

# 21st Century Truck

## Powering Tomorrow's Heavy-Duty Vehicles

### Trucks Move America's Economy

Our nation of more than 280 million people and more than 200 million vehicles needs only a tenth of those vehicles (our medium-duty and heavy-duty vehicles) to deliver all we need to our neighborhoods and businesses. Heavy-duty vehicles move our nation's economy, through the delivery of consumer goods and services, mass transportation of passengers, and logistical movement of our military to ensure our security.

### Trucking Faces Significant Challenges in the Future

Our nation's truck fleet has a variety of sizes, weights, and ways in which they are used. Powering all these trucks and buses presents different challenges depending upon their applications, but a common thread is their energy use. Trucks are dependent on petroleum as fuel. The petroleum we use is increasingly imported from distant nations—58% of the petroleum we currently use is imported—and projections are that this dependence will only increase with the years.

Improving trucks and buses to use fuel more efficiently is a major focus of the 21st Century Truck Partnership. The challenges include building more efficient engines while:

- meeting tighter emissions standards,
- reducing energy losses from engine and vehicle operation,

- reducing fuel consumption while idling,
- getting more hybrids (electrical and mechanical) into the powertrain, and
- making heavy vehicles safer for everyone.

The 21st Century Truck Partnership is a significant cooperative effort of government and industry intended to identify and develop technologies that focus on making trucks more efficient, cleaner, and safer. By sharing information across four federal agencies and sixteen private companies, research can be focused on selected projects that show the greatest likelihood of near-term success and fleet-wide effectiveness.

### Selection of Vehicle Platforms

21st Century Trucks are classified by gross vehicle weight (GVW) into class 3 to class 8 vehicles.

**Class 3** - 10,001 to 14,000 lbs

**Class 4** - 14,001 to 16,000 lbs

**Class 5** - 16,001 to 19,500 lbs

**Class 6** - 19,501 to 26,000 lbs

**Class 7** - 26,001 to 33,000 lbs

**Class 8** - 33,001 and over

### National imperatives essential for the future of this nation:

- Transportation in America supports the growth of our nation's economy both nationally and globally.
- Our nation's transportation system supports the country's goal of energy security.
- Transportation in our country is clean, safe, secure, and sustainable.
- Our nation's transportation system is compatible with a dedicated concern for the environment.



## The 21st Century Truck Partnership's Vision

The 21st Century Truck Partnership's industry and government partners have worked hand-in-hand to develop a common vision for the Partnership. The Vision of the Partnership is:

**Our nation's trucks and buses will safely and cost-effectively move larger volumes of freight and greater numbers of passengers while emitting little or no pollution and dramatically reducing the dependence on foreign oil.**

## The 21st Century Truck Partnership's Goals

According to U.S. Energy Secretary Spencer Abraham, "Our goal is to improve the energy efficiency and safety of trucks, while maintaining a dedicated concern for the environment. The expanded 21st Century Truck Partnership will center on advanced combustion engines and heavy hybrid drives that can use renewable fuels."

In May 2003, the 21st Century Truck Partnership established specific technical goals that were developed by the partners to focus Partnership efforts on essential activities to achieve the common goal of safer, cleaner, and more efficient trucks and buses.

The Partnership's five new goals will:

- improve engine efficiency and reduce emissions
- increase power assistance through hybrid systems

- reduce parasitic losses
- decrease energy loss with idling reduction
- address safety concerns for heavy weight vehicles.

The 21st Century Truck Partnership was first announced on April 21, 2000. The Partnership includes representatives from the Departments of Energy, Transportation and Defense, and the U.S. Environmental Protection Agency along with 16 private sector companies representing leaders in engine manufacturing, truck manufacturing, and hybrid system manufacturing.

## 21st Century Truck Partners

### Industry

BAE SYSTEMS  
Caterpillar, Inc.  
Cummins, Inc.  
DaimlerChrysler Corporation  
Detroit Diesel Corporation  
Eaton Corporation  
Freightliner LLC  
GM-Allison Transmission  
Honeywell, Inc.  
International Truck & Engine Corporation  
Mack Trucks, Inc.  
NovaBUS  
OshKosh Truck Corporation  
PACCAR, Inc.  
Volvo Trucks North America, Inc.

### Government

U.S. Department of Defense (U.S. Army)  
U.S. Department of Energy  
U.S. Department of Transportation  
U.S. Environmental Protection Agency

## A Strong Energy Portfolio for a Strong America

Energy efficiency and clean, renewable energy will mean a stronger economy, a cleaner environment, and greater energy independence for America. Working with a wide array of state, community, industry, and university partners, the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy invests in a diverse portfolio of energy technologies.



U.S. Department of Energy  
**Energy Efficiency  
and Renewable Energy**

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