

Newsweek

Pulling The Plug On Oil

Buy a hybrid, join a carpool. Why we should consume less.

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It's no accident that we've become dependent on oil, which is one of the highest energy-density fuels found in nature. In fact, long before humans turned to oil for transportation, migrating birds were using a similar form of energy—stored oil in the form of body fat—to journey thousands of miles. Strictly from a physicist's perspective, burning oil for fuel can be understood. But from any other perspective, our dependency on oil is dangerous and shortsighted.

Today, we import roughly 60 percent of our oil. This is a huge drain on our economy because any dollar we send overseas for oil is a dollar we can't reinvest in America. The American people, meanwhile, are at the mercy of price spikes. And, while we can't predict oil prices from year to year, we know they will rise in the long run as the developing world starts to use energy like we do.

Our oil dependency also weakens our security because much of the world's oil is controlled by regimes that do not share our values. With oil prices low, the world is now jockeying for position to guarantee long-term access to oil and gas, creating a potentially destabilizing international situation.

Finally, we must move beyond oil because the science on global warming is clear and compelling: greenhouse-gas emissions, primarily from fossil fuels, have started to change our climate. We have a responsibility to future generations to reduce those emissions to spare our planet the worst of the possible effects.

For our economy, our security and our environment, we must free ourselves from foreign oil. We must depend not on the oilfields of the Middle East but on the farm fields of the Midwest and on our vast wind and solar resources here at home.

After decades of excuses and inaction in Washington, President Obama is taking serious steps toward energy independence. By transforming how we use energy, we can create new jobs and entire new industries based on America's resources, America's ingenuity and America's workers. Through his American Recovery and Reinvestment Act, President Obama is making a down payment on a clean-energy future. We will double our alternative-energy capacity over the next three years. The Recovery Act also begins to modernize our nation's electric grid, so we can move clean energy from the places it can be produced to the places it will be used. And we will create jobs and cut energy bills by helping working families weatherize their homes.

The most direct way to reduce our dependency on foreign oil is to simply use less of it, starting with the cars and trucks we drive. Nearly 70 percent of our oil use is for transportation, and more than 65 percent of that amount is for personal vehicles. President Obama has already ordered new fuel-efficiency standards for 2011 model-year cars and trucks, and we can all do our part by starting to make personal changes immediately.

All Americans can strike a blow for energy independence by choosing to buy fuel-efficient cars,

take public transit or join a carpool. These steps will save families money and will help keep oil more affordable by reducing demand. For the longer term, energy independence means changing how we power our cars and trucks from foreign oil to new American-made fuels and batteries.

We will continue to need high-energy-density fuels for years to come. But we can develop new liquid biofuels that will be direct replacements for gasoline and diesel fuel. These will be next-generation biofuels made from high-energy grasses such as miscanthus and from agricultural wastes. In 2005 the Oak Ridge National Laboratory outlined an achievable strategy (known as the "Billion Ton" study) for using biomass to replace 30 percent of our transportation fuels, and the science has advanced since then. When we have new biofuels that can be blended at any level with gasoline and that are safe for both engines and the environment, the importance of oil as a strategic resource will plummet.

We must also move toward running new vehicles on electricity—and to generating that electricity from clean, renewable sources like solar and wind power. We are pursuing electric hybrid vehicles with batteries that can be charged in ordinary wall outlets. President Obama recently announced \$2.4 billion in funding to put America's manufacturers to work producing these plug-in hybrid vehicles and the battery components they run on. The Department of Energy is also researching potentially revolutionary advances in battery technology. With these investments, we can create new jobs and make sure the next generation of biofuels and fuel-efficient cars are made right here in America.

We can seize our own energy destiny and start meeting America's energy needs with America's resources.

Chu, winner of the 1997 Nobel Prize in physics, is the U.S. Secretary of Energy.

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