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Energy Guru Lovins Sheds Management Duties To Plot 'Oil Endgame'

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For all of the ink and adjectives lavished on hybrid gas-electric SUVs at the Los Angeles Auto Show last week, automakers have a long way to go toward curing the nation's oil addiction, says Amory Lovins, one of the nation's pre-eminent energy thinkers.

Under bright lights on the big stage, General Motors Corp. Chairman and CEO Rick Wagoner said the world's largest automaker would begin selling large vehicle models with a two-mode, hybrid engine in the next three years. And GM's rival, Ford Motor Co., unveiled its own hybrid SUV, the 2008 Escape, with a muscular V6 engine and recycled seats, no less (*Greenwire*, Nov. 30).

Such vehicles represent earnest efforts to wean the world from oil, Lovins says, but the big steel boxes still weigh more than they should. His point: 95 percent of the weight hauled is the vehicle itself.

High-tech, ultra-light materials can change that, Lovins says. And what is more, we also need to change the way we make trains, tanks, Humvees and heavy trucks, alike.

Late last month Lovins announced that he would be shedding his role as CEO of the Rocky Mountain Institute, the energy and environmental "think and do tank" he founded in 1982. Free of management responsibilities, the Oxford-trained experimental physicist will become the Snomass, Colo., organization's board chairman and chief scientist (*Greenwire*, Nov. 22).

Lovins, 58, says the move will enable him to work more closely with Army

manufacturers and others on RMI's ambitious "Winning the Oil Endgame" strategy. The three-year effort, which is now in its second year, is aimed at setting the course for eliminating U.S. oil use by 2040.

"RMI has extraordinary opportunities that are escalating rapidly in quality and quantity," Lovins said during an hourlong telephone interview last week while en route to U.S. Strategic Command at Nebraska's Offutt Air Force Base, where he was expected to give a lecture on military and civilian energy strategies.

Next week, Lovins is slated to deliver a lecture on energy security to members of Congress and Pentagon officials in Northern Virginia. Yes, he has the ears of the nation's top military brass -- not to mention those of dozens of heads of state and Fortune 500 executives.

"I need to focus my time on its best use," he says.

Six-part strategy

Lovins divides his entrepreneurial nonprofit's oil endgame strategy into six areas: cars, heavy trucks, airplanes, fuels, military and finance.

On the heavy truck front, Lovins has been working with Wal-Mart Stores Inc. to commit to doubling the efficiency of its fleet by 2015. As the world's largest retailer, Wal-Mart's demand for more fuel-efficient trucks will have a ripple effect across the entire road-shipping industry, he expects.

Lovins and RMI plan to speed that expansion along by getting other major truck buyers and manufacturers on board with the plan. And like any trusted adviser, Lovins knows the value of discretion; he is not naming which companies he is working with

"It's a demand-pull strategy," the mustachioed Lovins says. "Once those trucks are on the market, everyone can buy them."



Amory B. Lovins

The U.S. military is a natural and eager ally in winning the oil endgame, as the Pentagon partnered with Lovins to produce a book by the same name in 2004. Lovins said his ongoing projects with the Pentagon include advising the reconstruction of Iraq's electricity sector as well as reformulating the military's energy strategy.

The latter effort is ambitious, to say the least. Lovins and his RMI team are working on energy efficiency and fuel supply issues at U.S. military bases and expeditionary installations. The institute is also devising ways to improve the energy efficiency and design of military platforms, such as trucks, tanks and airplanes.

Lovins says the stakes are high, but he is optimistic about the Pentagon's progress. The military is one of the largest buyers of biofuels today, he claims, and some installations in Iraq are using off-grid solar photovoltaic generators.

"We're rapidly seeing progress toward making the Pentagon the leader in getting the country off of oil so that we don't need to fight over it," he says.

Lighter materials for cars

In the private sector, Lovins says the auto industry should be taking a page from the aerospace industry by using lighter-weight materials to save on fuel use.

Lovins has been working with auto-

he confesses getting Detroit to change course is like steering a supertanker. But lately, he says he has seen “very encouraging process.”

In September, Ford hired Alan Mulally as its new president and CEO, who helped turn around the commercial airplanes division of Boeing Co. One of Boeing’s most recent successes is the announced development of the 787 Dreamliner, a commercial aircraft built with lighter-weight materials that will improve its fuel economy by 20 percent.

“Boeing is beating the pants off of Airbus with this technology leapfrog,” adds Lovins, who describes the leap as the use of strong, ultra-light materials in the aircraft’s body.

Ford and GM should be mimicking Boeing, adds Lovins, who also happens to chair the board of Fiberforge, a Colorado company that makes light-weight carbon-fiber materials.

If the major automakers built cars and SUVs with lighter-weight materials, he contends, they could cut the cost of

manufacturing in half. The lighter vehicles would save consumers money by consuming half as much fuel. Bingo, a clear path to an oil endgame.

Changes like these are inevitable, he adds.

“This industry is in the most aggressive competition and rapid transformation since the late 1920s,” Lovins adds. “This competition will change either the managers’ minds or the managers, whichever happens first.”

Top ‘green campaigner’

Such bold statements and influence with industry and government leaders earned Lovins the No. 12 spot on The Guardian newspaper’s recent list of the top 100 “green campaigners” of all time. Other environmental luminaries on the list include “Silent Spring” author Rachel Carson, economist E.F. Schumacher, conservationist Wangari Maathai and evergreen politician Al Gore.

Lovins’ peers in the United States, such as the Natural Resources Defense Council’s Ralph Cavanagh, have called him the “world’s most creative inven-

tor of paths toward clean, secure and affordable energy.”

RMI officials say they have begun a search to fill Lovins’ shoes but have set no deadline for hiring a replacement.

In the meantime, in addition to trying to win the oil endgame, Lovins says he will be developing a biogenetic design solutions database with life sciences writer Janine Benyus.

The practice of biomimicry uses nature’s models and then imitates them in designs and processes to solve human problems. Think of a solar photovoltaic cell inspired by a plant leaf.

The electronic database, Lovins notes, will be catalogued by the function of an organism rather than the organism.

It is the same kind of outside-of-the-barrel thinking that just might be necessary to solve the oil endgame.

“There’s a lot to be learned,” he says, “from 3.8 billion years of design genius.”