Greening Vehicle Fleets to Meet New Environmental Criteria

Concerns about global climate change, increasing fuel costs, and dependence on foreign oil are forcing many corporations and government agencies to rethink their vehicle fleets. Many are considering alternative fuels and advanced vehicle technologies—from biodiesel to plug-in hybrids—to reduce their environmental footprints. However, organizations must choose carefully among the various fuel and technology options—not all perform equally well in every fleet.

Booz Allen can help you be ready for what’s next

Booz Allen Hamilton, a leading strategy and technology consulting firm, assists corporations and government agencies in “greening” their vehicles. We help our clients quickly assess their fleets’ emissions and fuel use, explore options for increasing fleet efficiency, and develop plans to incorporate alternative fuels and advanced technologies. We are experts in a broad range of vehicle technologies and fuels, and we have a deep understanding of both public and private sector fleet operations.

Our services and approach

Booz Allen’s vehicle fleet greening services include:

**Environmental Fleet Assessment.** Working with fleet owners, Booz Allen conducts a thorough inventory of the fleet, assessing vehicle types, duty cycles, usage rates, and fuel consumption. We then apply the latest lifecycle emissions modeling techniques to estimate the fleet’s current emissions of greenhouse gases and air pollutants, such as particulate matter or nitrogen oxides. Booz Allen’s Environmental Fleet Assessment establishes a baseline that quickly shows fleet owners where they stand in terms of emissions and fuel use.

**Green Fleet Forecasting.** Based on anticipated growth and changes to fleet composition, Booz Allen develops forecasts of future fleet emissions and fuel use. We also provide tools that allow fleet owners to run “what if” scenarios that predict the changes to emissions and fuel use if, for example, alternative fuels are introduced or fleet mileage is reduced. Forecasting and scenario-building let fleet owners look forward in order to determine the right combination of fuels and vehicle technologies to meet tomorrow’s regulations or environmental goals.
Environmental Technology Selection. When fleet managers are ready to purchase advanced-technology vehicles or make the transition to alternative fuels, Booz Allen’s vehicle and fuel experts assist them in selecting specific technologies and technology providers. Our capabilities include alternative fuel vehicle specification, competitive product assessment, manufacturer capability evaluation, fuel availability and cost analysis, capital and operating cost evaluation, environmental impact assessment, and procurement management. Booz Allen’s technology selection assistance ensures clients choose solutions that improve their fleets’ environmental footprints while maintaining reliable, cost-effective service to vehicle users.

Environmental Technology Implementation. With deep program management experience, Booz Allen is well suited to manage the implementation of alternative fuel efforts. We have extensive experience that includes systems integration for prototype vehicles, field testing of environmental vehicles, management of vehicle demonstration projects, and training of drivers and maintenance staff. Working with Booz Allen’s implementation team gives fleet owners the confidence to roll out new fuels and vehicles with minimal impact on existing operations.

Success stories

City of New York. Booz Allen is leading the effort to reduce fuel consumption and emissions from the largest municipal fleet in the United States. We have helped the city understand its fleet’s environmental footprint and are developing strategies to reduce fleet greenhouse gas emissions by 30 percent during the next two decades. Strategies include optimizing the specifications and use of current vehicles, increasing use of alternative fuels such as biodiesel, and incorporating new vehicle technologies, including plug-in hybrids and electric vehicles.

City of Los Angeles. Booz Allen developed an Alternative Fuels Conversion Plan to help the Los Angeles convert its fleets of heavy-duty diesel vehicles to clean-burning natural gas. We led the evaluation of maintenance and fueling facilities, identified optimal fueling station locations, developed a phased plan for conversion of vehicles and fueling infrastructure, and forecasted costs for facility upgrades.

U.S. Postal Service (USPS). Booz Allen has a long history of work with USPS, which operates one of the nation’s largest fleets of alternative fuel vehicles. In a recent project, we assessed the potential of hybrid diesel delivery vehicles in the USPS fleet. Booz Allen developed vehicle test plans, oversaw testing processes, and assessed the relative improvements over conventional diesel vehicles in fuel use, emissions, and reliability.

U.S. Army. Booz Allen led a feasibility study examining the conversion of various military vehicles to run on fuel cell power. Supported by a thorough understanding of military vehicle use, we conducted performance simulations for both hybrid and pure fuel cell powertrains, determined performance requirements for size the fuel cell and system components, and assessed packaging and configuration. The result was a comprehensive set of new vehicle configurations that would be required if military vehicles, including tanks and troop transports, were to use fuel-cell powertrains.

San Francisco Municipal Transportation Agency (SFMTA). Booz Allen assisted SFMTA in adding diesel-hybrid-electric buses to the city’s Muni public transit system, the seventh largest transit system in the United States. We managed the procurement program, which included conducting engineering reviews, inspecting vehicles during manufacturing, testing vehicles, and developing the vehicle delivery plan.

Whether you’re managing today’s issues or looking beyond the horizon, count on us to help you be ready for what’s next.