

**WINNING THE OIL ENDGAME****A. Lovins***Rocky Mountain Institute, Colorado, USA*

Transport, particularly by road, is normally considered the most intractable part of the climate and air-pollution problems. Yet when more closely examined, it yields to a combination of the usual system reforms plus vehicle-level technological solutions. These depend chiefly on ultralight materials that also improve safety, transform manufacturing economics, and solve the oil problem-even without the hydrogen transition, which they can greatly accelerate. Such breakthrough vehicle technologies are highlighted by an independent, peer-reviewed strategy for eliminating U.S. oil dependence, to be published 20 Sept. 2004 by the nonprofit Rocky Mountain Institute ([www.rmi.org](http://www.rmi.org)). *Winning the Oil Endgame* shows American business and military leaders how most of the oil used in the United States can be saved more cheaply than buying it. Fully applying today's best efficiency technologies in a doubled-GDP 2025 U.S. economy would save half the oil at half its cost per barrel. Non-oil substitutes for the rest would also cost less than oil. (These conservative comparisons assign zero value to avoiding insecurity, competition with developing countries, oil depletion, climate change, and pollution.) In practice, all U.S. oil use, not just imports, can be displaced over the next few decades at historically reasonable rates. The transition beyond oil can be led by business, rewarded by profit, driven by customers, and accelerated by innovative public policies-market-oriented without taxes, innovation-based without mandates, emphasising rapid replacement of inefficient by superefficient vehicles. Benefits would include revitalising the automotive, truck, aviation, and hydrocarbon industries, rebalancing trade, and making the U.S. more secure, prosperous, equitable, and environmentally healthy and the world more developed, fair, and peaceful. Similar opportunities and benefits are evident in the E.U. and indeed worldwide.