



Getting Off Oil

By Heather L. Ross

ENERGY INDEPENDENCE means getting off oil imports, which means ending most oil use. Yet in the decades since

energy independence made its rhetorical debut, both oil use and oil import dependence have risen substantially in the United States. This year has brought new calls for reducing oil dependence, both to enhance national security and to combat global climate change. High on the agenda are government mandates: increased vehicle fuel-efficiency standards, higher targets for alternative fuel use, and a ceiling on greenhouse gas emissions. These steps could reverse oil-demand growth over the next decade, but they will not come close to ending import dependence.

Missing from these proposals is the policy that would most effectively wean society off oil—a tax on oil consumption that increases the price of oil to a level reflecting its true national security and environmental costs. In addition to moving consumers to oil-saving behaviors and goods, particularly fuel-efficient vehicles, the tax would encourage private investment in alternative energy research, development, demonstration, and deployment and could fund public incentives to accelerate such innovation.

While a tax on oil consumption is widely seen as politically unachievable, Congress is already considering legislation to increase oil-sector tax revenues and invest the proceeds in new energy sources. As a further step, an excise tax on U.S. oil

production could provide substantial sums for alternative energy innovation without raising the price of oil to consumers.

In its first 100 hours, the House passed legislation reversing recent oil-industry subsidies and depositing the proceeds in a fund to advance clean domestic renewable fuels. Legislation introduced in the Senate's first week called for eliminating tax giveaways to large energy companies and expanding secure, efficient, and environmentally friendly energy supplies and technology. Like reduced oil subsidies, an added excise tax would be borne principally by oil companies and not passed through to consumers, since imported oil, 60 percent of U.S. supply, would not be directly affected. Also like reduced subsidies, an excise tax at the margin would have minimal effect on domestic oil supply and energy security.

Oil production levies at the margin can affect the life of fields at the edge of profitability, but they have little leverage on investment decisions for new developments because their effect is dominated by the effect of oil-price uncertainty. For example, royalty forgiveness on deepwater federal leases can save oil companies 12.5 percent of production revenues, but this incentive is eclipsed by the impact of oil prices that can halve, or double, over the course of months. Marginal changes in taxes and royalties, applied to large ongoing revenue streams, can lose or gain the government large sums of money without affecting future production very much. A 2005 study for the Interior Department estimated that current deepwater royalty relief provisions would add 1.2 percent to production over the years 2003–2042, at a forgone royalty cost of \$23 billion, or \$67 per barrel—more than twice the \$30 per barrel it would take to buy the barrel outright at the market price assumed in the analysis.

The effect on energy security of any incremental change in domestic production is also small. Producing a little more oil at home will hardly alter the risk of an oil crisis or lessen the shock when a crisis hits. Oil prices will spike to the same high level for domestic barrels as for foreign ones. The cost of a crisis to us will turn principally on how much oil we use, not on how much we produce.

Security is not a matter of finding more oil but finding alternatives to more oil.

At the margin, even funds that find their way into discovering and developing new production will have greater security value if spent on forestalling the need for that production. The benefits of speedier separation from oil and increased 21st-century competitive advantage through a successful portfolio of private and public investments in research and development, demonstration, and deployment of alternative-fuel technologies will dwarf the value of temporarily backing out a slice of foreign oil.

An excise tax that shaved the top off the highest-cost production projects—for example, a tax equal to 35 percent of the market price over \$45 per barrel—would concentrate its marginal effects on the outer edge of potential production, where oil-price risk already inhibits investment commitments. Such a tax would raise \$10 billion this year at projected levels of production and prices averaging \$60 per barrel, money that could finance an Oil Freedom Fund (OFF) for alternative technologies to get us off oil.

There are two cautionary points to make about the tax and the fund. First, the tax would reduce industry profits and trigger familiar arguments against a “windfall profits” tax, notably that the tax would decrease U.S. oil production. While an excise tax would have that effect directionally, as discussed above, any such shift would be small in absolute magnitude and in relative cost compared to the benefit of accelerating new oil-replacing technologies. As world oil prices have moved up in the last few years, many jurisdictions, including the state of Alaska, have introduced tax structures based on price. Second, the fund will need to make investments based on the potential economic and environmental performance of new fuels, not on their current political support. While energy R&D will involve trial and error, sustained subsidies to technologies with no prospect of becoming environmentally and economically sound will defeat both energy independence and trust in government's ability to execute its fundamental security role.

Redirecting resources from the oil sector into seed money for oil replacement is a “second-best” policy, a desirable choice when the optimal policy is not available. Without a tax on oil consumption to convey its true cost to society, private markets are seriously underinvesting in oil-replacing technology. At the same time, vast resources are accruing in oil companies that are selling oil at a much higher price, averaging \$66 per barrel last year, than they are using for investment decisions, around \$30 per barrel according to published reports. In the big world of oil markets—where ExxonMobil spent \$28.6 billion in 2006 to buy back its stock—an excise tax of \$10 billion a year would have only a small effect, but it would transform the lean world of oil-saving R&D. A large public-interest advance in energy security and leadership can be pursued for a small shift in the private market that will not deliver either.

Our future well-being as a nation depends on oil reduction, not oil production. Moving from oil exposure to safe, sustainable energy is one of the biggest engines of security, stability, prosperity, and advantage we have in a world of challenges developing around us. Tapping our current oil wealth to advance our future oil freedom is a good way forward. ■