

What is the Government's Interest in Electrification?

The Promoting Electric Vehicles Act of 2011 will advance the wide-scale deployment of grid-enabled vehicles (GEVs) and related infrastructure in order to reduce our nation's dependence on oil. The bill is designed to leverage limited federal investment to drive high concentrations of grid-enabled vehicles into specific geographic regions—"deployment communities"—accelerating national deployment at scale.

Electrification represents a compelling national interest for three primary reasons:

01 OIL DEPENDENCE REPRESENTS A THREAT TO THE NATION

Economic Costs:

- High oil prices are contributing to a widening current account deficit in the United States. In 2008, crude oil and petroleum products accounted for 57 percent of the U.S. trade deficit—more than \$380 billion. The figure fell back to \$200 billion in 2009, but spiked to \$265 billion in 2010. In just the first quarter of 2011, the U.S. ran an \$84 billion deficit in petroleum trade.
- Oil price spikes have occurred before or concurrent with every recession in the United States since the 1970s.
- According to the Department of Energy, oil dependence has cost our economy \$5 trillion since 1970 (\$484 billion in 2008 and \$294 billion in 2009).

Foreign Policy and National Security Costs:

- U.S. armed forces expend enormous resources protecting vulnerable infrastructure and patrolling oil transit routes, benefitting all nations at our expense in blood and treasure.
- American diplomacy is distorted; too often, oil dependence requires us to accommodate hostile governments that share neither our values nor our goals.

02 REPLACING CONVENTIONAL VEHICLES WITH GEVS PLACES THE NATION ON A PATH TO:

- Reduce the consequences of oil dependence on our conduct of foreign policy and the burden that it imposes on our military.
- Enhance resilience to future oil price shocks by reducing the economy's petroleum intensity.

- Reduce oil imports by over 3 million barrels per day, improving our trade balance by about \$125 billion by 2030.
- Create nearly 2 million jobs by 2030.
- Reduce the federal debt by over \$300 billion by 2030, net of policy costs.
- Increase the household disposable income by nearly \$3,700 in 2030.

03 **ELECTRIFICATION WILL NOT YET OCCUR ON ITS OWN**

- GEVs are not yet cost-effective vis-à-vis conventional vehicles, in part because scale in production is necessary to bring down the cost of batteries, and in part because of price of gasoline does not reflect its full costs.
- GEVs require integrated systems including the coordinated action of disparate players that do not traditionally work together. An early deployment strategy will address many questions and provide templates of coordination for wide-scale deployment.
- Electrification is Inevitable because it is more efficient, more secure and cleaner than oil. The world is moving that way, motivated by high oil prices In Europe and a matter of national policy in China. We can invest to compete or lag behind our competitors.
- Oil price volatility undermines investment in efficient alternatives.