

# Drilling in All the Wrong Places

By Amory B. Lovins



## DRILLING FOR OIL IN THE ARCTIC

National Wildlife Refuge should offend conservatives because it's insecure, unimportant, unprofitable, and uncompetitive.

Oklahoman ex-CIA Director R. James Woolsey testified against drilling because its "real show-stopper is national security. Delivering that oil by its only route, the 800-mile-long Trans-Alaska Pipeline System (TAPS), would make TAPS the fattest energy-terrorist target in the country—Uncle Sam's 'Kick Me' sign....Doubling and prolonging dependence on TAPS...imperils [national] security."

"TAPS," he wrote, "is frighteningly insecure. It's largely accessible to attackers, but often unrepairable in winter. If key pumping stations or facilities at either end were disabled, at least the above-ground half of 9 million barrels of hot oil could congeal in one winter week into the world's biggest ChapStick®. The Army has found TAPS indefensible. It has already been sabotaged, incompetently bombed twice, and shot at more than 50 times[;] a drunk shut it down with one rifle shot. In 1999, a disgruntled engineer's sophisticated plot to blow up three critical points with 14 bombs, then profit from oil futures trading, was thwarted by luck. He was an amiable bungler compared with the [9/11] attackers."

**Importance?** The Energy Information Administration (EIA) says the Refuge's limited and scattered oil—its biggest field is one-tenth of a Prudhoe Bay—could start flowing around 2018, peak in 2027 at 3 percent of U.S. use, and temporarily cut oil import dependence by two percentage points and 2025 oil prices by 2 cents a gallon.

**Profitability?** EIA in May 2008 found today's quintupled oil prices won't yield more or earlier Refuge oil, because drilling costs have soared even higher: Alaskan onshore drilling costs rose 564 percent during 2000–2005, then *really* stood up on end. Today's soaring capital costs for frontier hydrocarbon projects strain even the biggest oil companies' exploration budgets. In 2001, Refuge oil's costs and risks were among the highest in the industry's global portfolios. Today's higher oil prices don't change prospects' *relative* merits, better technologies tend to advantage other prospects more, and volatile oil prices raise financial risks in a sour capital market, so Refuge oil still lacks a sound business case.

**Competitiveness?** My team's Pentagon-cosponsored 2004 study *Winning the Oil Endgame* (free at [move.rmi.org/oilendgame](http://move.rmi.org/oilendgame)) road-mapped eliminating U.S. oil use by the 2040s, led by business for profit, at an average cost of \$15 per barrel—lucrative at \$26/bbl, far

more so with today's far higher prices. Refuged oil would be costlier and slower than those efficiency and supply-side competitors, and they're getting cheaper.

So why press for a project that would create a new and even more vulnerable Strait of Hormuz, depend for decades on a geriatric pipeline (corroding, maintenance-challenged, already past its 30-year design life), yield little oil slowly and riskily, and lose money? Perhaps advocates simply misunderstand the nature of America's oil problem.

The U.S. has lifted oil faster and longer than any other country, so it's more depleted, and the next barrel costs more at home than abroad. A market economy offers only three solutions: protectionism, trade, and substitution.

Protectionism distorts relative prices by taxing foreign oil (violating free-trade rules) or subsidizing domestic oil (suppressing efficient use). Both approaches weaken competitiveness. Both illogically suppose the solution to domestic depletion is to deplete faster—or as David Brower said, "strength through exhaustion." Oil-less countries like Japan and Germany trade—buying oil from the cheapest sources (diversified and buffered by stockpiles), earning the money to pay for it, and maintaining good relations with exporters. The U.S. buys copiously but lags in earnings and friendships.

By substituting resources that do oil's tasks better and cheaper, the U.S. can lead the world beyond oil. Face facts: America's oil output peaked in 1970 and Texas is now a net importer of oil. Let's get on with what we *can* do together, better than anyone: saving oil quickly and depleting it slowly.

If the U.S. had kept saving oil as fast as it did during 1976–1985, we wouldn't have needed any Persian Gulf oil ever since. But now wildcatters are finding new gushers of savings: more than 8 million barrels per day (nearly a Saudi Arabia's worth) in the Detroit Formation, 0.9 in the Seattle Formation—in all, over 14 million barrels per day of "negabarrels" (saved oil) that is all-American and inexhaustible, climate-safe and secure, costing an average of \$12 a barrel.

If oil companies went to the ends of the earth drilling for very expensive oil that might not even be there, while innovators and entrepreneurs found all those negabarrels under Detroit, wouldn't the old-fashioned drillers be embarrassed, even bankrupt?

Smart developers drill the most prospective plays first. We should all be able to agree about that. If we do it, then the oil we don't agree about—at least 50 times smaller and several times costlier—will become superfluous, America will be richer and stronger, and the world will be cooler and safer. •