SURVEY OF AUTOMOTIVE SUPPLIERS

with respect to the costs and performance of vehicle technologies

A report by

Ricardo Energy & Environment

for CALSTART
EXECUTIVE SUMMARY

ABOUT THE MIDTERM EVALUATION

The National Program for greenhouse gas emissions (GHG) and fuel economy standards was developed jointly by the Environmental Protection Agency (EPA) and the National Highway Traffic Safety Administration (NHTSA). The EPA and NHTSA are required to conduct a review of the standards as part of the Final Rule making to extend the National Program of harmonized greenhouse gas and fuel economy standards for 2017-2025 period. The aim of this midterm evaluation (MTE) is to decide whether the standards for model years 2022-2025, established in 2012, are still appropriate given the latest available data and information. The National Academies of Science (NAS) Report on Cost, Effectiveness and Deployment of Fuel Economy Technologies for Light-Duty Vehicles (NAS, 2015) was published in 2015, timed to inform the EPA midterm evaluation.

STUDY DETAILS

CALSTART has commissioned Ricardo Energy & Environment to conduct a Delphi survey of Tier 1 automotive suppliers in the U.S. in order to gather information on the views of these companies with respect to the cost and performance data included in the 2015 NAS report.

This survey followed the Delphi approach and was conducted in two stages, giving respondents the opportunity to review the aggregate responses and amend their responses if necessary. The objective of a Delphi survey is to obtain the consensus of a group of experts on a specific question/problem. The method is mainly applied for analyzing issues that are particularly complex and hence involve significant uncertainty.

JOHN BOESEL
President and CEO of CALSTART

“This survey underscores the degree to which deploying new fuel-efficient technology is already baked into automotive suppliers’ businesses plans.”

STAGE ONE: SURVEY

The first stage of the survey included questions covering the following topics:

- Background information (relating to the respondents)
- 2025 GHG and fuel economy targets
- Effect of oil prices
- Policies and employment
- Estimates for reductions in fuel consumption from the NAS report
- Costs and performance of vehicle technologies
- Approaches used in the NAS report
Following completion of the first stage of the survey, the results were anonymised, summarized and incorporated into Stage 2 of the survey. In line with the Delphi method, these results were distributed to the Stage 1 respondents in order to give them the opportunity to comment on the responses of the other participants, reconsider their view and revise their answer to the issue being analyzed. Telephone interviews were also conducted with some of the survey respondents in order to collect further details and follow up on comments made during the survey.

Overall, the automotive suppliers recognized the scale of the challenge of processing the data and information required to assess the fuel consumption reductions and cost estimates of the wide range of technologies included in the NAS report.

There were a number of key areas where there was a high level of consensus among the automotive suppliers:

- The majority of Tier 1 suppliers who participated in this study agreed with the 2025 fuel efficiency target as set by the EPA and the NHTSA.
- The majority of suppliers surveyed believe that this target should not be changed under the next administration, indicating that the target helps industry by providing regulatory certainty in order to help plan investments and strategies for developing new technologies.
- Automotive suppliers generally agreed that it is important to start planning and setting targets now for beyond 2025. New technologies have long development lead times so regulatory certainty is essential.
- Most respondents broadly agreed with the approaches used in the NAS report, recognizing the challenges of assessing the costs and performance of such a wide range of technologies.

In addition, there were a number of areas where the responses from automotive suppliers were more mixed:

- Regarding the cost estimates, there was less agreement amongst respondents who were able to express an opinion. The majority of respondents felt unable to comment on costs in the majority of technology categories.
- There was no clear consensus on the importance of electrification of vehicles in order to meet the 2025 target. Although some survey respondents felt that there would be sufficient improvements in ICE technologies, light-weighting and hybridization technologies to meet the 2025 targets without additional electrification, other survey respondents indicated that a high level of EV penetration would be required to achieve the target.
- The effect that oil price has on the sales of fuel efficiency technologies garnered a mixed response from the survey respondents. About 45% indicated that low oil prices do not have a noticeable effect on these sales, whereas 45% indicated that low prices reduce the demand for, and sales of, fuel efficiency technologies.

The results of this survey will be used by CALSTART to provide a response to the midterm evaluation of the U.S. federal light-duty vehicle greenhouse gas emissions standards.