

# Reimagining electricity pricing to meet beneficial-electrification and carbon-reduction goals

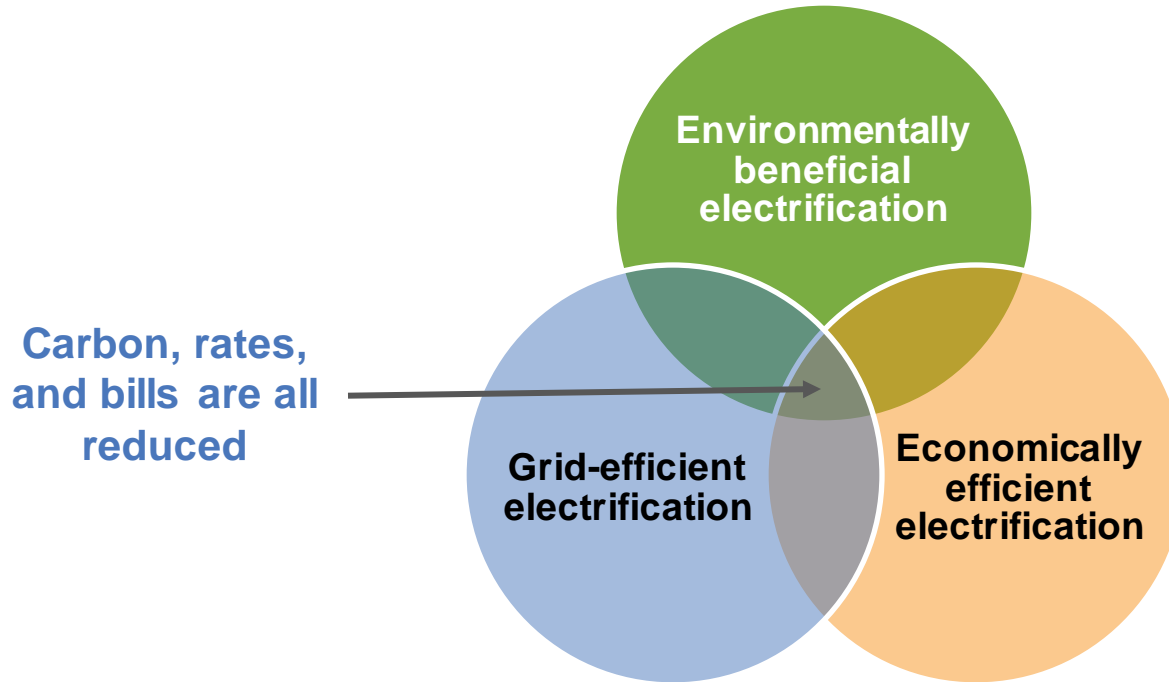
Now's the time for big changes

Bill LeBlanc, Chief Instigation Agent, E Source

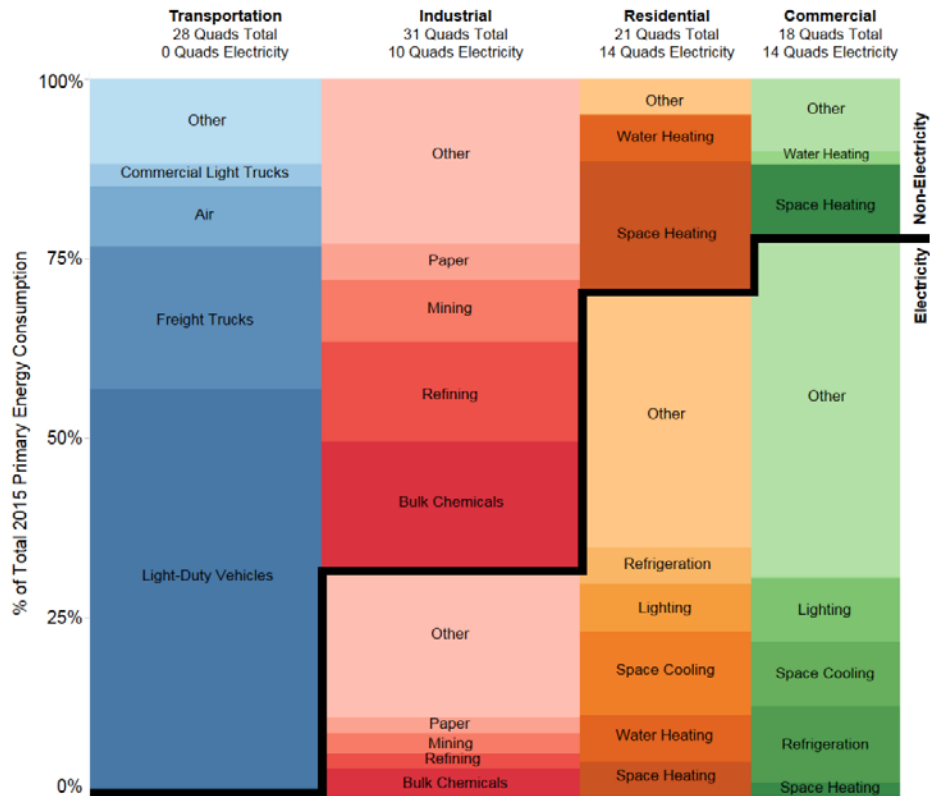
Ahmad Faruqi, Principal, The Brattle Group



# Defining beneficial electrification



# What's the electrification potential?



Source: [Electrification Futures Study](#) (PDF), National Renewable Energy Laboratory

# Framing pricing properly

## Economics

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- Do economic decisions include **all** costs?

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## Policy

- Does it meet equity and fairness goals?
- Is it cost-based or goal-based?
- Can it facilitate environmental goals?
- Does it enable customer choice?
- Does it encourage the right investments?

# People! Actual real live humans

I want my energy company just to talk to me like I'm not an engineer.

What's that unit of energy they make me buy?

Can't they just tell me how much it costs to charge my phone overnight?

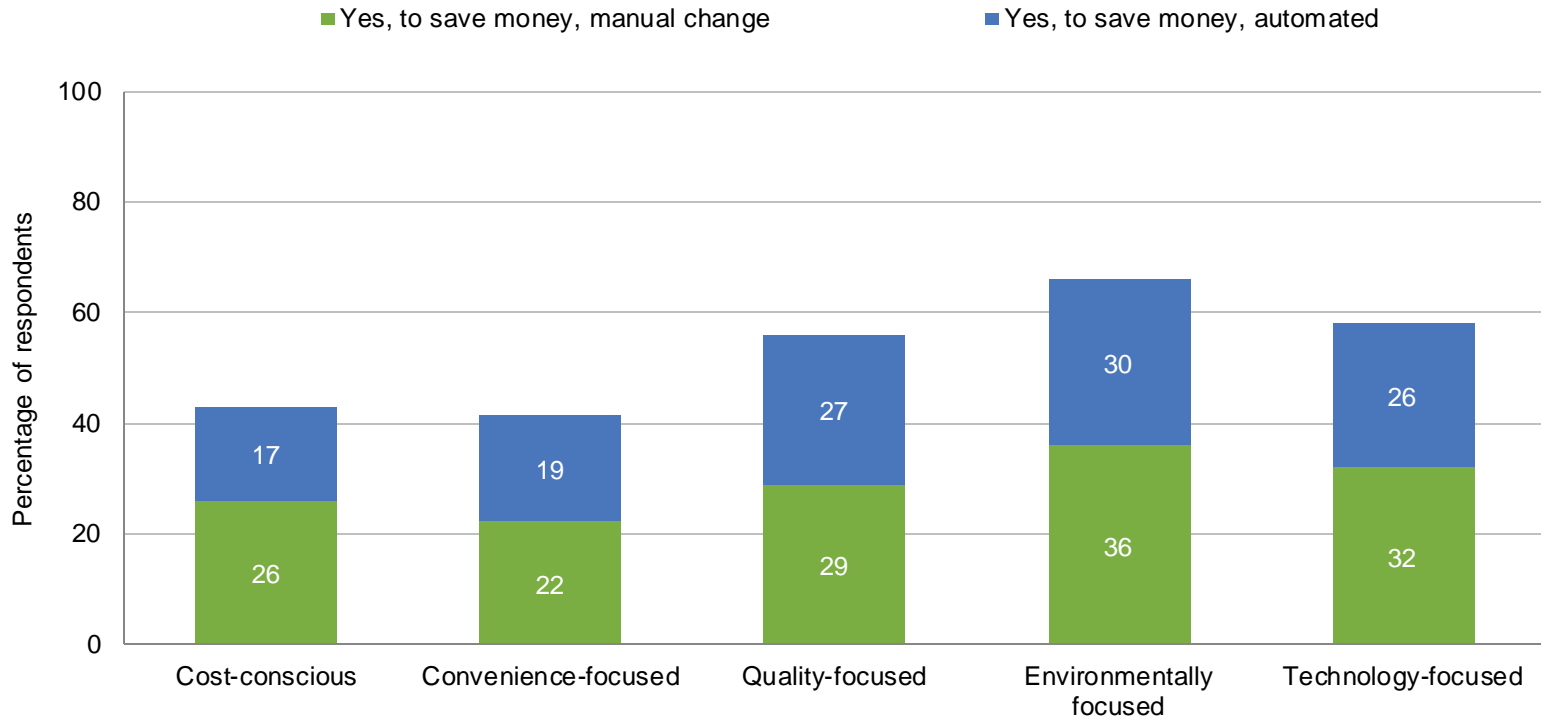


# E Source Powerwalking videos: What do regular people know about electric pricing?



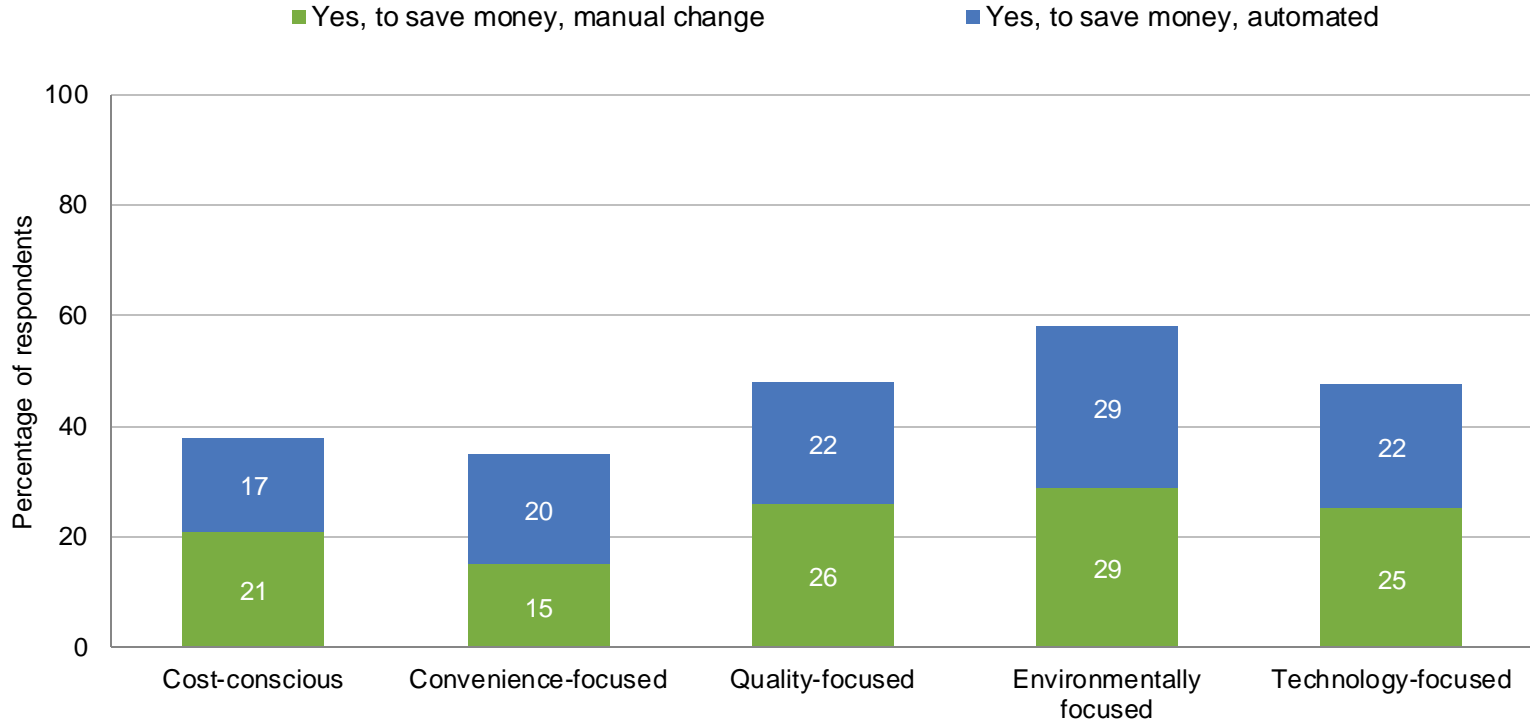


# Segments matter: Interest in time of use



**Base:** All respondents (n = 3,000). **Question S5\_3:** Time-of-use: Which statement most accurately represents your desire for this type of rate? **Note:** Percentages may not add to 100 percent due to rounding. © E Source (2015 Innovative residential rate design and pricing: Customer preferences and acceptance)

# Interest in demand charges



**Base:** All respondents (n = 3,000). **Question S5\_3:** Demand charge: Which statement most accurately represents your desire for this type of rate? **Note:** Percentages may not add to 100 percent due to rounding. © E Source (2015 Innovative residential rate design and pricing: Customer preferences and acceptance)

# 5 critical design imperatives

E Source residential ethnographic design research



**Engagement  
design**



**Reward design**



**Choice design**

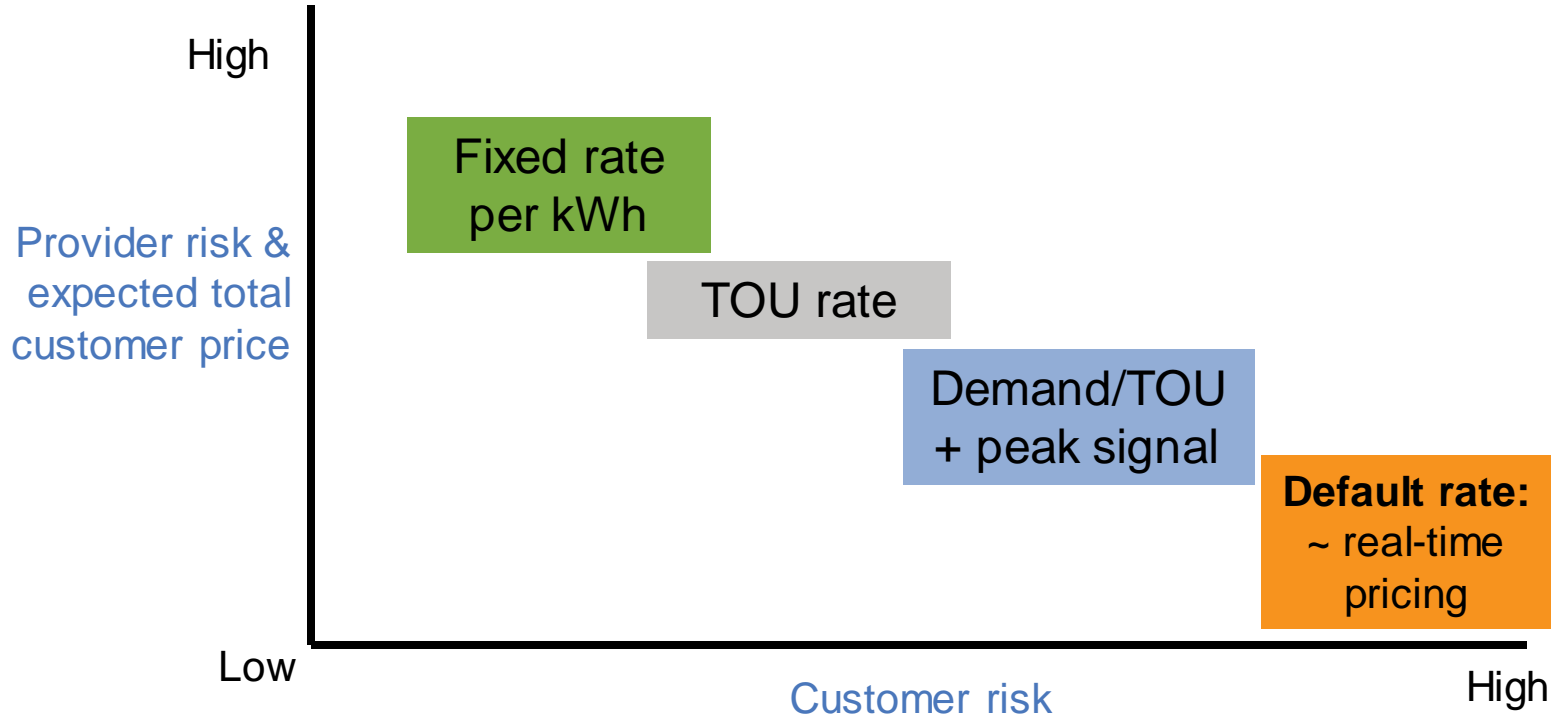


**Localization  
design**



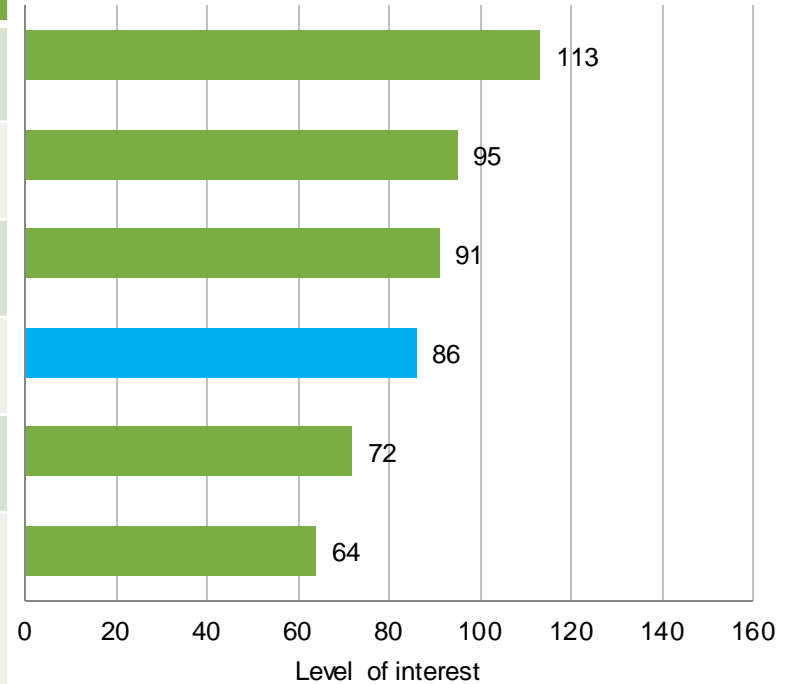
**Advisory design**

# Bill's ideal pricing approach: Risk/choice derivative products



# Rate & pricing tradeoff analysis: Conjoint

Amount of bill	Rate plan design	Energy adjustments
\$90 average/month	Flat/standard	Automatic peak reduction of 10%
\$90 average/month	Time-of-use	Automated shifting
\$90 average/month	Time-of-use	Manual shifting
\$100 average/month	Flat/standard	None
\$105 fixed	Unlimited	None
\$90 average/month	Flat/standard	Thermostat automatically raised to 80° for 4 hours on 6 peak summer afternoons



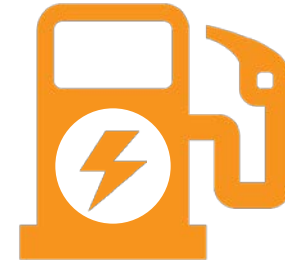
**Question:** Please indicate the one scenario you would be most interested in as well as the one scenario you would be least interested in. **Note:** This slide shows 6 of 15 scenarios respondents were asked to rate. © E Source (2015 Innovative residential rate design and pricing: Customer preferences and acceptance)

# Prospective electric vehicle (EV) owners are much more sensitive to price than current owners are

What's the most you'd be willing to pay for a public charger that uses the same Level 2 charging system?

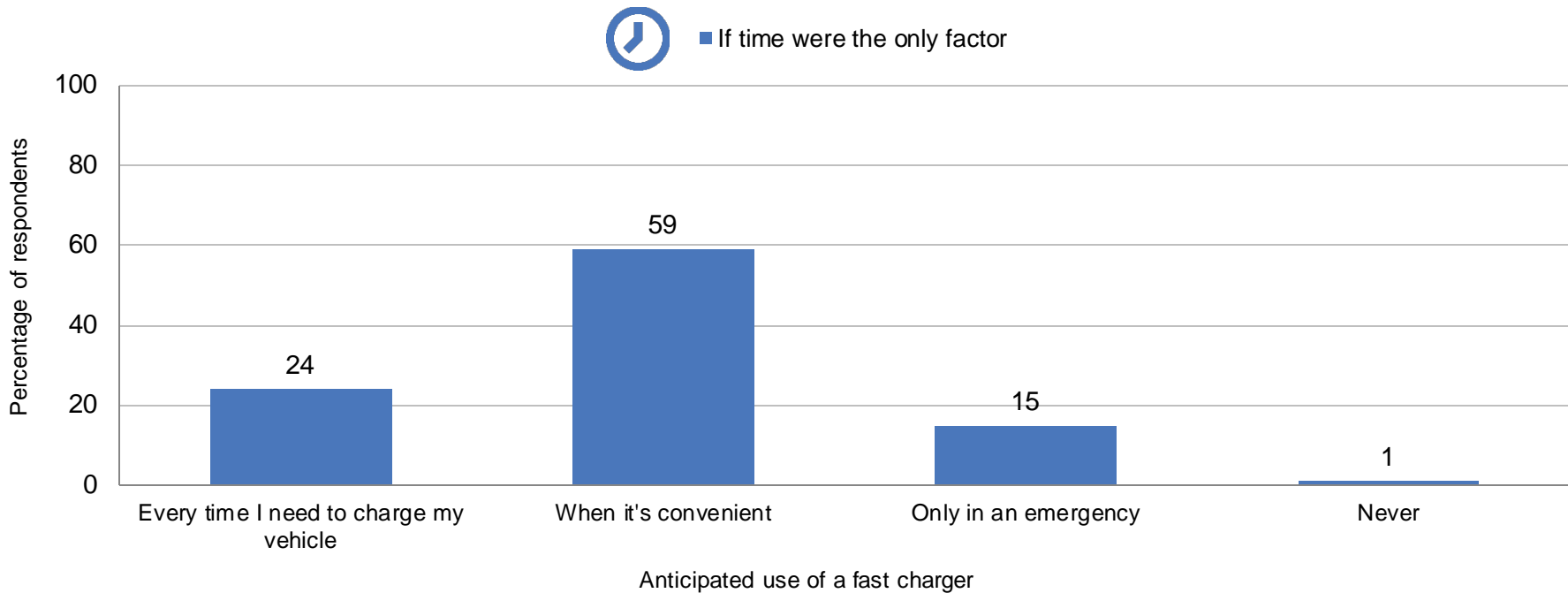
EV owners  \$2 and \$4 per hour

Considering EV  \$0.75 and \$1 per hour

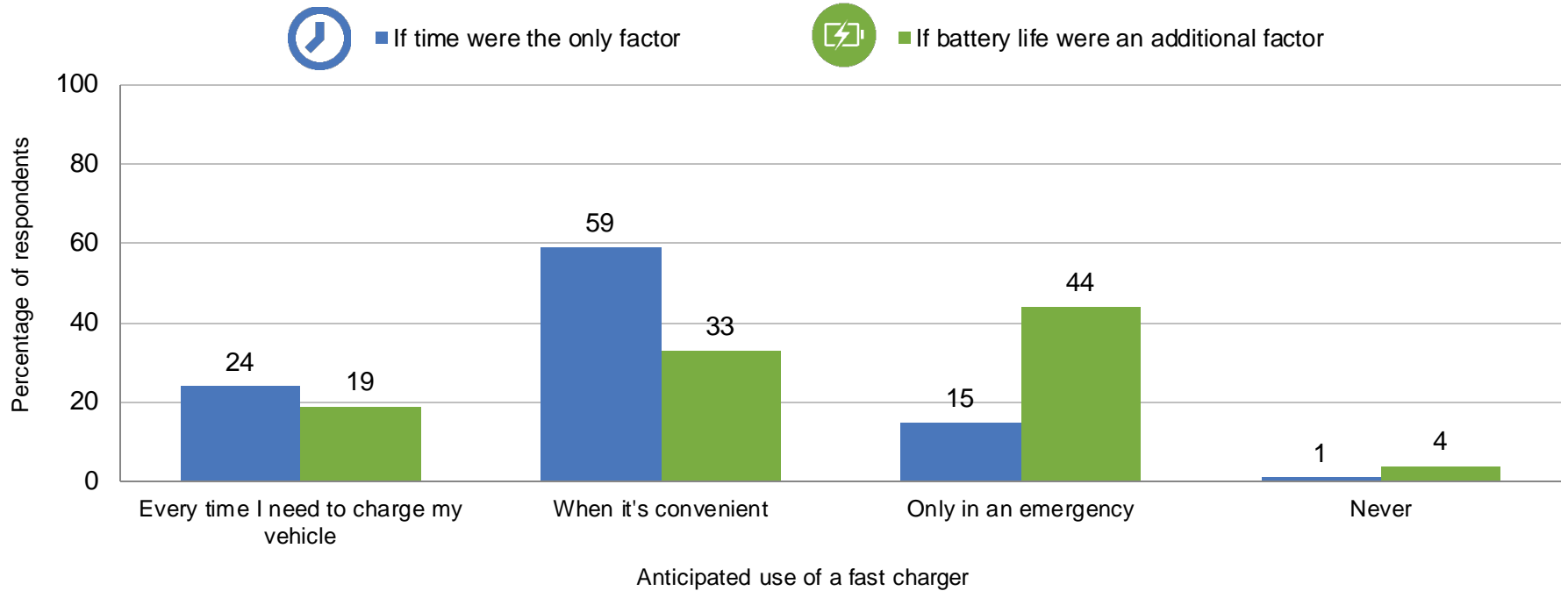


**Base:** All respondents from the US and Canada who have a battery electric vehicle (BEV) or plug-in hybrid electric vehicle (PHEV) and use public chargers and those considering an all-electric vehicle. © E Source [Electric Vehicle Residential Customer Survey](#)

# Use of high-powered fast chargers



# Use of high-powered fast chargers





# Willingness to pay for a fast charger

What's the most you would be willing to pay for the fast charger compared to the Level 2 charger?

43% (same price)

36% (25% more)

17% (50% more)

**Base:** All respondents from the US and Canada considering an all-electric vehicle or have a BEV or PHEV and who would use a fast charger after knowing about time and battery life (n = 4,484). © E Source [Electric Vehicle Residential Customer Survey](#)

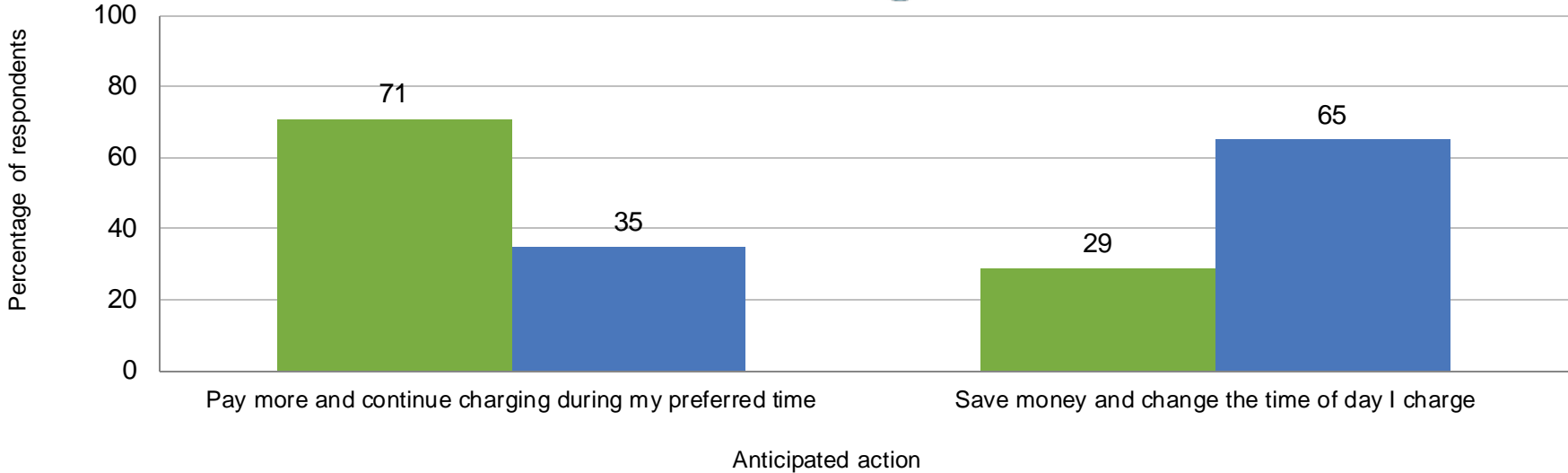
# Which action would you take if the price of electricity increased during your preferred charging time?



■ EV owners  
(n = 958)



■ Considering an EV  
(n = 3,463)



# How does charging your EV compare to putting gas in a traditional vehicle?

33% (spend less)

37% (spend the same)

28% (spend more)



**Base:** All respondents from the US and Canada who have a BEV or PHEV (n = 1,016). © E Source [Electric Vehicle Residential Customer Survey](#)



Collins

AEROSOL

PROPERTY OF  
EST 1963  
*Lake Havasu*  
ARIZONA



[SMILE]  
la vie est belle

Recycle

# For more information



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