Medium- and Heavy-Duty Vehicle Field Evaluations

**SUMMARY**

NREL partners with fleets and industry to provide unbiased evaluations of advanced medium-duty and heavy-duty (HD) vehicle technologies through testing, data collection, and analysis.

**RELEVANCE**

- The activity supports DOE's mission of improving our energy security and supporting the U.S. economy by providing valuable data and information to DOE researchers.
- HD and MHV commercial vehicles are critical components of U.S. trade, commerce, and economic growth and can offer the fastest growing segment of transportation energy saving.
- NREL is an aggregator of data from commercial fleets.
- The data includes cost information and operational data.
- New projects in FY 14-15 include 3 new fleet evaluations.

**OVERVIEW**

- **Background:** Data collected includes real-world data from actual vehicles and commercial fleets.
- **Objectives:** The primary objectives of the activity are to provide data for validation of operational cost-effective HDV retrofits; to inform and validate VTO battery research efforts and technology development; and to support the development of tools and technology to enable technology development across VTOs.
- **Results:** The activity has produced a significant amount of data and analysis from real-world testing of vehicles and technologies.

**APPROACH**

- **Goal:** The goal is to provide unbiased data and information to support the development of advanced vehicle and battery technologies.
- **Approach:** The approach involves selecting vehicles and technologies for testing, collecting data, and analyzing the results to provide useful insights.

**MILESTONES**

- **FY14 Milestones Complete:**
  - Q1: Market research and data collection.
  - Q2: Data analysis and report writing.
  - Q3: Final report submission.
  - Q4: Follow-up activities.
- **FY15 Milestones Complete:**
  - Q1: Market research and data collection.
  - Q2: Data analysis and report writing.
  - Q3: Final report submission.
  - Q4: Follow-up activities.

**TECHNICAL ACCOMPLISHMENTS**

- **FY15 Key Technical Accomplishments**
  - Completed U.S. Hybrid Hybrid and Low-NOx Fueling Studies.
  - Completed Vehicle-to-Grid (V2G) data collection on existing school buses.
  - Completed Vehicle-to-House (V2H) data collection on existing school buses.
  - Completed Vehicle-to-Vehicle (V2V) data collection on existing school buses.
  - Completed Vehicle-to-building (V2B) data collection on existing school buses.

**COLLABORATION AND ACKNOWLEDGMENTS**

- **Industry and Government Partners:**
  - Department of Energy (DOE), National laboratories, industry, and universities.
  - **Academic and Research Institutions:**
    - California State University, Fullerton
    - California Polytechnic State University
    - University of California, Los Angeles
    - University of California, Berkeley
  - **Other Partners:**
    - Microsoft
    - Google
    - IBM
    - Intel

**Additional Information:**

- [Read more about the project](http://www.nrel.gov/transportation/fieldtests.html)