

Committee on Review of the FreedomCAR and Fuel Research Program, Phase 2

Statement of Task

The National Academies' National Research Council (NRC) will establish a committee to conduct an independent review of the research and development program of the FreedomCAR (Cooperative Automotive Research) and Fuel Partnership, a program undertaken by the U.S. government in collaboration with the U.S. Council for Automotive Research (USCAR) and five energy companies. The first step in the study will encompass a National Academies' process to establish an independent committee, whose members are appointed by the President of the National Academy of Sciences. In accordance with usual NRC practices, the committee will be configured and balanced in such a way as to ensure its impartiality. The committee will hold a number of meetings and collect information on the FreedomCAR and Fuel program in addressing the following tasks:

- (1) Review the challenging high-level technical goals and timetables for government and industry R&D efforts, which address such areas as (a) integrated systems analysis; (b) fuel cell power systems; (c) hydrogen storage systems; (d) hydrogen production and distribution technologies necessary for the viability for hydrogen-fueled vehicles; (e) the technical basis for codes and standards; (f) electric propulsion systems; (g) electric energy storage technologies; (h) lightweight materials; and (i) advanced combustion and emission control systems for internal combustion engines (ICEs).
- (2) Review and evaluate progress and program directions since the Phase 1 review towards meeting the Partnership's technical goals, and examine on-going research activities and their relevance to meeting the goals of the Partnership.
- (3) Examine and comment on the overall balance and adequacy of the research and development effort, and the rate of progress, in light of the technical objectives and schedules for each of the major technology areas.
- (4) Examine and comment, as necessary, on the appropriate role for federal involvement in the various technical areas under development.
- (5) Examine and comment on the Partnership's strategy for accomplishing its goals, which might include such issues as (a) program management and organization; (b) the process for setting milestones, research directions, and making Go/No Go decisions; (c) collaborative activities needed to meet the program's goals (e.g., among the various offices and programs in DOE, the U.S. Department of Transportation, USCAR, universities, the private sector, and others); and (d) other topics that the committee finds important to comment on related to the success of the program to meet its technical goals.
- (6) Review and assess the actions that have been taken in response to recommendations from the Phase 1 review of the program
- (7) Write a report documenting its conclusions and recommendations.