

AMORY B. LOVINS, 68, has been active in ~65 countries for over 40 years as an innovator and practitioner in energy and its links to security, development, environment, and economy. He is cofounder (1982), Chief Scientist, and Chairman Emeritus of Rocky Mountain Institute—an independent, entrepreneurial, nonprofit think-and-do creating a clean, prosperous, and secure energy future ([www.rmi.org](http://www.rmi.org)). Originally a consultant experimental physicist, and author of 31 books and 600 papers, he has received MacArthur and Ashoka Fellowships, the “Alternative Nobel,” Zayed, Blue Planet, Onassis, Volvo, Nissan, Shingo, and Mitchell Prizes, 12 honorary doctorates, and the National Design, Heinz, Lindbergh, and World Technology Awards. In 2016 the President of Germany awarded him the Officer’s Cross of the Order of merit. In 2009, *Time* named him one of the 100 most influential people in the world, and *Foreign Policy*, one of the 100 top global thinkers. A Swedish engineering academician, former Oxford don, honorary US architect, and member of the National Petroleum Council, he has briefed over 30 heads of state, advises industries and governments worldwide (as well as DoD and DOE) mainly on advanced energy and resource efficiency, and has led the superefficient redesign of >\$40 billion worth of facilities in 29 sectors, scores of buildings, and land and sea vehicles. His “integrative design” techniques often make very large energy savings cheaper than small ones.<sup>1</sup> Since 1991, he has led the development of quintupled-efficiency, uncompromised, cost-effective automobiles<sup>2</sup> and low-cost advanced-composite manufacturing technology to make them. His *Small Is Profitable* was an *Economist* 02 book of the year ([www.smallisprofitable.org](http://www.smallisprofitable.org)). His OSD- and ONR-cosponsored 04 synthesis *Winning the Oil Endgame*<sup>3</sup> roadmapped how to eliminate U.S. oil use by 2040 and revitalize the economy, led by business for profit. His Oct 11 *Reinventing Fire* synthesis expanded that to include coal and save \$5t ([www.reinventingfire.com](http://www.reinventingfire.com)). He co-led a consortium drawing similar conclusions to help inform China’s 2015 13<sup>th</sup> Five Year Plan.

Dr. Lovins’s security background includes devising the first logically consistent approach to nuclear nonproliferation (technical papers<sup>4</sup> and two books, 79–83); performing for DoD the still-definitive UNCLAS study of domestic energy critical infrastructure and resilience<sup>5</sup>; codeveloping a “new security triad” of conflict prevention, conflict resolution, and nonprovocative defense<sup>6</sup>; lecturing at NDU, DAU, USMA, USNA, NWC, NPS, STRATCOM, etc. on least-cost security and on how new technologies will transform missions and force structures; leading for VADM Lopez the 95–98 overhaul of NAVFAC’s design process; leading a 00–01 analysis for SECNAV of how to save up to half the hotel-load electricity aboard *USS Princeton* CG-59<sup>7</sup>; addressing ASNE 10 and the USMC Commandant’s 10 expeditionary energy symposium; keynoting SECNAV’s 62th Current Strategy Conference; and serving on 99–01 and 06–08 Defense Science Board panels<sup>8</sup> finding cost-effective DoD fuel-saving potential later estimated by RMI to total ~66% plus avoided lift. Dr. Lovins continues to help DoD with energy strategy<sup>9</sup>, electricity resilience, and platform efficiency, and has been tasked by COMNAVSEA to help transform the Naval design process. Having helped drive DoD’s energy agenda for three decades, he serves on CNO’s Advisory Board (CAB) and as a Professor of Practice at the Naval Postgraduate School.

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<sup>1</sup> [www.rmi.org/Knowledge-Center/Library/2010-09\\_IntegrativeDesign](http://www.rmi.org/Knowledge-Center/Library/2010-09_IntegrativeDesign), [www.rmi.org/Knowledge-Center/Library/2010-10\\_10xEPrinciples](http://www.rmi.org/Knowledge-Center/Library/2010-10_10xEPrinciples), and *Reinventing Fire* (2011, [www.reinventingfire.com](http://www.reinventingfire.com)).

<sup>2</sup> A.B. Lovins & D.R. Cramer, “Hypercars®, Hydrogen, and the Automotive Transition,” *Intl. J. Veh. Design* **35**(1/2):50–85 (2004), [www.rmi.org/Knowledge-Center/Library/T04-01\\_HypercarsHydrogenAutomotiveTransition](http://www.rmi.org/Knowledge-Center/Library/T04-01_HypercarsHydrogenAutomotiveTransition).

<sup>3</sup> [www.rmi.org/Knowledge-Center/Library/E04-07\\_WinningTheOilEndgame](http://www.rmi.org/Knowledge-Center/Library/E04-07_WinningTheOilEndgame).

<sup>4</sup> Summary in *Foreign Affairs* **58**:1137–1177 (1980); typical UNCLAS support in *Nature* **283**:817–823 (1980).

<sup>5</sup> A.B. & L.H. Lovins, *Brittle Power: Energy Strategy for National Security*, 1981 report to DoD, 436 pp., 1,200 refs., Brick House (Andover MA), 1982, out of print but reposted in 2002 at [www.rmi.org/Knowledge-Center/Library/S82-03\\_BrittlePowerEnergyStrategy](http://www.rmi.org/Knowledge-Center/Library/S82-03_BrittlePowerEnergyStrategy). Foreword by ex-CJCS ADM (Ret.) Tom Moorer and ex-USECNAV, then DCI, Woolsey; summary [www.rmi.org/Knowledge-Center/Library/S83-08\\_FragileDomEnergy](http://www.rmi.org/Knowledge-Center/Library/S83-08_FragileDomEnergy).

<sup>6</sup> H. Harvey & M. Shuman, *Security Without War*, 1990–93, Westview (Boulder), [www.rmi.org/Knowledge-Center/Library/S93-23\\_SecurityWithoutWar](http://www.rmi.org/Knowledge-Center/Library/S93-23_SecurityWithoutWar).

<sup>7</sup> RMI report under ONR Grant #N00014-01-1-0252, 2001, [www.nps.edu/Academics/Institutes/Meyer/docs/SI4000/Amory\\_Lovins/S01\\_09\\_EnergyEffSurveyCG59.pdf](http://www.nps.edu/Academics/Institutes/Meyer/docs/SI4000/Amory_Lovins/S01_09_EnergyEffSurveyCG59.pdf).

<sup>8</sup> At [www.acq.osd.mil/dsb/reports/ADA392666.pdf](http://www.acq.osd.mil/dsb/reports/ADA392666.pdf), and [www.acq.osd.mil/ddb/reports/ADA477619.pdf](http://www.acq.osd.mil/ddb/reports/ADA477619.pdf).

<sup>9</sup> Lovins, “DoD’s Energy Challenge as Strategic Opportunity,” [www.ndu.edu/press/jfq\\_pages/editions/i57/lovins.pdf](http://www.ndu.edu/press/jfq_pages/editions/i57/lovins.pdf).