

## Energy Security: For a Stronger Foreign Policy and a Safer Nation

*Robbie Diamond*

Founder and President, Securing America's Future Energy (SAFE)

Leading up to World War II, Japan and Germany were well aware that their ships, tanks and planes were completely dependent on oil. The Fischer-Tropsch process—invented in Germany some years earlier—allowed the Germans to produce 72,000 barrels a day of synthetic fuel from coal by 1940. However, the synthetic fuels were not enough and the principal goal of the march into the Soviet Union was the rich oilfields of Baku on the Caspian Sea.

As the German war machine drove toward the Caucasus, however, it faced steadily more dire fuel shortages. Hitler insisted on pushing forward, saying to Field Marshal Erich von Manstein that “unless we get the Baku oil, the war is lost.” Despite desperate efforts to transport oil by camel, the Germans retreated before reaching Baku in 1943, abandoning the Sixth Army with insufficient fuel to escape slaughter at Stalingrad.

Japan faced a similar fate, relying almost entirely on vulnerable shipping lanes for its oil supplies. United States submarines sank oil tankers faster than they could be built. After carefully calculating the oil that would be saved, Japan directed *kamikaze* attacks on American aircraft carriers during the critical battle for the Philippines—the suicide planes were not only more efficient destruction devices than fighters and bombers, but they did not need fuel for the return trip.

What is clear is that American war planners understood the power of superior energy supplies, and focused on cutting off enemy supply lines while exploiting their own plentiful sources of fuel. Today, however, it is we who are dangerously dependent on a vulnerable oil supply, and there can be little doubt that those who wish us harm keenly understand that vulnerability.

Each day, Americans consume approximately 20 million barrels of oil—nearly one-fourth of the world total. In 2008, the United States imported 60 percent of the crude oil and refined product it consumed at a cost of more than \$380 billion—56 percent of the total US trade deficit.

It would be ideal if there was a free market solution to these economic threats. But there is no free market for oil. Far from it: 90 percent of global oil and gas reserves are held by national oil companies that are either fully or partially controlled by foreign governments whose interests often have as much or more to do with geopolitical considerations than free market principles.

Oil dependence constrains American foreign policy and burdens our military. Whether dealing with uranium enrichment in Iran or an increasingly assertive Russia,

American diplomacy and the ability to lead our allies is hampered by the need to minimize disruptions to the flow of oil. In addition, the vulnerability of global oil supply lines and infrastructure has driven the United States to accept the burden of securing the world's oil supply. America's men and women in uniform are on the front lines of a steadily intensifying global resource conflict that strains the country's military forces and ultimately weakens its security.

United States oil dependence grossly distorts the power and influence of producing nations, which fuel the entire global economy. Projections show that the world—and consuming nations such as the United States—will become increasingly dependent on OPEC nations as non-OPEC output has reached a plateau. Together, the 12 OPEC nations today already control 40 percent of daily oil supplies and hold 76 percent of conventional oil reserves. In the meantime, demand, particularly in developing nations, is expected to continue to skyrocket. In China and India alone, the International Energy Agency (IEA) projects that the number of light duty passenger vehicles will grow from approximately 40 million in 2007 to an astounding 330 million in 2030. In the meantime, unsurprisingly, oil demand in those nations will more than double, to 23 million barrels a day.

So long as the United States and the global economy—in which our goods and services are traded every single day—are so utterly dependent on oil produced in volume by only a relatively small number of nations, we are at risk.

At the crux of our oil dependence problem is the energy demand of the transportation sector. Transportation accounts for almost 70 percent of American oil consumption, and is 97 percent reliant on oil-based fuel for energy. In fact, the US transportation sector uses more oil than any other nation's entire economy.

We cannot continue down this path. And there is ultimately only one solution: a transportation system in which the vehicles we drive every day no longer rely on oil.

Electrification of transportation would allow cars and light trucks to run on energy produced by a diverse set of domestic sources—natural gas, coal, wind, solar, geothermal, hydroelectric, and nuclear. Among those fuels, the role of petroleum is negligible. In fact, just one percent of electric power generated in the United States in 2008 was derived from petroleum. An electrified transport system is therefore one in which no one fuel source—or producer—would be able to hold our transportation system and our economy hostage the way a single nation can disrupt the flow of petroleum today.

Electric vehicles are cleaner than conventional gasoline-powered cars, even when the electricity is generated solely by conventional coal plants. The infrastructure backbone already exists. And there is substantial spare electric generation capacity: today, we could power millions of electrified cars and trucks without building a single new power plant.

In short, electricity represents a diverse, domestic, stable, fundamentally scalable energy supply whose fuel inputs are almost completely free of oil.

However, electrifying our transportation system is not a simple undertaking. The individual elements of an electrified transportation system—cars, batteries, recharging infrastructure—make up a highly-integrated system, in which every part depends on the other. At its most simplified level, what if we introduce millions of electric cars, but don't have the infrastructure to power them? What if there is hesitation to build infrastructure because the cars don't exist? We would see few results if we began selling batteries in the Northeast, created a smart grid and public charging infrastructure in the Northwest, and introduced electric cars in the deep South.

Last Fall, the Electrification Coalition—a partner of Securing America's Future Energy—released the *Electrification Roadmap*, a detailed set of policy recommendations that offer a pathway to the synchronized introduction of all of the elements needed for the widespread production, deployment and adoption of electric cars and trucks. The *Roadmap's* primary proposal is the selection and creation of specific geographic areas in which all of the elements of an electrified transportation system are deployed simultaneously, thus providing a crucial first step toward moving electrification beyond a niche product used only by early adopters into a dominant, compelling and ubiquitous concept.

These localized concentrations of electrification would be developed over approximately eight years. From there, electrification would continue apace over the next several decades. That timeline brings up another crucial policy issue: while electrification offers the best chance to truly end our dependence on petroleum, we will still be using oil and other liquid fuels for many years as we make the transformation, and it would be irresponsible not to protect ourselves as much as possible during that time.

There are several ways to do this.

First, we must increase our domestic production of oil. According to the Minerals Management Service, there are more than 40 billion barrels of oil off the Pacific, Atlantic and Alaskan coasts and in the Eastern Gulf of Mexico. That equates to 13 years of projected US crude oil imports—exactly the kind of timeframe to start to 'bridge' the nation to electrification. With modern recovery techniques, this oil can and should be recovered with very limited impact on the environment.

Second, we must continue to make efficiency improvements in traditional internal combustion vehicles. We made tremendous strides in this area with the bipartisan Energy Independence and Security Act of 2007, but we cannot rest on our laurels. As long as our cars and trucks still run on oil, it is crucial that they run on less of it.

And finally, it is important to remember this: oil, diplomacy and foreign policy go hand in hand. Not every solution to our oil dependence is an 'energy' solution. Just as oil dependence can create diplomatic challenges, so can diplomacy and the foreign policy and national security communities help us alleviate our oil dependence.

For example, the United States can and should work with foreign governments to eliminate fuel subsidies that artificially support higher levels of oil consumption. We

should work with other nations to secure naval support to protect global oil supply lines. We should promote a relationship with China with the goal of encouraging Chinese involvement in international organizations (such as the IEA) that are focused on communication and cooperation among major consuming countries.

To achieve these goals, however, what is perhaps most important is that policy-makers put into place systems to guarantee that energy security is a priority as we make foreign policy and national security decisions. Whether through a national energy council at the White House, a focus of intelligence agencies—including a National Intelligence Estimate of the weaknesses in the global supply system—or ongoing discussions with the nations that today benefit from the American commitment to protecting the supply of oil, it is crucial that we approach the challenge as the global danger that it is.

That is why Securing America's Future Energy has joined with a bipartisan group of former ambassadors, led by Ambassadors Charles Manatt and Al Hoffman, to form the Diplomatic Council on Energy Security. The Council will be working in the coming months to formulate detailed policy recommendations directly related to the foreign policy and diplomatic challenges posed by oil dependence, and the policies we can pursue to overcome them.

Ultimately, the reality is this: every day that our cars and trucks are powered solely by oil is a day that our economy, environment, and—most importantly—our national security remain threatened. The danger is real. It is time to be bold and chart a new path for our nation's energy future.