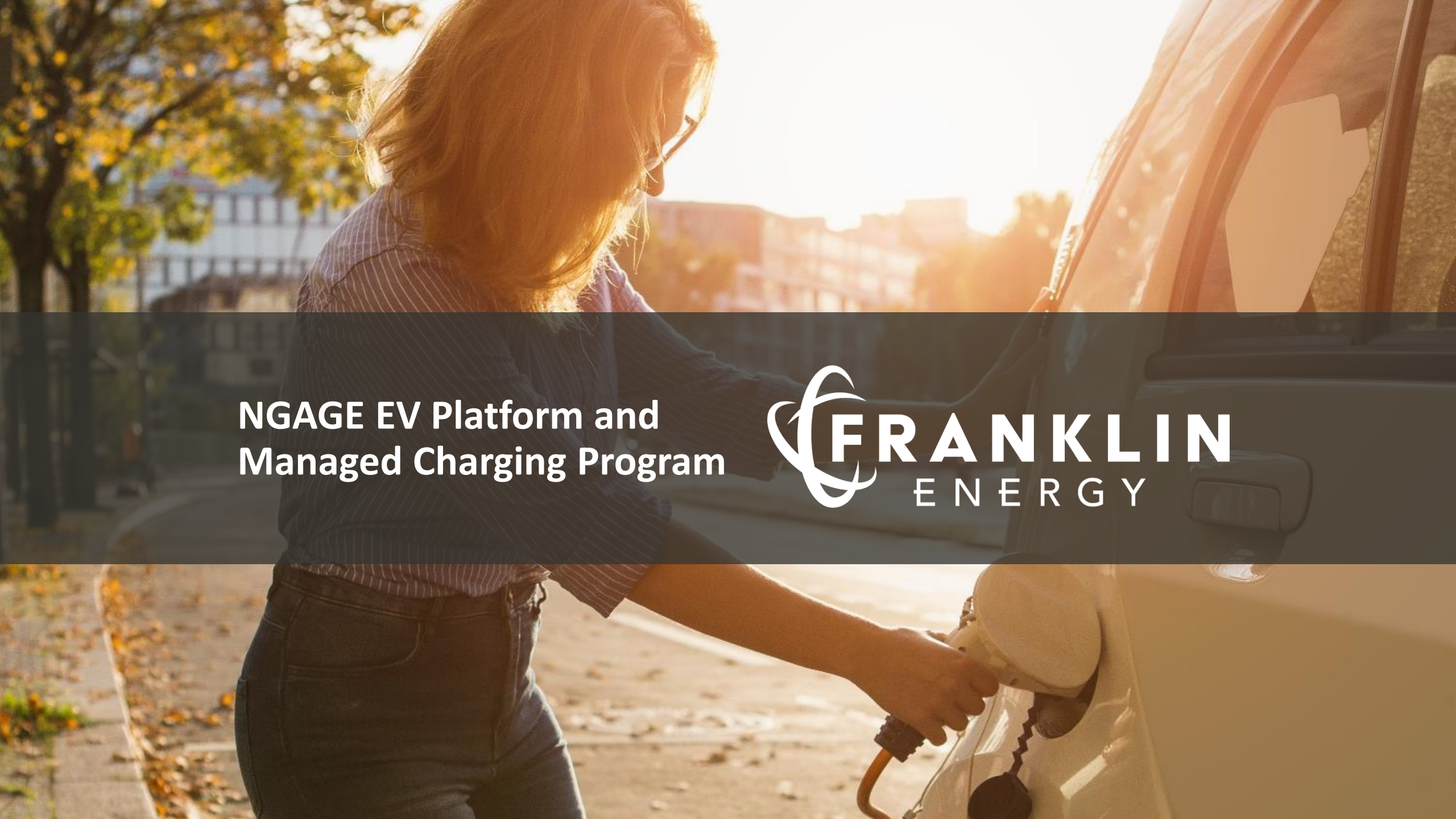
Green Innovators and Tech-Savvy Proteges need to be encouraged that any little bit counts.

Three Recommendations to Policymakers

SMART ENERGY CONSUMER COLLABORATIVE

1. **Benefit consumers--**consider ways to more explicitly articulate these benefits.
2. **Include consumers--**include and understand consumer perspectives prior to and during the creation of policy objectives related to electrification.
3. **Educate consumers--**help grow understanding and awareness of how energy is acquired and produced

Name	Background
Lee Ann Head 	**Senior Software Product Manager, Franklin Energy** • Lee Ann serves as Senior Product Manager at Franklin Energy and is currently working with the NGAGE platform • She served as the Energy Efficiency Solutions Manager for Entergy • VP of Research and Insights for The Shelton Group for 17 years



NGAGE EV Platform and Managed Charging Program

FRANKLIN ENERGY

Utility EV Programs

CUSTOMER EDUCATION & AWARENESS

ADDRESS PRIMARY BARRIERS TO ADOPTION

- EV and EVSE educational tools providing:
  - Vehicle comparisons
  - Cost of ownership
  - Rate options
  - Home charging
  - Public charger maps
  - Available incentives
  - Dealer locator

ENROLLMENT, PURCHASE & INSTALLATION

STREAMLINE THE CUSTOMER JOURNEY

- EVSE marketplace
- Rebate processing
- Stacked rebates
- Program enrollment
- Certified trade ally networks (dealers, installers)
- Financing
- Charger network integrations

MANAGED CHARGING

MINIMIZE THE COST TO SERVE

- Behavior programs:
  - TOU rates
  - Coaching and messaging
  - Rewards
  - Price elasticity analysis
- Direct control programs:
  - Networked EVSE control
  - Smart circuit breakers

WORKPLACE, FLEET, AND PUBLIC CHARGING

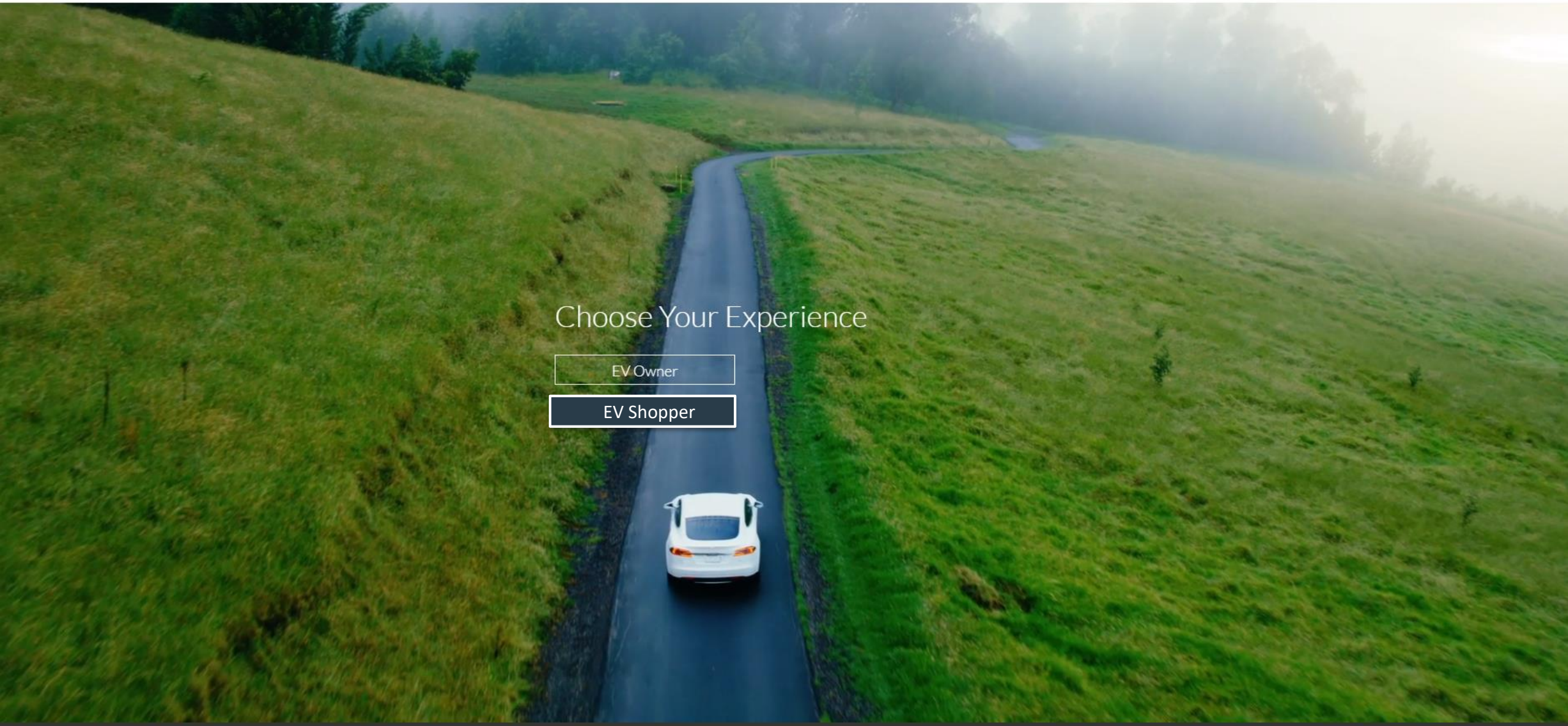
EXPAND EV ADOPTION BEYOND RESIDENTIAL

- Fleet assessments
- Site feasibility assessments
- Rate analysis
- Charging optimization
- Depots
- Public and private charging programs

FRANKLIN ENERGY

EV Customer/Grid Optimization Value

FRANKLIN ENERGY



FRANKLIN ENERGY

Target Personas

FRANKLIN ENERGY

Electric Vehicles

EV BENEFITS

Electric Vehicles Cost Less to Operate than Gas Powered Cars

Depending on the local prices of fuel and electricity, driving an EV can be three to five times cheaper than gasoline and diesel-powered cars. Plus, they don't need as much maintenance as gasoline or diesel-powered internal combustion engines.

Learn more >

EV FACTS

Battery Electric Vehicles have a battery and an electric motor instead of a gas tank and an internal combustion engine.
Learn more

Plug-in Hybrid Electric Vehicles have an electric motor AND a gas-powered internal combustion engine.
Learn more

Range refers to the number of miles an EV will travel before the battery needs to be recharged.
Learn more

Charging your EV requires plugging into a charger connected to the electric grid.
Learn more

WHY BUY AN EV?

There's never been a better time to purchase an electric vehicle. There are now over one million EVs on the road in the U.S. and the market is booming, with 2018 sales totaling 361,307 (up 81% from 2017.)1

There are now over 40 types of electric vehicles on the road and automotive manufacturers are aggressively investing in EV technologies and rolling out new models with greater range each year. Plus, the nation's public charging infrastructure has doubled over the past two years.

EV BENEFITS EV FACTS

Electric Vehicles Cost Less to Operate than Gas Powered Cars

Depending on the local prices of fuel and electricity, driving an EV can be three to five times cheaper than gasoline and diesel-powered cars. Plus, they don't need as much maintenance as gasoline or diesel-powered internal combustion engines.

Never Go to the Gas Station Again

Electric vehicles don't use gasoline or diesel. You can charge one at home with a standard 120V outlet. For faster, more efficient charging, owners can choose to install a 240V level 2 charger.

FRANKLIN ENERGY

Find a charging station

11797

Filter by: 45 Results

25 Miles

DC Fast Charging

Level All
Level 1
Level 2
Include all charging levels
DC Fast Charging
Legacy charging systems (such as inductive paddles)

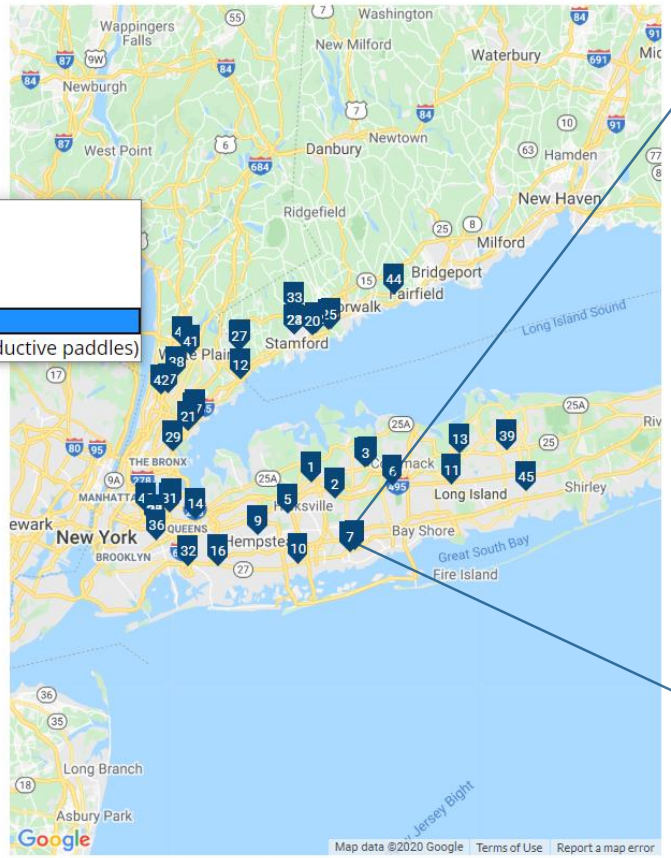
11791 NY Syosset 268 Jericho Tpke
877-455-3833
View station details >

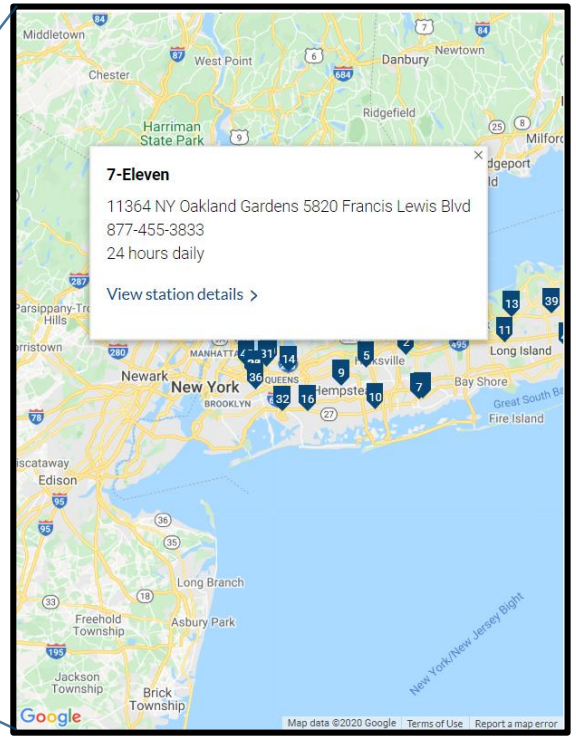
Country Pointe Plainview - Tesla Supercharger

11803 NY Plainview 1427 Old Country Road
877-798-3752
View station details >

Nissan - Huntington

11746 NY Huntington Station 850 E Jericho Turnpike





FRANKLIN ENERGY

Compare vehicles

Choose The EV That's Right For You

StandardSUV | Large Car | MidSize Car | SmallSUV | Small Car

Filter by

Your selections: Make: BYD ✕ Chevrolet ✕ Hyundai ✕ Mitsubishi ✕ Year: 2020 ✕

Compare	Compare	Compare	Compare
2020 BYD e6	2020 Chevrolet Bolt EV	2020 Hyundai Kona Electric	2020 Mitsubishi Outlander PHEV
City/Hwy Range 189/184	City/Hwy Range 278/235	City/Hwy Range 284/226	City/Hwy Range 2

✕ ✕

Compare

Or

Select a gas vehicle ›

Compare vehicles calculator

Please select a state

Annual Consumption based on:

Miles Driven/Year: 15000

% City: 55

% Highway: 45

% Electric Driving (vs. Gasoline): 100

Avg $/gal: 2.937

kWh Price: 20.49

Recalculate

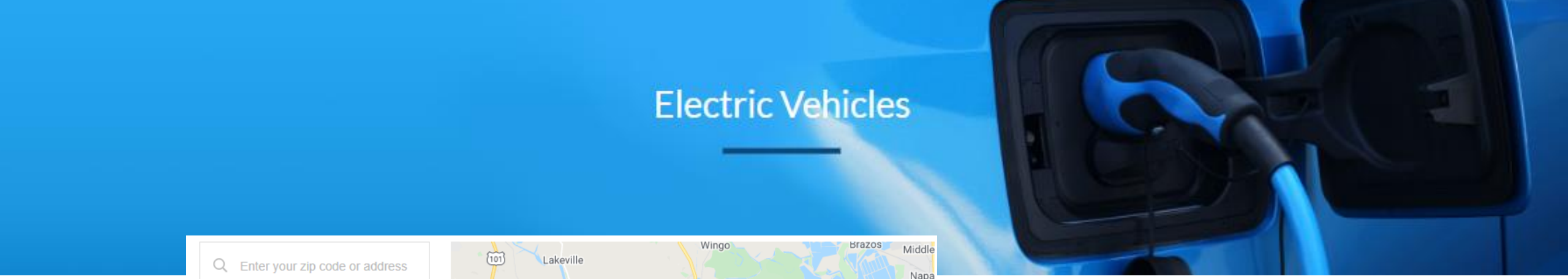
Reset

	← Change vehicle ✕	← Change vehicle ✕
		
Annual Fuel Cost	$ 845	$ 881
Year	2020	2020
Make	Hyundai	Chevrolet
Model	Kona Electric	Bolt EV
Type	EV	EV
Class	Small Sport Utility Vehicle 2WD	Small Station Wagons
City/Hwy Range	284/ 226	278/ 235
City/Hwy eFuel Economy**	25/31	26/31
City/Hwy MPG	N/A	N/A
Charge time at 240V	9 Hour	10 Hour

*Based on 10,000 miles, 55% city driving, and the price of fuel (electric and/or gasoline) used by the vehicle.

**kWh/100 miles

FRANKLIN ENERGY



Electric Vehicles

Enter your zip code or address

Filter by: 5 Results

Dealer Name

Zip code

State

Auto Brand

BMW of San Rafael

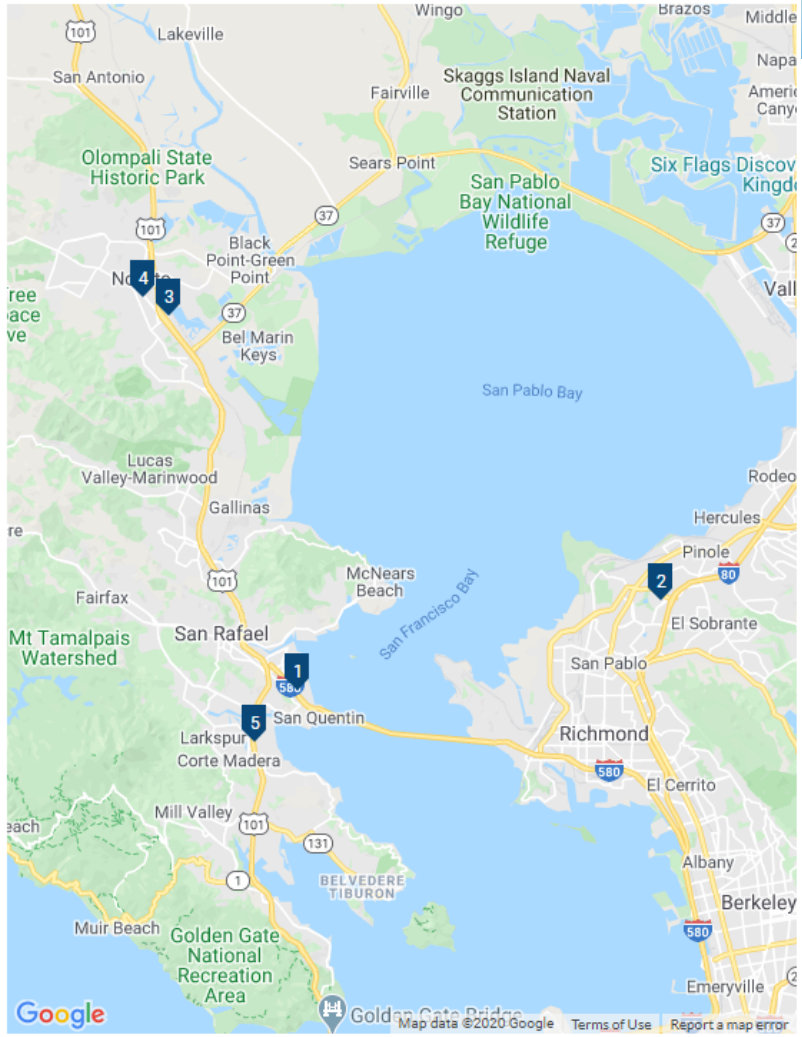
1599 Francisco Blvd. E.
(415)549-9020
New and Certified Pre-owned BMW Dealer

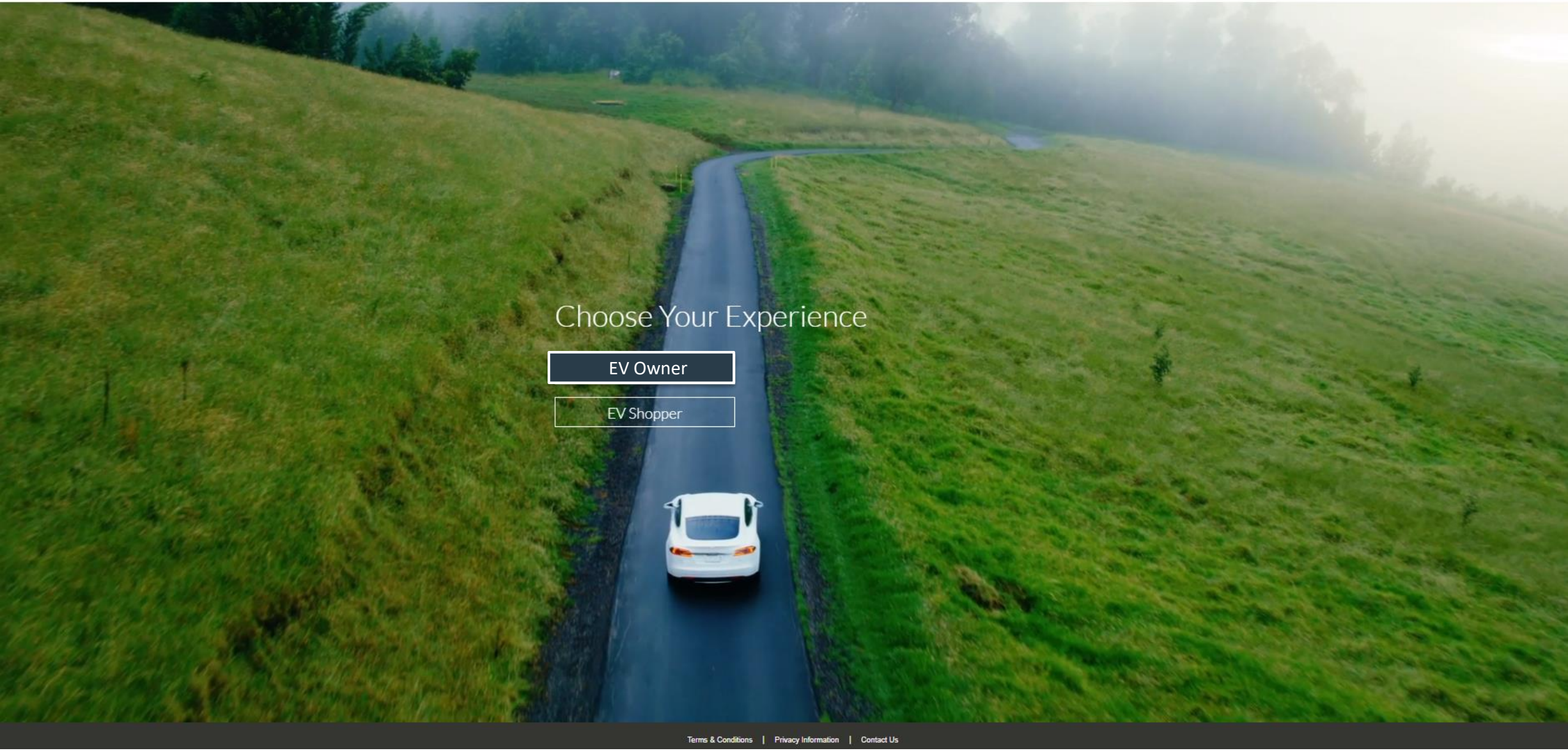
Hanlees Hilltop Hyundai

3285 Auto Plaza
(888)312-2162
New and Certified Pre-owned Hyundai Dealer

Kia Marin

105 Vintage Way
(833)335-2937
New and Certified Pre-owned Kia Dealer





FRANKLIN ENERGY

EV Incentives and Rate Plans

Learn about ways to re

Utility

$500

Home charger rebate

Purchase and install a qualifying Level 2 (240V) charging station at your home and receive a $500 incentive!

Learn more >

Utility EV Programs and Rate Plans

The following rebates can help lower the costs of your energy action plan.

Save $500 on a Level Two Home Charger

A level two (240v) charger offers much faster charging at home. While the 120v electric outlet charger that comes standard with most Plug-in All-Electric and Plug-in Hybrid Electric vehicles provides 2-5 miles of range per hour, a level two charger works up to nine-times faster – giving you 10-20 miles of range per charging hour.

This also allows you to potentially save money on your electric bill by charging your vehicle at strategic times when electrical demand is lower. You can take advantage of lower rates during the night, which helps to maximize the savings on an already energy efficient vehicle.

QUALIFYING CHARGERS

JuiceBox Pro 32

Speed: 6x faster
Ampage: 32A/7.7kW
Plug type: Plug in NEMA 14-50 Outlet

~~Was $649.00~~

$119.00

With $500* charger/installation credit

Apply now

Buy now

JuiceBox Pro 40

Speed: 7x faster
Ampage: 40A/10kW
Plug type: Plug in NEMA 14-50 Outlet

~~Was $649.00~~

$149.00

With $500* charger/installation credit

Apply now

Buy now

Save money with our Plug-in Electric Vehicle Rate Plan!

Fueling a vehicle with electricity is already much cheaper than gasoline or diesel. But for even greater savings, try our Plug-in Electric Vehicle rate. This rate offers lower prices from 11 p.m. – 7 a.m. to encourage nighttime EV charging.

How this a

You pay less
Super Off-P

Super off-peak

Off-peak

On-peak

Enroll

Super Off-p

This period
year and it h
produce ele
are passed

Off-peak:

From June t
a.m. to 2 p.m
and 7 a.m. to
months, this
during this p
time period,
period.

On-peak:

Although th
only about 5

Search AM Marketplace

Find the best deals on energy efficient products

Learn more

Filter + Sort by: Featured

Compare

4.8 ★★★★☆ (34 reviews)
Model: Z-CHARGEPOINT32

Annual Energy Use (kWh/yr): **138**

Chargepoint
ChargePoint Home 32A Electric Vehicle (EV) Charger

$199.00

~~Was $699.00~~

Save $500.00 (72%)

Add To Cart

Compare

5.0 ★★★★★ (25 reviews)
Model: Z-CHARGEPOINTFLEX50

Annual Energy Use (kWh/yr): **130**

Chargepoint
ChargePoint Home Flex 50A Electric Vehicle (EV) Charger

$199.00

~~Was $699.00~~

Save $500.00 (72%)

Add To Cart

4.7 ★★

Model: Z

Annual E

Enel X
JuiceBox
Charger

$119

~~Was $61~~

Save $50

Earn Incentives! Enroll in our EV Managed Charging Program Today!

Complete the form below to confirm your eligibility and earn the **$500 Level 2 Home Charger Rebate.** Please use the name and address displayed on your Utility Bill.

First Name: John
Last Name: Smith
Email Address: jsmith@franklin.com
Daytime Phone: 555 555 5555
Address: Enter your address
Address line 2:
City: Enter your city
State: Select a state
Zip:

Earn a $500 enrollment incentive and up to $120 per year by allowing <Utility> to lower or interrupt your EV charging during periods of peak energy use.

Here's how it works:

Your utility work will work directly with your EV charger manufacturer to lower usage during specific times.

Occasionally, on days when the demand for energy is high (usually on the hottest summer afternoons), the program will schedule a Managed Charging event. These events will lower or interrupt the power supplied to your vehicle through your charging station.

In order to assist you in your charging planning, the program will provide you with up to a 24-notice that a Managed Charging event is scheduled to occur. You can select from multiple notification options including email, charger mobile app, text message, or phone call.

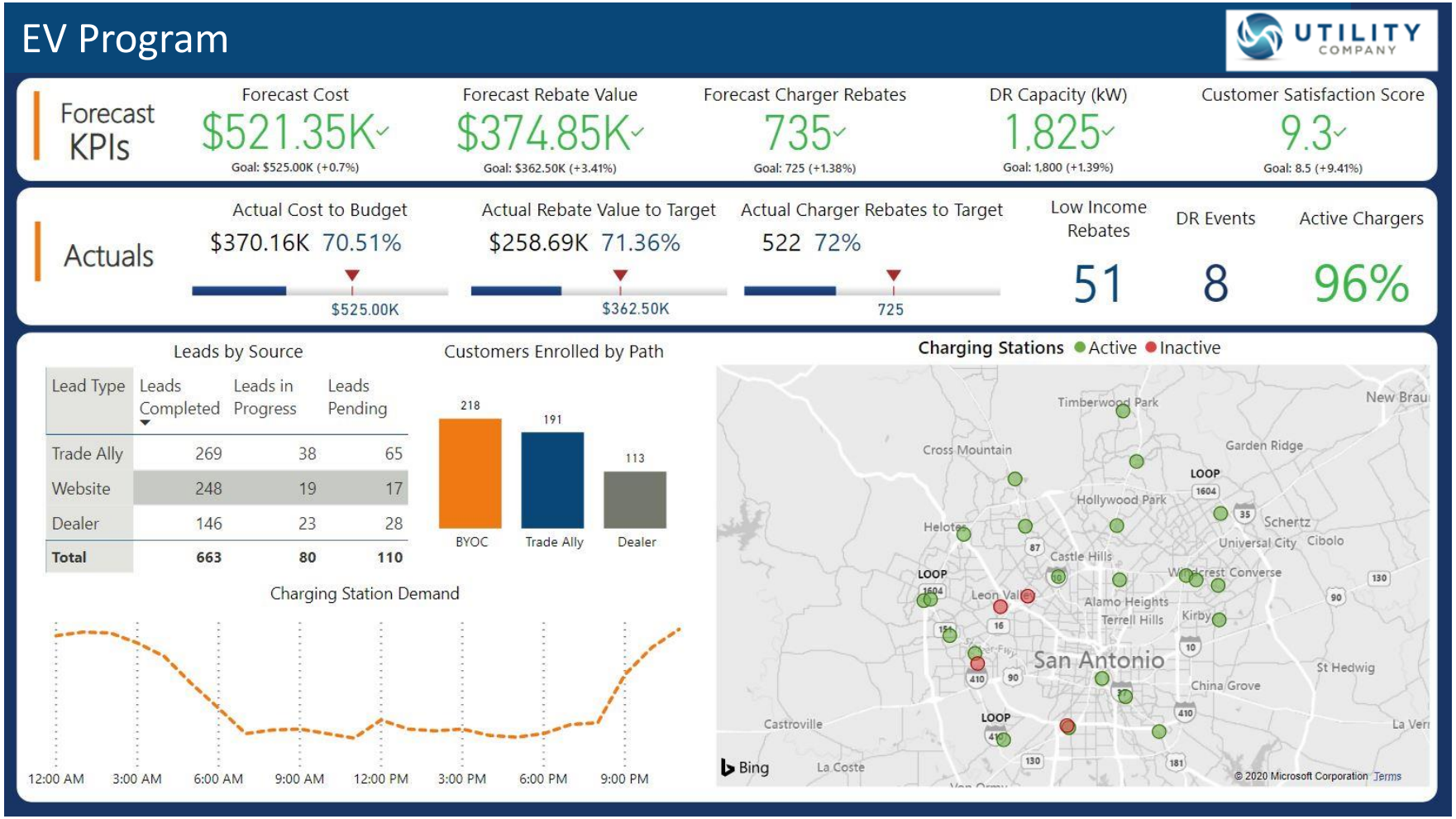
You always have control. In situations where you need to charge your vehicle during the Managed Charging Event, you can opt out and charge your vehicle as needed.

You'll receive a bill credit of $10 for each month you participate in all managed charging events. If you opt out of half, you'll receive $5. If you opt out of more than half, you'll receive no bill credit for that month.

By participating in the Managed Charging Program, you will receive a $500 instant enrollment incentive off the price of your selected qualified charger. The program is designed to save energy during peak periods and reduce the costs for all customers while providing you with an opportunity to earn additional incentives via your continued participation.

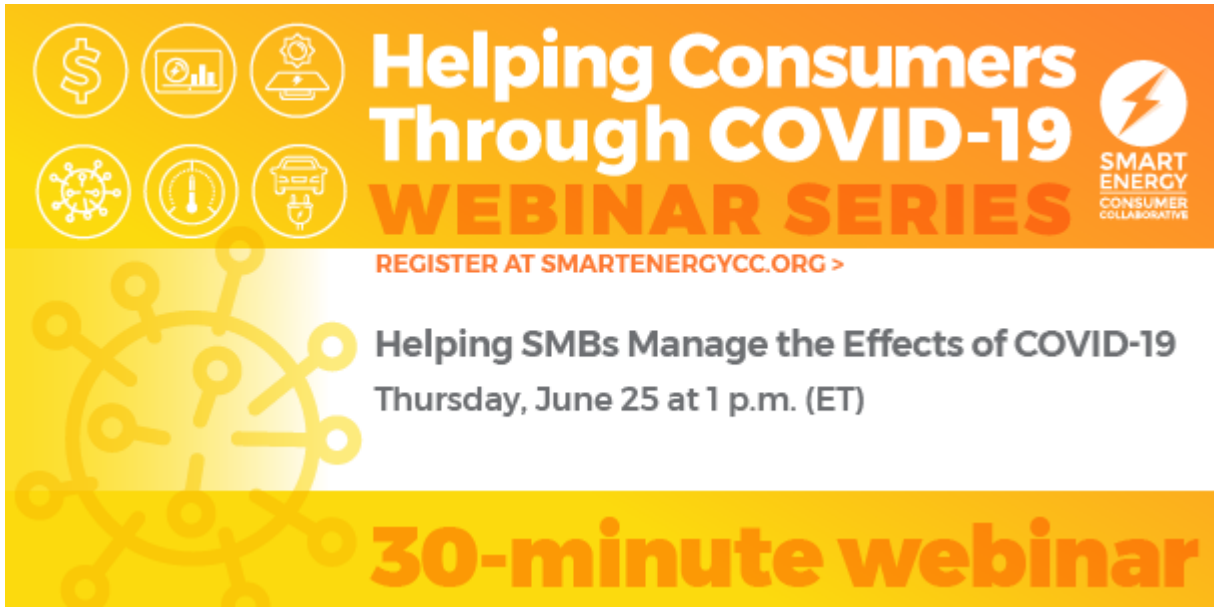
FRANKLIN ENERGY

Program Reporting



FRANKLIN ENERGY

SECC's COVID Webinar Series



Questions?

You will receive a link to the research and a copy of today's slides at the email address you used to register.

SMART ENERGY CONSUMER COLLABORATIVE

Nathan Shannon
Deputy Director
Smart Energy Consumer Collaborative

Sara Cappe
SVP and Managing Director
Maru/Matchbox Public Service Practice

Lee Ann Head
Senior Software Product Manager
Franklin Energy

Follow SECC's LinkedIn Company Page

- Search "Smart Energy Consumer Collaborative"
- Posts on research, education, events, relevant news & more
- Active conversation on consumer-centric trends