



Volpe, The National Transportation Systems Center

# Center for Environmental and Energy Systems

The Center for Environmental and Energy Systems provides critical data and analyses to support energy independence, innovations in the movement of people and goods, and transportation-related climate-change mitigation and adaptation. We specialize in the measurement and analysis of inputs for climate variability, air quality, and noise, and maintain substantial expertise in environmental engineering, compliance, remediation, and sustainability.

The results of our work equip transportation decision-makers at all levels of government and industry with the information necessary to design energy and environmental policies that drive reductions in carbon dioxide and other greenhouse gas emissions, promote energy independence, and prepare our nation to cope with potential impacts of climate change.



U.S. Department of Transportation  
**Research and Innovative Technology Administration**

John A. Volpe National Transportation Systems Center

## What We Do

### Environmental Measurement and Modeling

The Volpe Center's Environmental Measurement and Modeling Division, including its Acoustics Facility and Air Quality Facility, anticipate future national, state, local, and international transportation-related noise, air quality, issues and requirements, and respond to current needs and priorities in accordance with its role as an international leader in transportation-related noise and air quality expertise.

### Energy Analysis and Sustainability

The Energy Analysis and Sustainability Division analyzes transportation-related greenhouse gas emissions, the potential use of alternative energy sources in commercial transportation systems, and the sustainability of transportation systems and their energy sources. The division also develops sustainability programs for transportation facilities and organizations. The team actively promotes the distribution and use of alternative energy resources that are sustainable and secure.

## Corporate Average Fuel Economy

The Corporate Average Fuel Economy (CAFE) Program Office plans and implements qualitative and quantitative analyses to support decisions regarding policies and programs relevant to the reduction of transportation sector petroleum consumption. The team develops and applies software capable of integrating engineering, economic, and statistical disciplines toward the analysis of regulatory and other program and policy options and facilitates coordination among agencies with roles related to CAFE rulemaking.

## Environmental Science and Engineering

Solving complex environmental problems requires experienced professionals who can quickly assess complicated requirements, evaluate feasible alternatives, and develop and implement innovative, cost-effective solutions. The Environmental Science and Engineering Division analyzes and resolves real-world environmental assessment, compliance, and remediation problems for a broad range of transportation issues. The team performs life cycle, turnkey environmental engineering and remediation work.

## Our Capabilities

We provide technical and analytical support for decision making at all levels of government and industry on:

- Transportation-related environmental and energy policies, including those pertaining to climate variability, air, noise, environmental compliance, engineering and remediation, and hazardous materials;
- Transportation system's role in achieving energy independence, both as a consumer of energy and as the critical element in the energy supply chain; and
- Research and development capabilities supporting all modes of transportation and other Technical Centers within the Volpe Center.

## Our Sponsors

- Federal Aviation Administration
- Federal Highway Administration
- National Highway Traffic Safety Administration
- National Park Service
- Research and Innovative Technology Administration
- U.S. Air Force
- U.S. Navy
- International Civil Aviation Organization

## Technical Centers at Volpe

- Transportation Policy and Planning
- Safety Management Systems
- Environmental and Energy Systems
- Transportation Logistics and Security
- Infrastructure Systems and Engineering
- Air Traffic Systems and Operations
- Human Factors Research and System Applications
- Advanced Transportation Technologies

## Contact Us

Gregg G. Fleming

Director, Center for Environmental and Energy Systems  
Volpe, The National Transportation Systems Center  
55 Broadway  
Cambridge, MA 02142

gregg.fleming@dot.gov  
617.494.2018

Photo Credit: Volpe Center image

Aviation-related global fuel burn computed using the Aviation Environmental Design Tool (AEDT)

---