

Contract Opportunity Notice

Motor Vehicle Attributes Survey and Analysis Hearing Room B

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Vehicle Attribute Forecast Needs

- Market Analysis and Vehicle Technology Data
- Historical Vehicle Attribute Data
- Technology Lists and Descriptors
- Forecasted Data for Vehicle Attributes and Baseline Vehicle Classes
- Training and Public Workshop Participation
- Draft and Final Report



Historical and Forecast Light Duty Vehicle Attributes

- Model year of vehicle
- Vehicle class of vehicle
- Number of individual makes and models
- Manufacturer suggested retail price (MSRP) of a new car expressed in 2011 U.S. dollars
- Fuel economy (on-road miles per gallon (mpg), or gasoline gallon equivalents (gge))
- Acceleration (seconds to 60 miles per hour)
- Annual new car maintenance cost in 2011 dollars, including fees for oil changes and regular maintenance
- Gradability (speed vehicle could maintain while climbing a 20-mile mountainous grade with full load)
- Range (The applicant shall report how range is determined specifying if it is all highway or a combined city/highway range estimate)
- Expected vehicle lifetime
- Passenger Seat Capacity (number of passengers)
- Trunk or Storage Space (in cubic feet)
- Time needed to complete full fueling or charging



Historical and Forecast Medium and Heavy Duty Vehicle Attributes

- Model year of vehicle
- Vehicle class of vehicle
- Body type (a component of vehicle class, e. g., bus type I, II, or III, tractor or straight truck, van, flatbed, tank, cement, garbage)
- Passenger Seat Capacity (number of passengers)
- Freight Capacity (in tons)
- Cargo Capacity (in cubic feet)
- Fuel economy (on-road miles per gallon (mpg), or gasoline gallon equivalents (gge))
- Annual fuel consumption in gasoline gallon equivalents (gge)
- Annual new vehicle maintenance cost in 2011 dollars, including fees for oil changes and regular maintenance
- Manufacturer Suggested Retail Price (MSRP) in 2011 dollars
- Range (The applicant shall report how range is determined specifying if it is all highway or a combined city/highway range estimate).
- Expected vehicle lifetime
- Gross Vehicle Weight
- Torque
- Torque to weight ratio
- Non-transport related fuel consumption (for example, cement trucks)



Vehicle Fuel Types

- Gasoline
- Gasoline Electric Hybrids
- Flexible Fuel Vehicles
- Diesel
- Diesel Electric Hybrid
- Propane
- Plug-in Electric Gasoline Hybrids
- Compressed Natural Gas (CNG)
- Liquefied Natural Gas (LNG)
- Dual Fuel – Gasoline and CNG
- Full Electric
- Hydrogen Vehicles



Vehicle Classes

- Light duty classes based on vehicle type, passenger volume, and weight
- Medium and heavy duty vehicle classes based on vehicle type, passenger volume(for buses) and Gross Vehicle Weight Rating for Trucks
- Detailed descriptions are available in the draft work statement



Market Analysis and Vehicle Technology Survey

- Plans to incorporate current and new vehicle technologies from 2012 to 2035
- Anticipated vehicle classes and models that manufacturers will sell from 2012 to 2035 for light, medium, and heavy duty vehicles
- Total lifetime vehicle and operating cost to the consumer or fleet user for each type of technology



Historical Vehicle Attribute Data

- Vehicle Class level data is needed
- Make and model level data is needed
- Vehicle classes will be provided by CEC
- 1992 to 2011 data needed



Technology Lists and Descriptors

- Obtain Vehicle Manufacturer Technology updates
- Analyze costs and fuel economy benefits of additional vehicle technologies
- Explain how these will be connected to the forecasts
- Explain how model will forecast supplier behavior in response to technology updates (whether manufacturers will offer these technologies) based on policies, technology costs, and technology benefits



Forecasted Data for Vehicle Attributes and Baseline Vehicle Classes

- Sixteen fuel price, policy, and economic cases will be used
- Vehicle class level data is needed
- Vehicle classes will be provided by CEC
- 2011 to 2035 data is needed
- Documentation and explanation of forecasting methodology is needed



Training and Public Workshop Participation

- IEPR Workshop presentation
- Model explanation and responses to questions and criticisms from workshop participants
- Train CEC staff on methodology and equations used to provide forecasts
- Train CEC staff to independently create supply-side forecasts by the end of the contract



Draft and Final Report

- Details of how forecasts are affected by different scenarios
- Validation Process
- Expected availability and market penetration schedules of alternative fuel vehicles
- Limitations of forecasts
- Coordination with automakers, staff, and contractors in Emerging Fuels such as NREL and Nextsteps, and explanation for any differences between forecasts
- Costs, Fuel Savings, and Payback periods of fuel efficiency technologies and alternative fuel vehicles compared



Questions and Answers

