

Automotive Trends Benchmark Study

July 2016

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Introduction & Methodology

Overview

- Investigation conducted exclusively for DuPont.
- Methodology, data collection and analysis by Penton Research, the research arm of Penton, parent company of *Wards Auto*.
- Data collected June 27 through July 11, 2016.
- Methodology conforms to accepted marketing research methods, practices and procedures.

Methodology

- On June 27, 2016, Penton Research emailed invitations to participate in an online survey to 27,104 subscribers of *WardsAuto*.
- By July 11, 2016, Penton Research received 604 completed surveys, for an effective response rate of 2.2%.

Response Motivation

- To encourage prompt response and increase the response rate overall, a live link to the survey was included in the e-mail invitation to route respondents directly to the online survey.
- Reminder emails were sent to non-respondents on July 1 and 8, 2016.
- The invitations and survey were branded with the *Wards Auto* name and logo, in order to capitalize on subscriber brand affinity.
- Each respondent was afforded the opportunity to enter a drawing for one of four \$50 Visa gift cards.

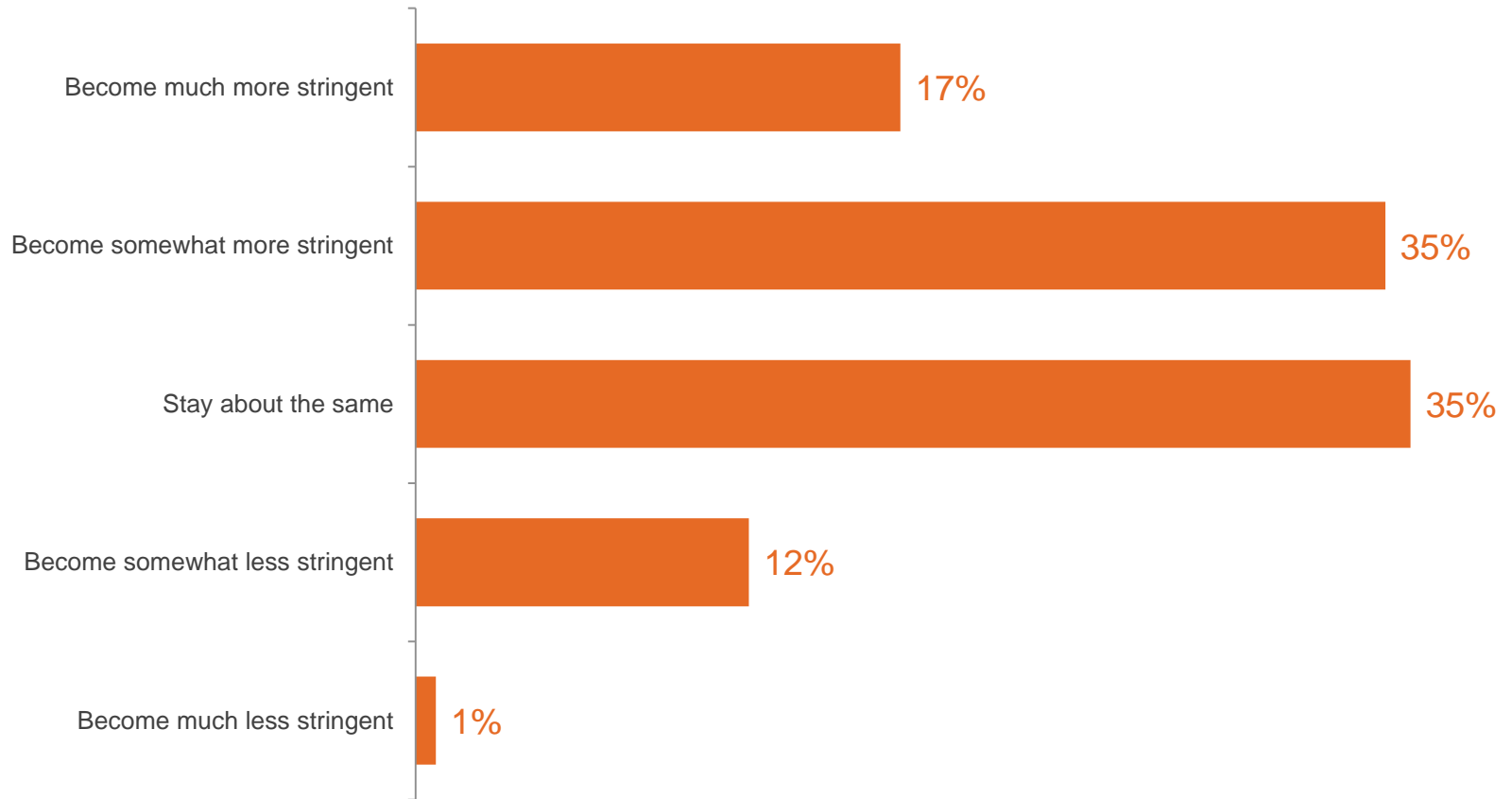
Key Findings

An abstract graphic on the right side of the slide. It features a solid orange background. Overlaid on this are several white, rounded, teardrop-like shapes that overlap each other. One large shape is in the upper left, another is in the upper right, and a third, larger one is in the lower right. The shapes are clean and minimalist.

2017-2016 Standards – Mid-Term Reviews

The majority of respondents (52%) expect the standards for fuel economy and emissions to become more stringent. About one in three (35%) expect the standards to remain unchanged.

In the US, mid-term reviews of the 2017-2025 standards could adjust the fuel economy and emission regulations. How do you expect standards to change?

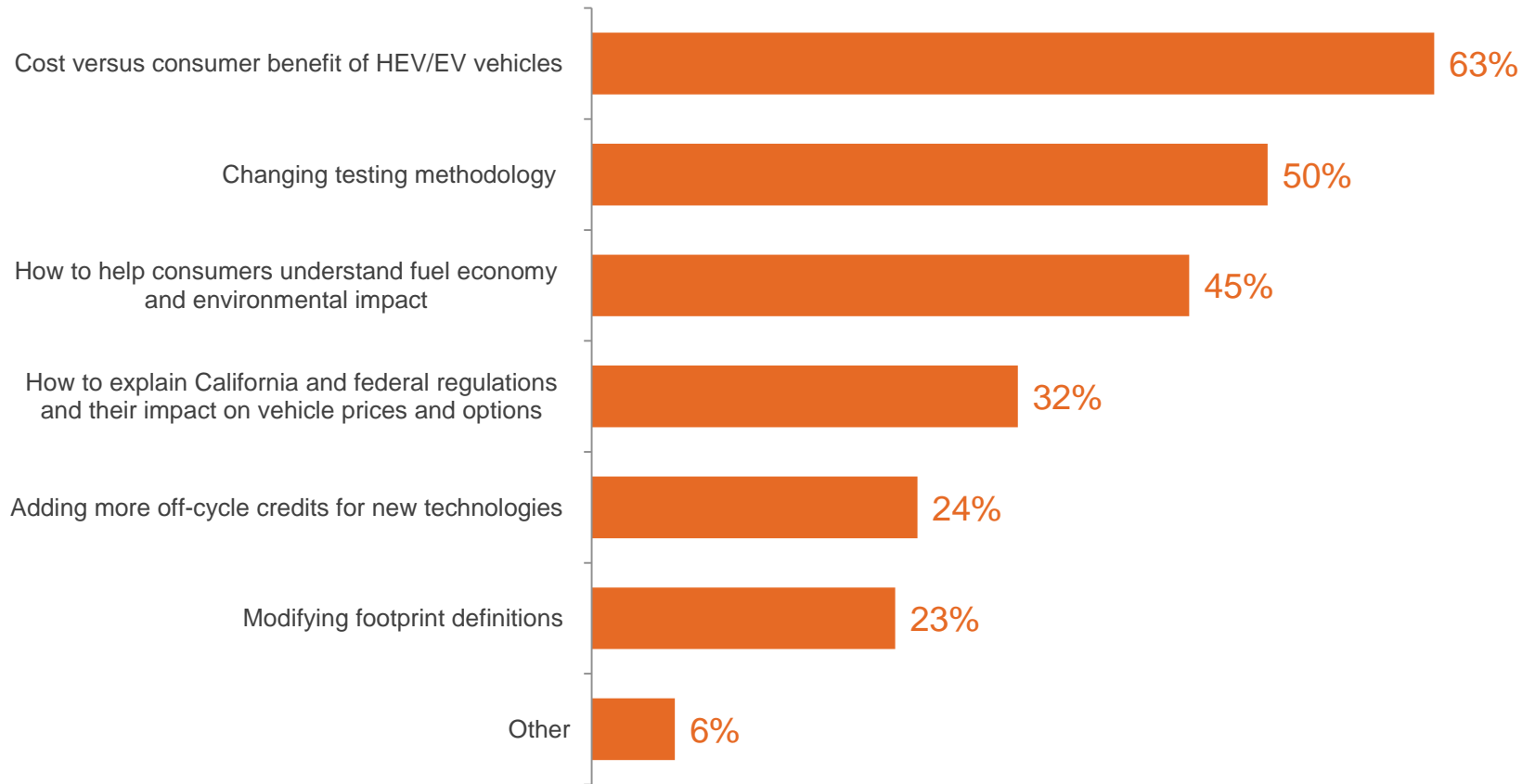


Base: All Respondents (n=555).

Topics Discussed During Mid-Term Reviews

The majority of respondents anticipate that during the mid-term reviews will be the cost versus consumer benefit of HEV/EV vehicles (63%) and changing testing methodology (50%).

What topics do you think will be discussed during the mid-term reviews?

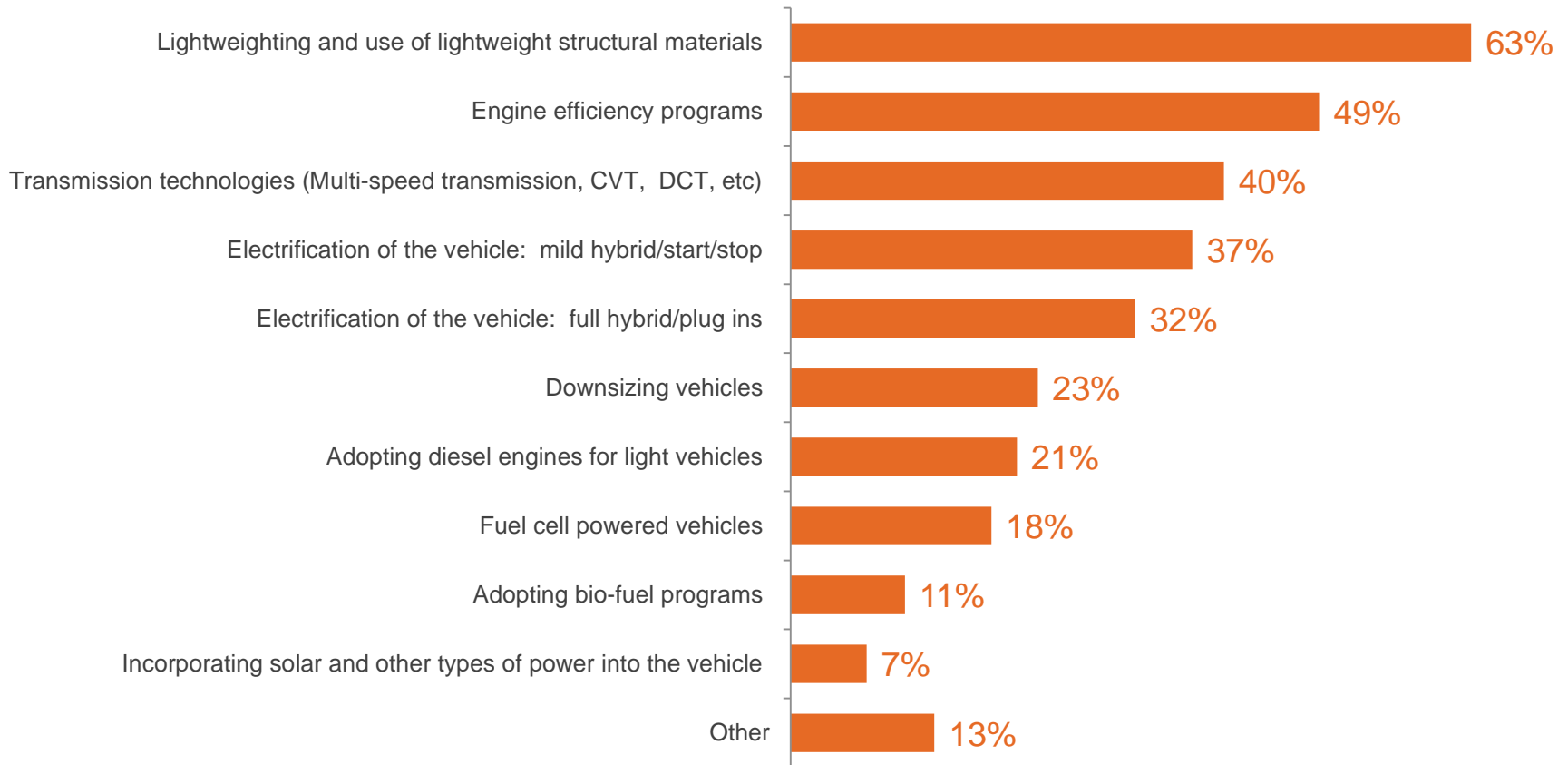


Base: All Respondents (n=548).

Technology Focus to Meet 2025 Standards

The majority of respondents (63%) are focused on lightweighting and use of lightweight structural materials to help meet the 2015 standards and nearly half (49%) are focused on engine efficiency programs to meet the standard.

Please identify all the technologies your company is focused on to help the industry meet 2025 standards?

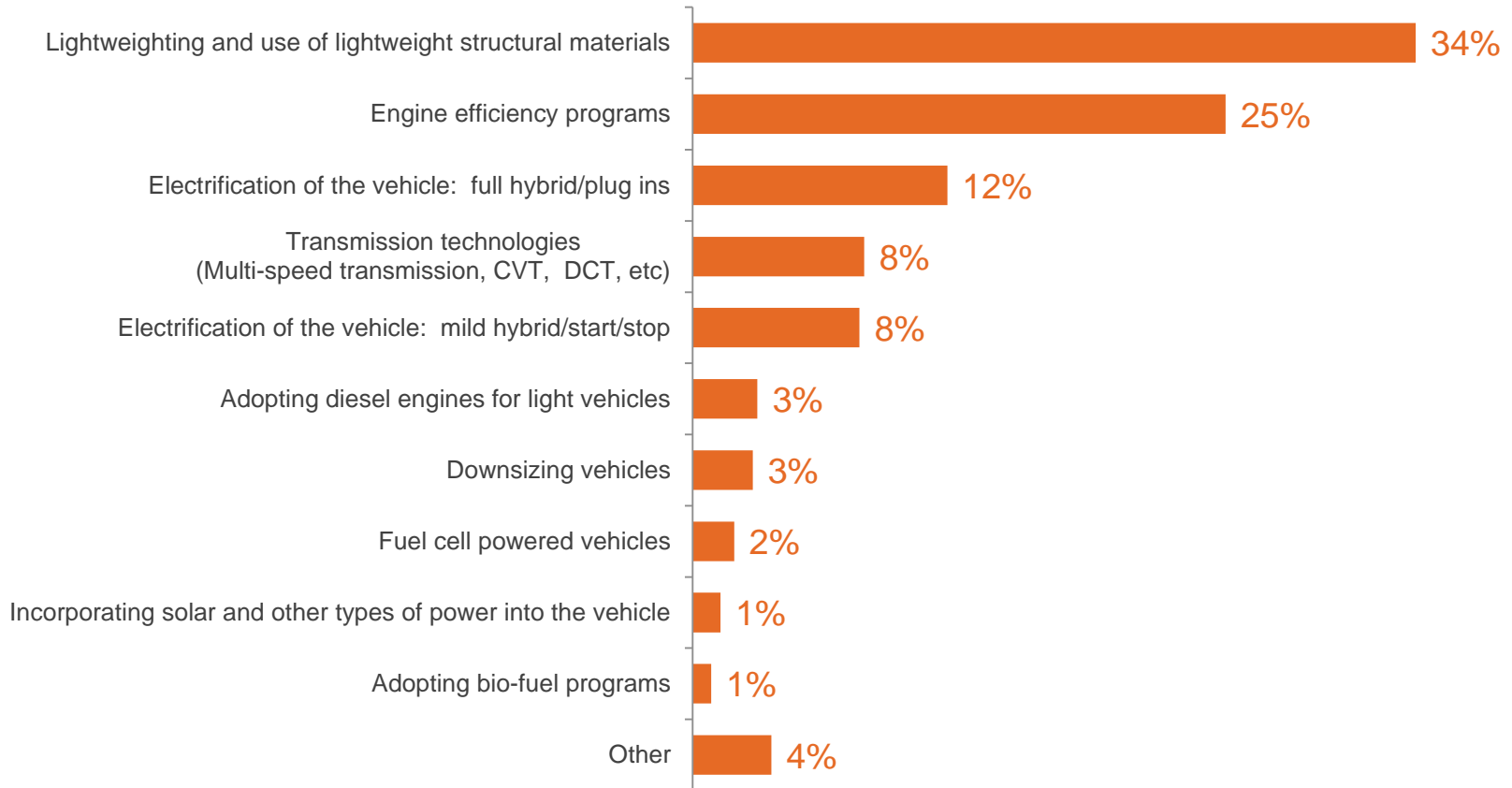


Base: All Respondents; multiple answers permitted (n=514).

Top Technology Focus to Meet 2025 Standards

One in three (34%) respondent's companies are most focused on lightweighting to meet the 2025 standards while another one in four (25%) is focused on engine efficiency programs.

Which one technology is your company most focused on to help the industry meet 2025 standards?

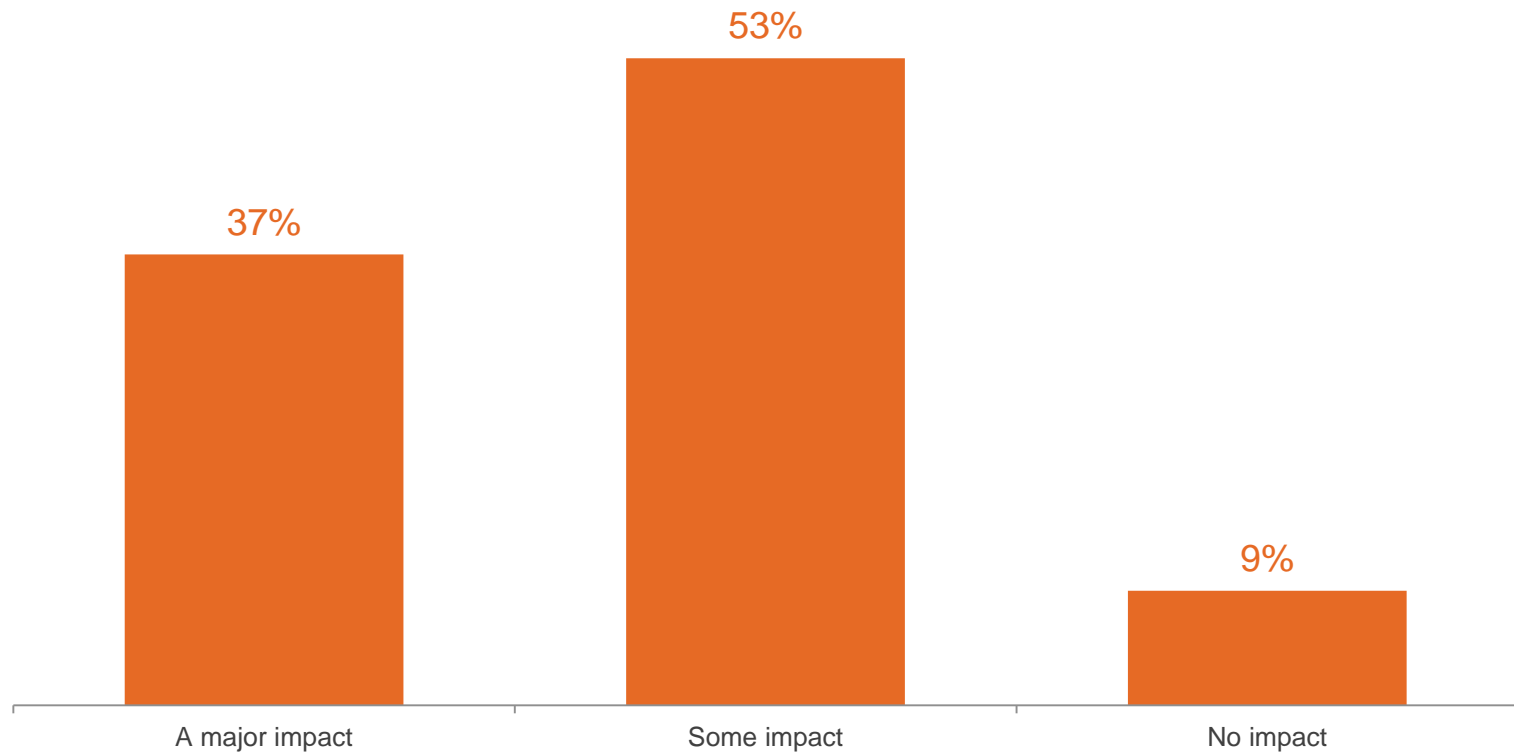


Base: All Respondents (n=462).

Impact of Low Gas Prices and Low Sales

90% of respondents feel there is an impact of low gas prices and/or low sales of fuel efficient vehicles on programs to meet the CAFE regulations.

What impact are low gas prices and/or low sales of fuel efficient, low-emission vehicles having on programs to meet CAFE regulations.

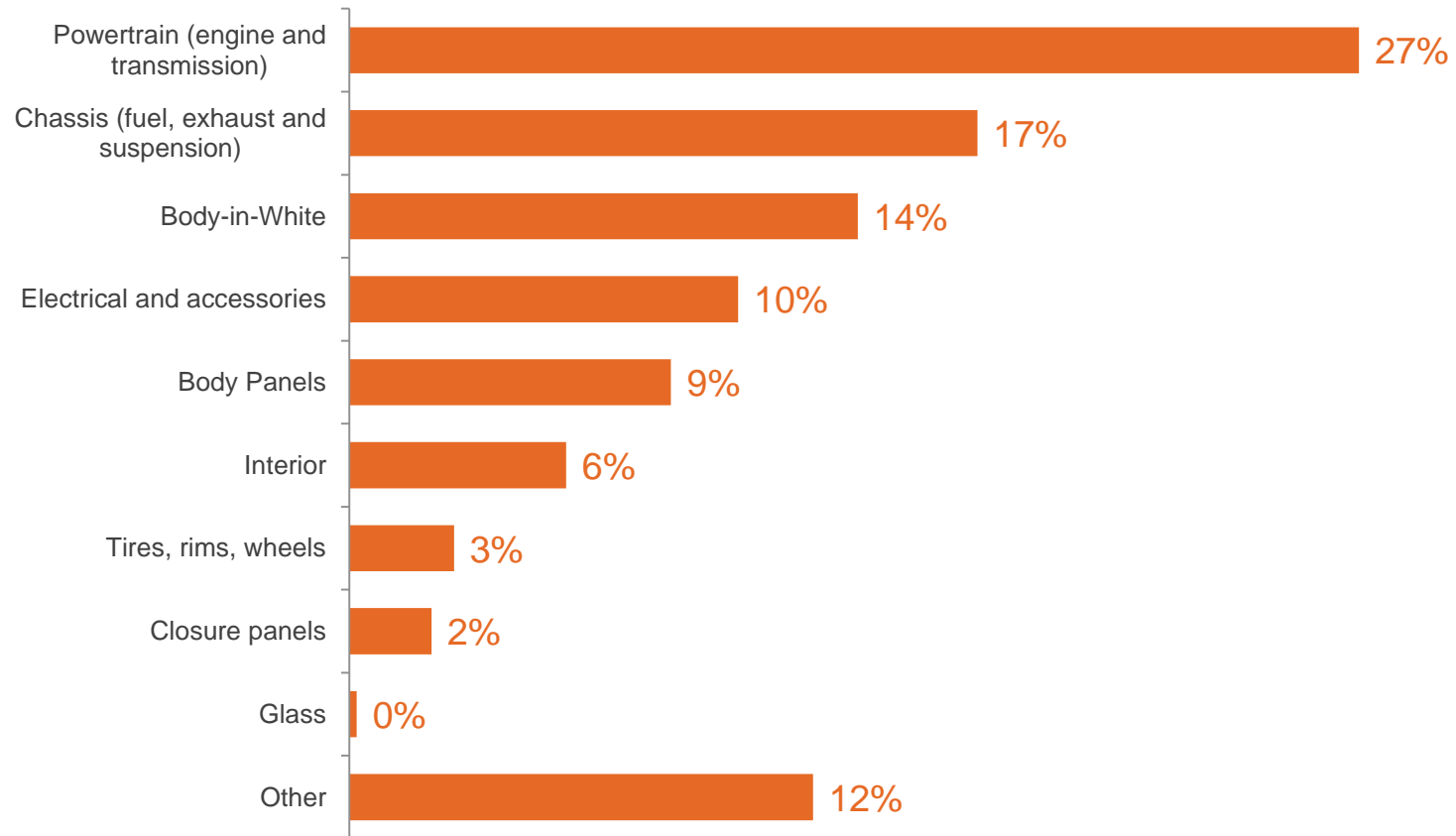


Base: All Respondents (n=519).

Primary Target for Lightweighting

One in four respondents (27%) are targeting the powertrain for lightweighting.

Which vehicle area/system is your primary target for lightweighting?

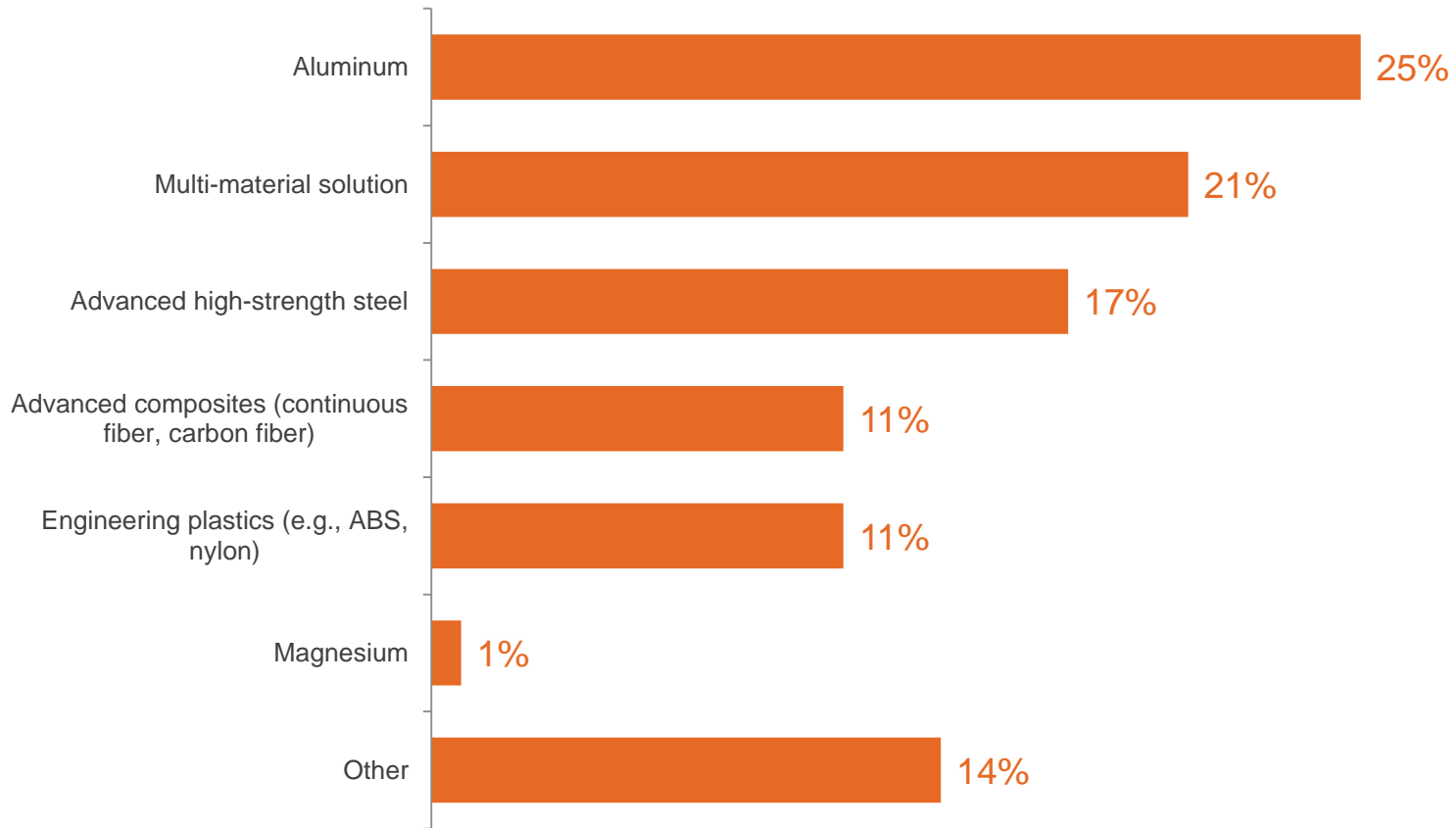


Base: All Respondents (n=499).

Most Heavily Relied Upon Material Family

The most relied upon material families to meet the CAFE standards are aluminum (25%) and a multi-material solution (21%).

Which material family are you relying upon most heavily to help meet the new CAFE fuel economy standards?

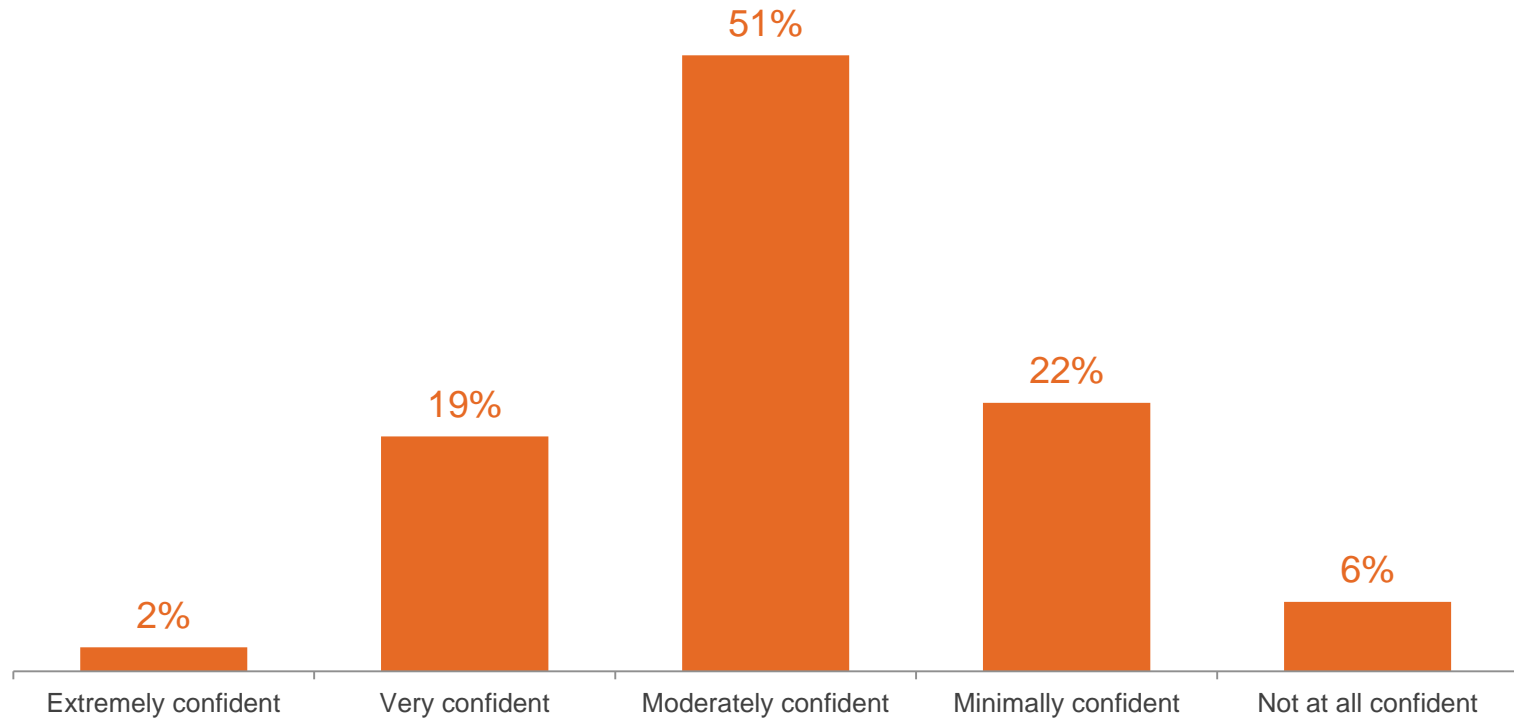


Base: All Respondents (n=492).

Confidence in Today's Materials Portfolio

21% of respondents are either extremely or very confident that today's materials will help the automotive industry meet the 2025 standards.

How confident are you that today's materials portfolio will help the automotive industry meet 2025 CAFE standards?

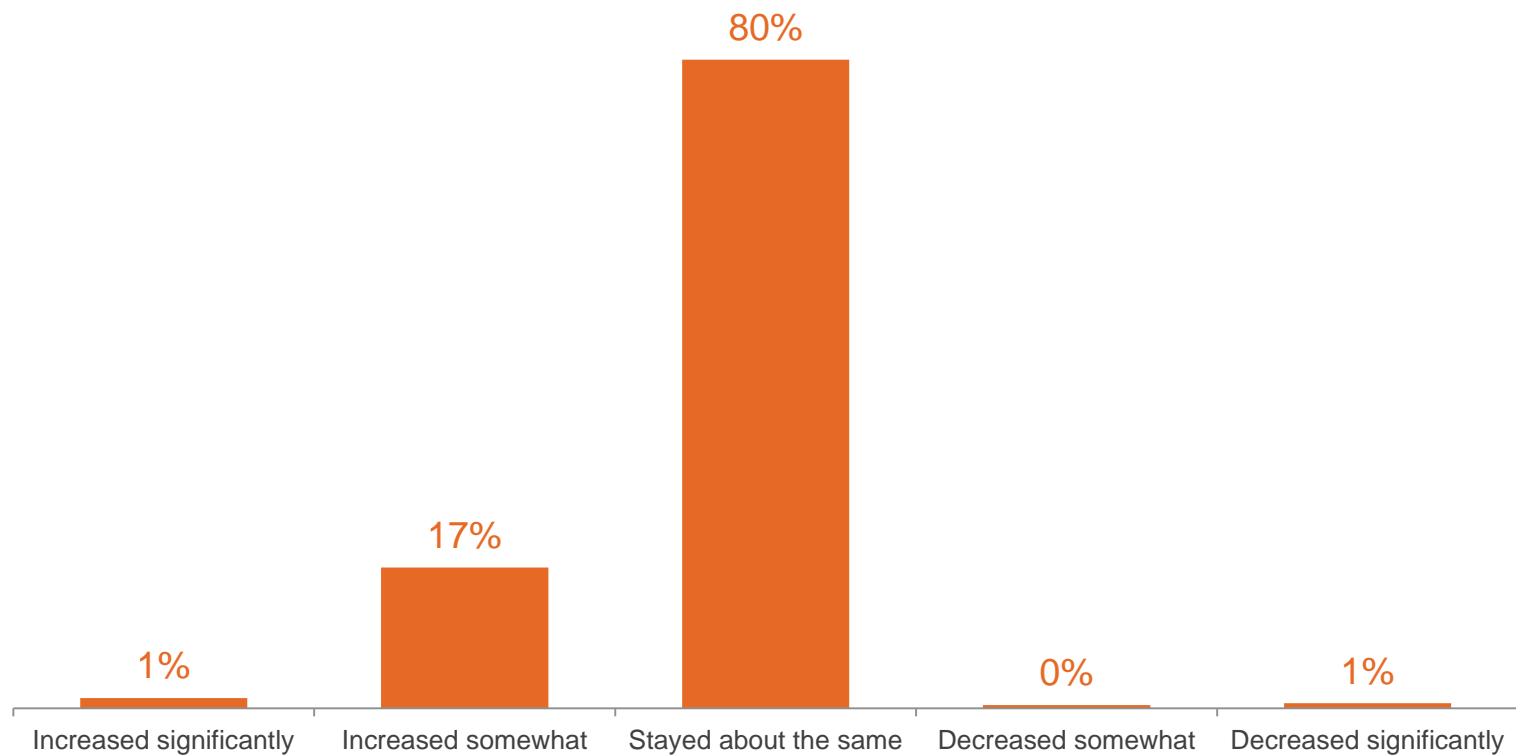


Base: All Respondents (n=506).

Utilization of Bio-Based Materials

The use of bio-based materials has increased slightly with 18% of respondents indicating an increase they deemed to be significant (1%) or somewhat (17%).

How has your company's utilization of bio-based materials changed in the last year?

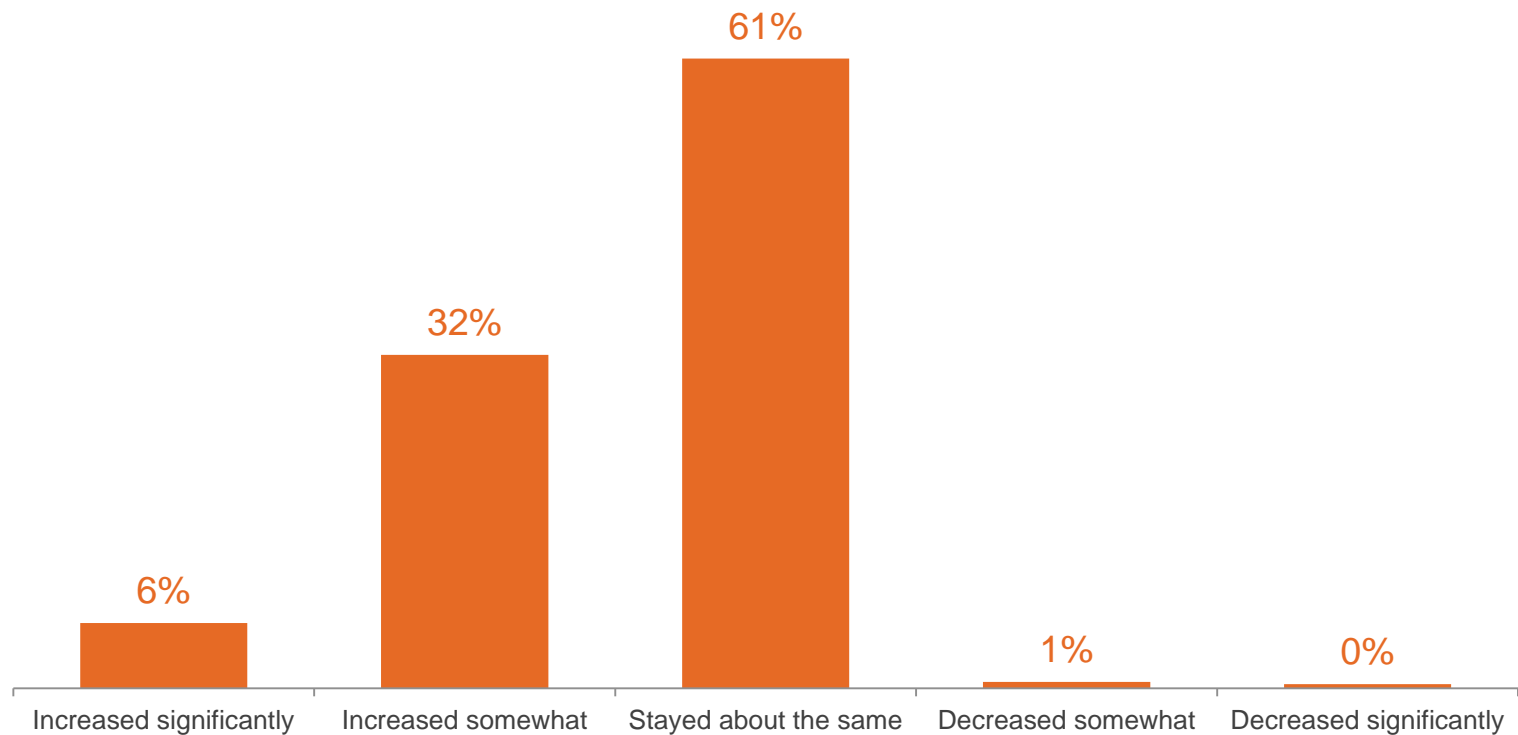


Base: All Respondents (n=471).

Utilization of Recycled Materials

Nearly one-third of respondents (32%) indicate their company have increased somewhat their utilization of recycled materials in the last year.

How has your company's utilization of recycled materials changed in the last year?

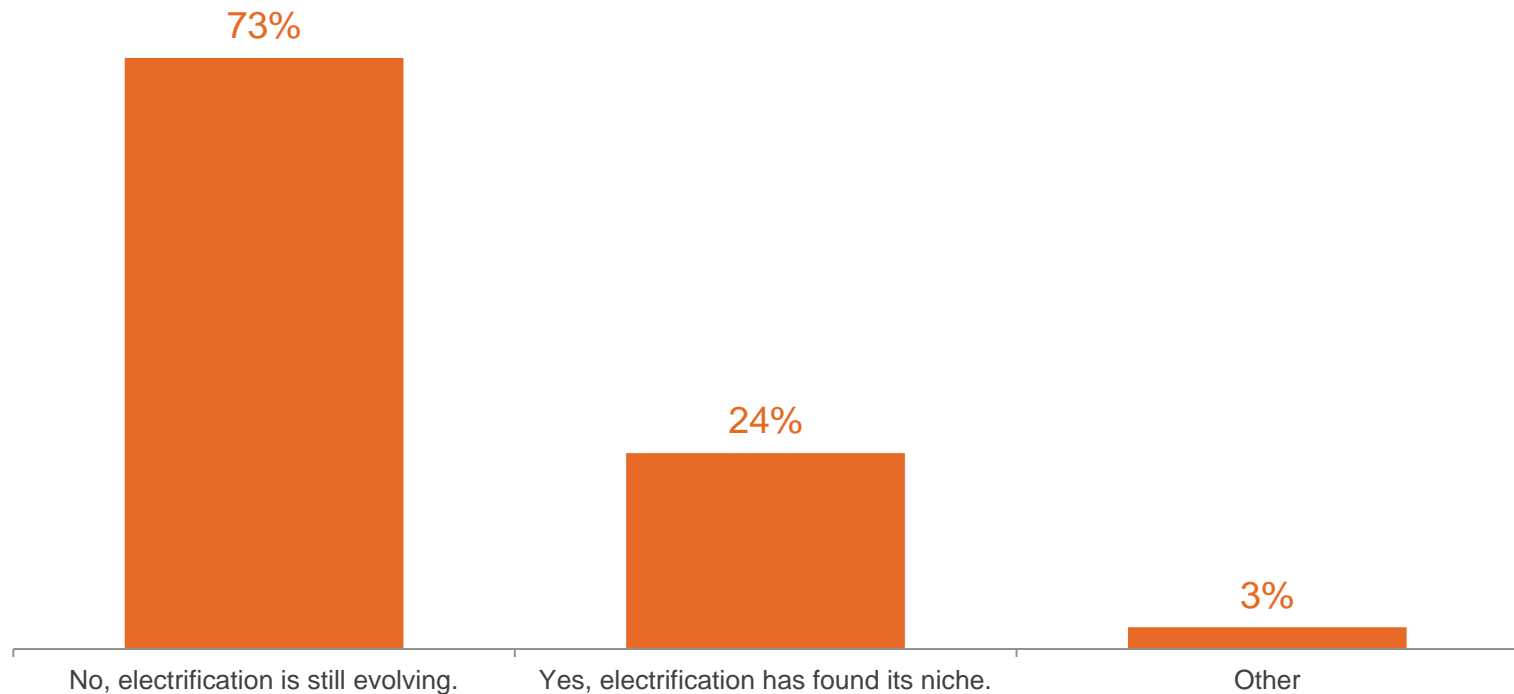


Base: All Respondents (n=477).

Role of Electrification

Approximately three out of four respondents (73%) feel that the role of electrification is still evolving.

Has the role of electrification to meet fuel economy and emissions regulations become clearer in the last year?

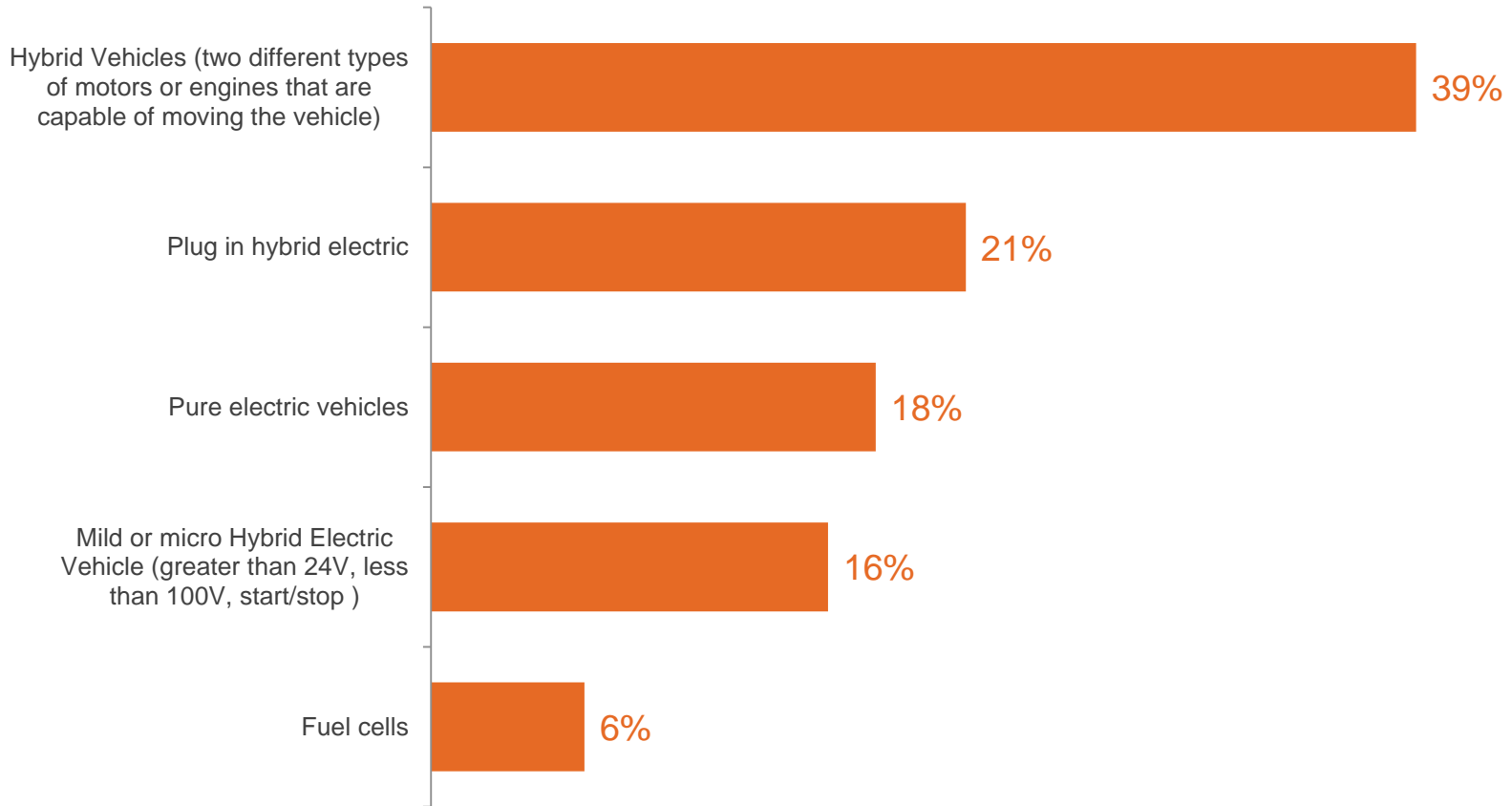


Base: All Respondents (n=483).

Most Popular Electrification System

Hybrid vehicles (39%) is the system that is getting the most attention and resources.

Which electrification system is getting the most attention and resources?



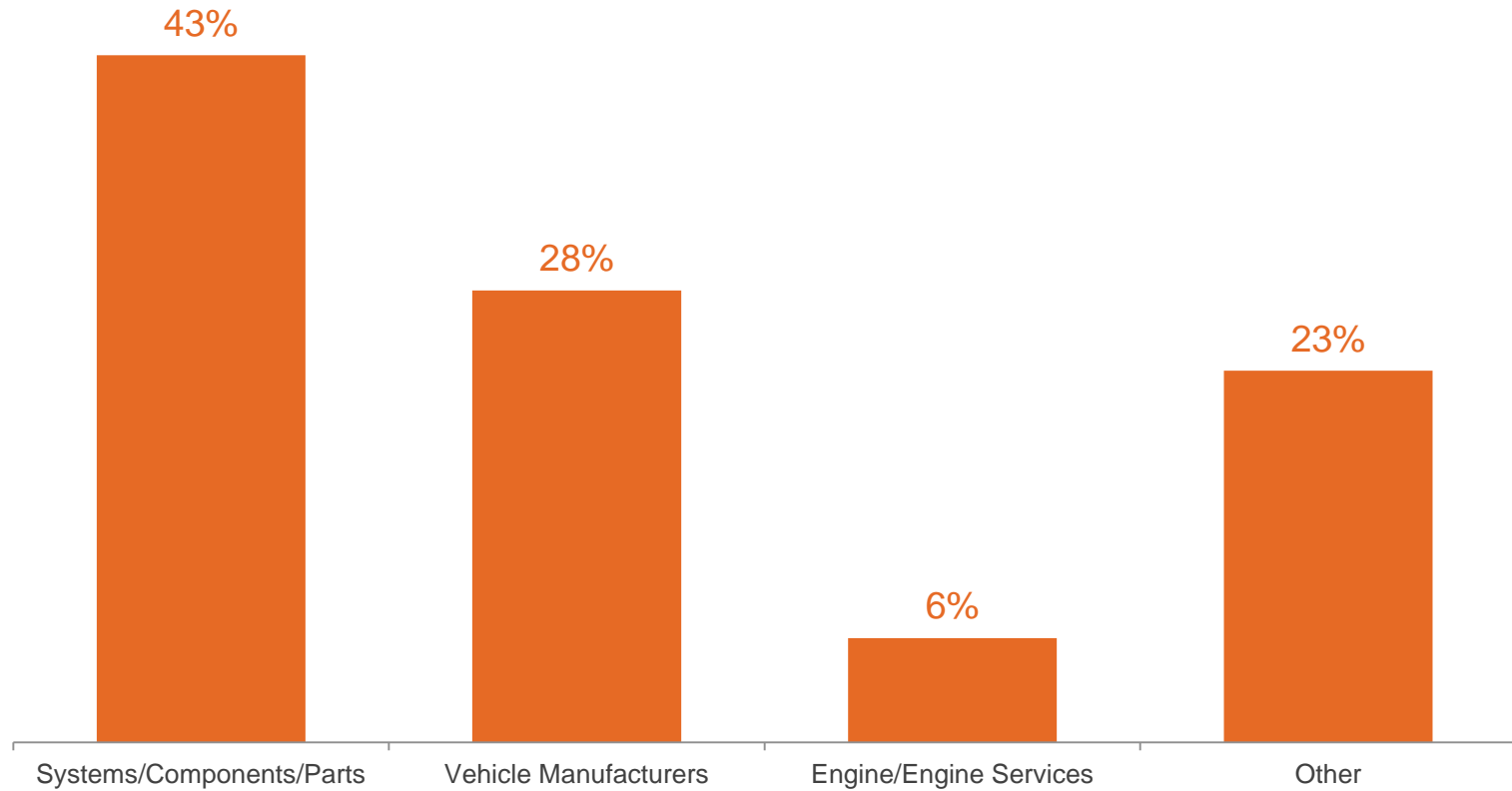
Base: All Respondents (n=475).

Respondent Profile



Business Type

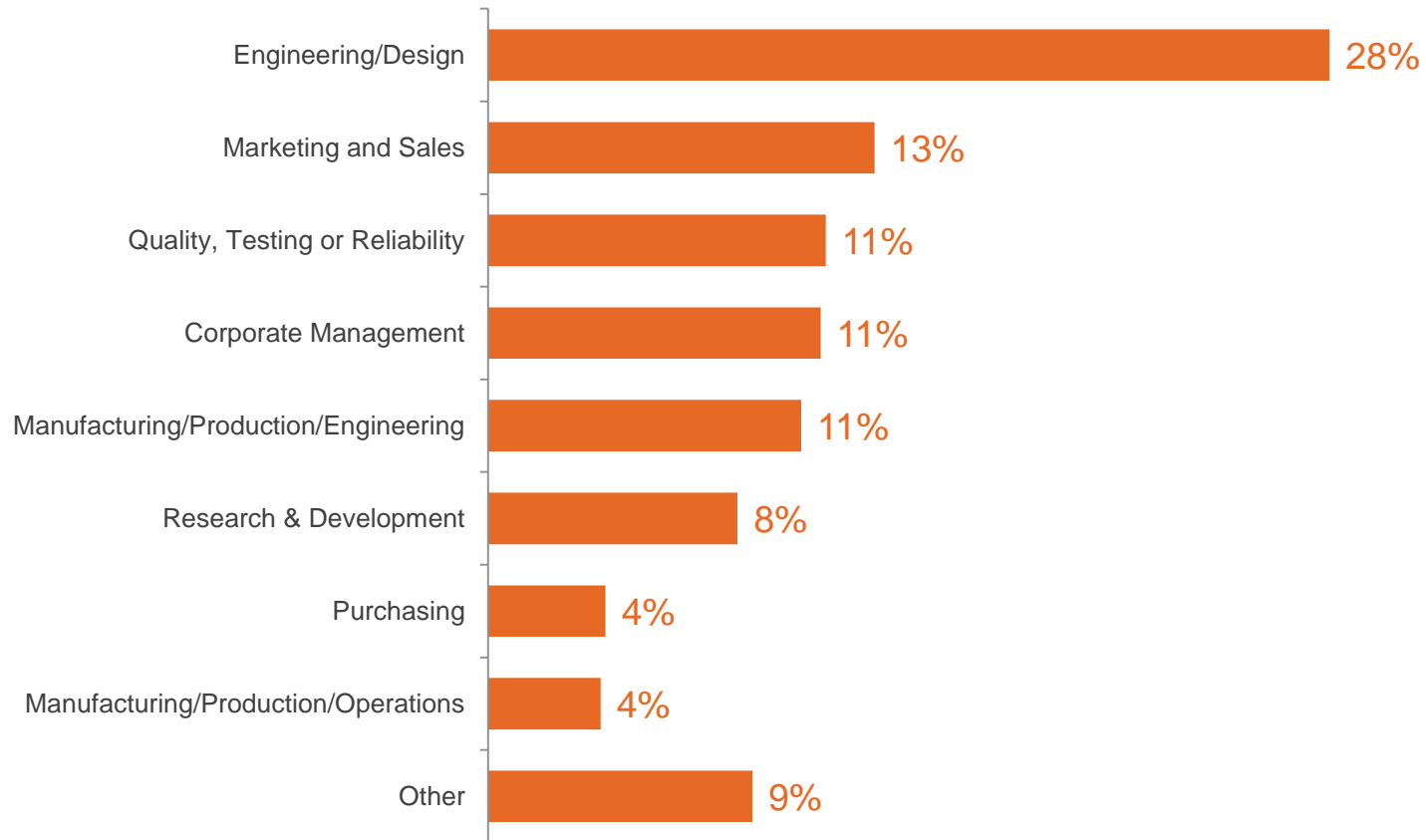
Which of the following best characterizes your company's business type?



Base: All Respondents (n=604).

Primary Job Function

Which of the following best describes your primary job function?



Base: All Respondents (n=604).

Thank you

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