

Consumer Segmentation for Beneficial Electrification

Key Findings

- There is varying interest among different consumer segments when it comes to electrifying their end-use technologies.
- Messaging tailored to each consumer segment helps to maximize their engagement with beneficial electrification.
- NRECA Market Research Services offers a consumer segmentation tool to provide cooperatives with analysis on the segments within their consumer-member base.

What has changed?

Many electric cooperatives are exploring beneficial electrification programs for their consumer-members. Beneficial electrification benefits not only the cooperative, but also the consumer-member and the environment. With a growing industry focus in beneficial electrification, it is important to understand which groups of consumer-members may be interested, and how to tailor communications to the nuances of various consumer segments.

In a recent report, sponsored in part by Touchstone Energy Cooperatives, titled “Beneficial Electrification: The Voice of the Consumer” by the [Smart Energy Consumers Collaborative \(SECC\)](#), Maru/Matchbox was commissioned



to survey 1,200 consumers on topics related to beneficial electrification. The data on age, gender, region, and education for the survey respondents were weighted to the US Census, giving a representative sample for the country. The study was conducted in the U.S. in mid-March 2020, and the report was released in June 2020. The survey used an Implicit Association Test (IAT) and a MaxDiff Exercise to show how consumers feel about a certain topic. The IAT shows implicit biases among the survey takers by measuring response time to certain statements. If a respondent takes a shorter time to agree or disagree with a statement, then this shows an implicit association with an instinctive reaction. A longer reaction time would suggest rational thinking and an explicit association. The MaxDiff Exercise forces respondents to choose between options that influence their decision-making process. Once finished, the options become ranked to show relative importance of a particular motivator for the respondent.

This report centered its findings around consumer segmentation, which divides consumers along lines of similar attitudes and behaviors in order to classify consumers into different groups. Each segment represents a distinct group of people that are based on a variety of factors such as age, income, household size and makeup, spending preferences, media habits, and attitudes about energy and the environment. The breakdown of the demographic characteristics used for each consumer segment from the report are shown in Figure 1.

Segment Name	Proportion of Consumer Market	Age			Household Income*			Electricity Bill (Mean)
		18-34	35-54	55+	</\$50K	\$50-\$99K	\$100K+	
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.

Figure 1: Comparison of Demographic Characteristics (SECC, 2020)

The study analyzed the results around four major consumer segments: Green Innovators, Tech-Savvy Proteges, Movable Middle, and Energy Indifferent. The segments that are more energy-engaged, Green Innovators and Tech-Savvy Proteges, generally prefer their political and community leaders to prioritize statements related to climate change and environmental issues. The less energy-engaged segments, Movable Middle and Energy Indifferent, are less likely to be concerned by climate change and environmental issues. These four consumer segments have interests that move along a continuum which can be seen in Figure 2.

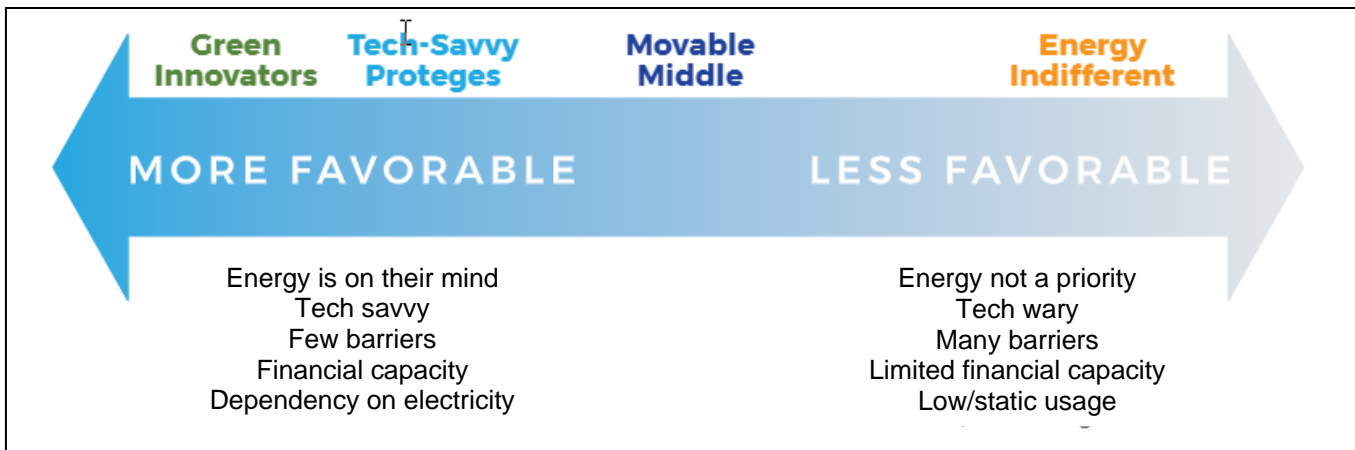


Figure 2: Segment Favorability Continuum (SECC, 2020)

The study focused on two main sectors of beneficial electrification, transportation and residential. Based on the interests of different consumer segments, the report also provides optimal messaging suggestions to best engage with each individual segment.

Transportation

There is significant consumer interest in purchasing electric vehicles (either all-electric or plug-in hybrid vehicles) as their next vehicles, although there are large discrepancies among the different segments. Given the option between electric vehicles and gasoline vehicle at the same price, Green Innovators had the most interest at 51%, followed closely by the Tech-Savvy Proteges segment at 41%. Even when surveyed for electric vehicles that have a 10% cost premium compared to gasoline vehicles, Green Innovators still showed a 47% interest and Tech-Savvy-Proteges showed a 37% interest. The Movable Middle and Energy Indifferent segments also saw relatively small decreases in interest with the price differential, moving from 27% to 24% interest, and 13% to 12%, respectively. These results are shown in Figure 3 and Figure 4.

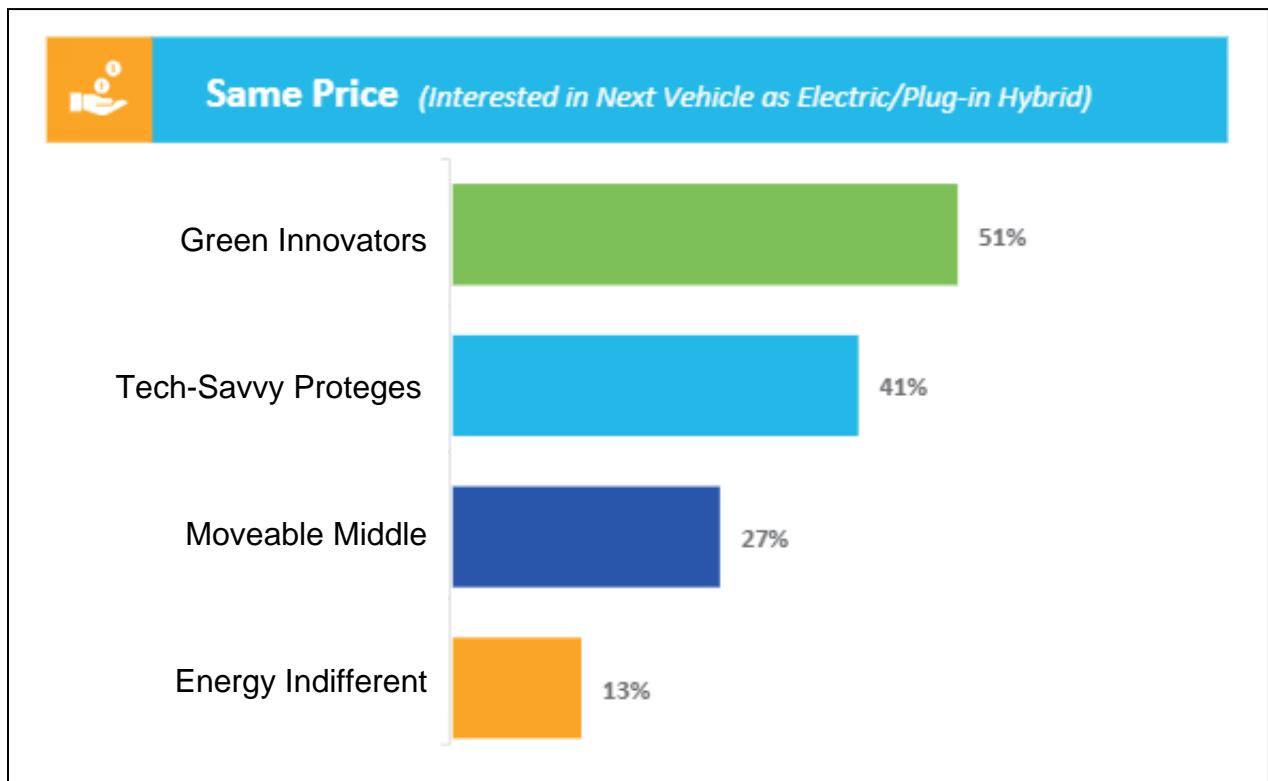


Figure 3: Interest Among Segments to Purchase an Electric Vehicle if the Price is Equal to a Gas-Powered Vehicle (SECC, 2020)

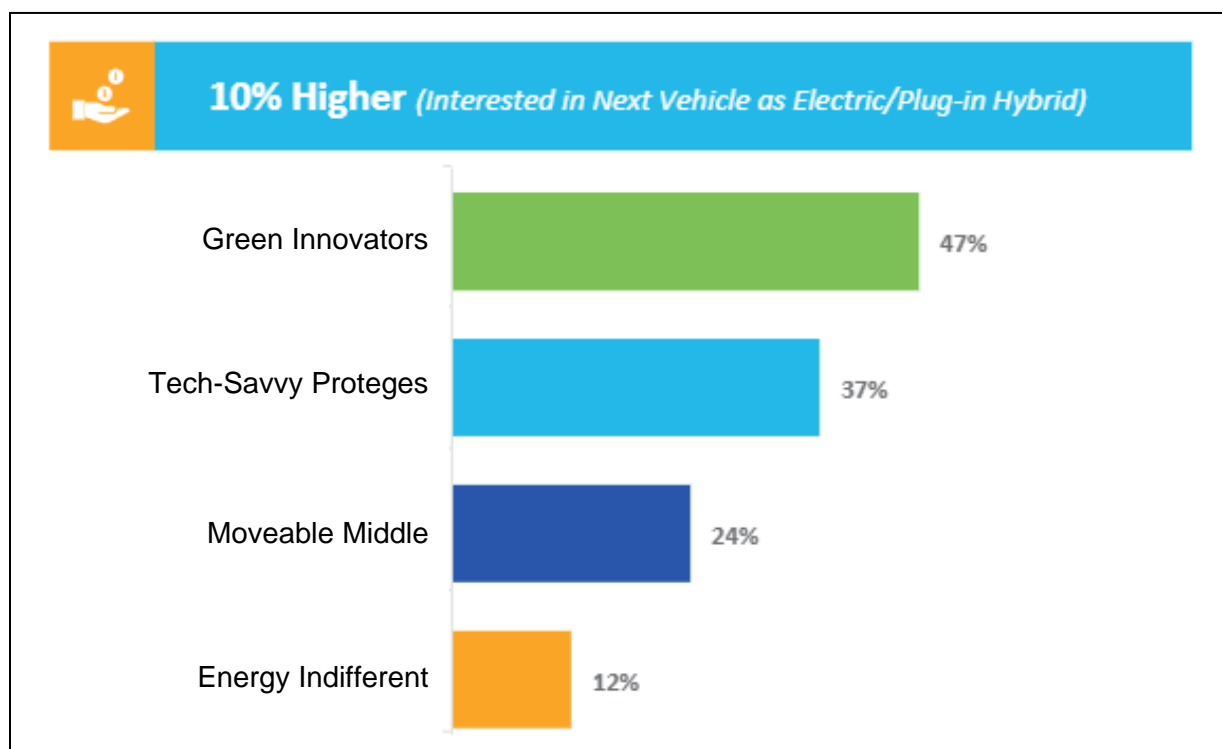


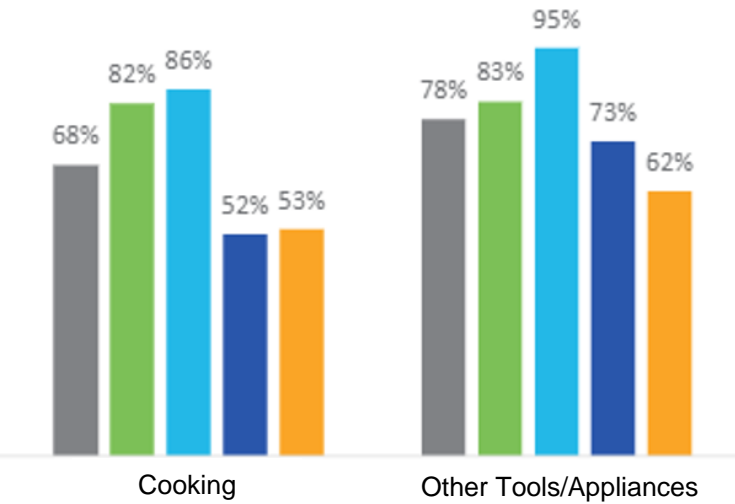
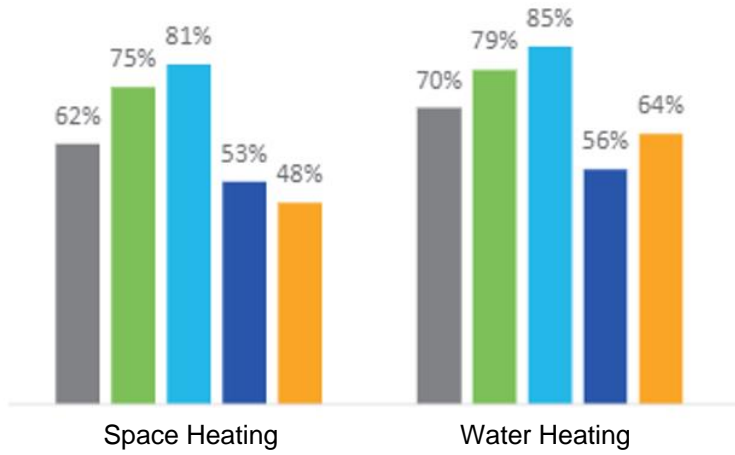
Figure 4: Interest Among Segments to Purchase an Electric Vehicle if the Price is 10% Higher than a Gas-Powered Vehicle (SECC, 2020)

Consumers in this study also generally believe that it is important to invest in electric vehicle charging infrastructure options, such as EV charging stations, public transportation, commercial vehicles, municipal vehicles, and school buses. Most people surveyed believe that investment in charging stations should be a shared responsibility between the government and electricity providers, with government having a slightly greater responsibility. However, these findings have large differences among consumer segments as well. Green Innovators and Tech-Savvy Proteges showed the greatest support for investment for all options, and the Energy Indifferent showed the least support.

Residential

For beneficial electrification at home, consumers were asked questions about four main categories of residential technology: space heating, water heating, cooking, and other tools/appliances (ex: electric yard tools, generators, sump pumps). For all segments surveyed, there is generally a high interest in electrifying each of the four technologies, which can be seen in Figure 5. Almost all segments for each technology had at least half of all respondents say they are either very or somewhat interested in electrification. “Other tools/appliances” received the highest interest, with 78% of all participants responding that they are “very/somewhat open.” Even for segments that are less energy-focused, which are the Movable Middle and the Energy Indifferent, about half of those consumers are still interested in electrifying their residential technologies.

 **Home Electrification Interest**
Very/Somewhat Open (% Top 2 Box)



- Total
- Green Innovators
- Tech-Savvy Proteges
- Moveable Middle
- Energy Indifferent

Figure 5: Residential Electrification Interest (SECC, 2020)

When there is a price premium of 10% for electric residential technologies, consumers are less interested in switching to electric technologies, however the segments are impacted differently. The more energy-engaged segments have less of a decline in their adoption interest than the less energy-engaged segments. However, the impact of a higher price on declining interest is greater for all residential technologies than reported for electric vehicles.

The research also surveyed for barriers that each consumer segment faces when implementing the four main types of residential electric appliances:

- **Space Heating and Electric Water Heating:** The main barrier that respondents gave for both switching to electric space heating and electric water heating was the cost or the perception that gas is cheaper. One potential solution to this barrier is creating a rate plan for consumers to save money through behavioral changes, such as a time-of-use rate or a peak-time rebate. Another solution is to show consumers a calculation tool to simulate the savings of switching to electricity.
- **Electric Cooking:** For electric cooking, consumers said the biggest barrier was their preference of cooking with gas or dislike of cooking with electricity. One way to combat this barrier is to demonstrate the benefits of new electric induction cooking, through live chef demonstrations or sharing infographics.
- **Electric Tools:** Electric tools and other appliances had two major barriers, the higher cost and the dislike of dealing with cords and outlets. Like with space heating and water heating, consumers can be shown bill simulators to see the cost savings over time.

Messaging

The research results can help to inform cooperatives about how to convey the right messaging to each segment, and how to promote action. The statement that resonated the strongest with all consumers was “*Energy is becoming cleaner and more renewable every day.*” This statement sends a broad message and can be used for engaging and resonating with all consumer segments to a degree.

Beyond this, there are optimal messaging statements to use for different consumer segments in order to encourage a higher engagement with them:

- **Green Innovators:** Statements that show any bit of effort towards reducing greenhouse gas emissions.
- **Tech-Savvy Proteges:** Statements that explain how doing something can be useful and how technology can be used to achieve that.
- **Movable Middle:** Statements that emphasize environmental action, while still incorporating cost savings.
- **Energy Indifferent:** Statements that focus on cost savings.

Different segments also view their electricity provider in different ways. The messaging from an electric cooperative can help to influence how engaged each segment is with beneficial electrification. There are different preferences for what each segment wants from their electricity provider:

- **Green Innovators:** Wants to see their utility take measures to reduce greenhouse gas emissions.

- **Tech-Savvy Proteges:** Wants to see how their utility is helping grid resiliency and preventing extreme-weather-pattern related outages.
- **Movable Middle:** Want to see their utility as a source of information for appliances.
- **Energy Indifferent:** Wants to see their utility as a source of information for appliances. It is especially important to share reliable information with this segment to grow a relationship.

What is the impact on cooperatives?

Electric cooperatives benefit from increased electricity loads and can use electric technologies to further manage load more effectively. Beneficial electrification also helps consumer-members to save money in the long run when switching from fossil-fuel-powered technologies. These results help to provide a new method to encourage more consumer-members to switch to electric when it is beneficial, which will, in turn, also benefit the cooperative.

Although these results reflect a national profile, many cooperative consumer-members will still have their interests reflected in the findings of this report. Understanding the four main consumer segments identified in the report, and the proportion of each segment within a cooperative’s consumer-member base, will be crucial to promoting beneficial electrification. Electric cooperatives that are able to cater their messaging to different segments will likely see an increase in engagement with beneficial electrification and will, thus, receive the benefits of having an increased electric load.

What do cooperatives need to know or do about it?

Cooperatives can take the findings from the SECC report and apply it to their own messaging to consumer-members. Communications using the key messages that the report found to resonate with all segments can be used to help evoke interest in all consumer-members, such as “Energy is becoming cleaner and more renewable every day.” Then, the more specific statements can be used for better appeal to certain segments.

For co-ops to further understand their consumer-members and most effectively communicate to each segment, cooperatives could have a segmentation analysis for the consumer-members that they serve. NRECA Market Research Services offers a *NRECA Energy Efficiency and Renewable Energy Segmentation Tool* that can create a profile for almost any cooperative size. Segmentation is relatively new to the utility industry, but it has been widely used by other industries for decades. NRECA’s Market Research Service brings this proven methodology to co-ops in a way that maximizes the co-op/member relationship. With the segmentation analysis defining the segments specific to a cooperative, that cooperative can then use the messaging tips for each segment that SECC provided in their report findings to then cater their messaging to different segments.

NRECA is currently mapping the co-op specific segments from their model to the national segments identified in the SECC report, with the updated model to be available by the end of the year online at [Market Research Services](#). This will allow co-ops utilizing that segmentation to determine the messaging that will work best for their membership. With a customized segmentation analysis, cooperatives can focus their messaging and how to promote certain electrification technologies based on the interests among their consumer-members.

Touchstone Energy members can join representatives from SECC for a deep dive into the findings from Beneficial Electrification: The Voice of the Consumer report as part of Touchstone Energy's Co-op Insights webinar series on July 22nd, at 2pm Eastern.

Additional Resources

- [Touchstone Energy's Co-op Insights - Beneficial Electrification Webinar on July 22 at 2pm ET](#)
- [NRECA Market Research Services](#)
- [NRECA Beneficial Electrification Resources](#)
- [SECC Report *Beneficial Electrification: The Voice of the Consumer*](#)
- [SECC Report Webinar](#)

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