

**S**ITTING IN THE BACK of an auditorium, waiting to address a global-warming conference at the University of Colorado, Amory Lovins glances towards the ceiling and frowns. The man *Newsweek* once called "one of the Western world's most influential energy thinkers" has detected yet another wasteful indoor-lighting system.

Lovins pulls a calculator from his breast pocket and begins punching numbers. Soon he has computed how many kilowatts are being squandered, how many pounds of greenhouse gases are being spewed into the atmosphere to produce that power, how many thousands of dollars a lighting retrofit could save.

### Modern Prometheus

At the lectern, Lovins extracts an efficient light bulb from his briefcase and plugs it in. Like a modern Prometheus, he raises the bulb and launches into his speech.

He tells his audience that the United States could run its economy on a third to a fourth as much energy as it does today, saving \$300 billion annually while reducing urban smog, acid rain, and global warming. By making cost-effective efficiency investments, he says, the country could eliminate oil imports and save trillions of dollars by the year 2000 – enough to pay off the national debt.

This is easily the conference's most uplifting message yet, and the crowd – nearly pickled by doom and gloom – perks up as Lovins, his moustache and thick eyeglasses giving him a vague resemblance to Charlie Chaplin, continues his speech.

"Together, renewable energy and energy efficiency – in the form of light bulbs like these, high-mileage cars, superinsulated homes, smart electric-motor systems, advanced aircraft, high-efficiency appliances, and a host of other such technologies – make it possible to meet all our energy needs without harming the climate."

Reeling off facts, figures, and asides ("In some cases efficiency is better than a free lunch; it's a lunch you're paid to eat"), Lovins keeps the audience hanging on his every word. He concludes by gently chiding the university: "It's theoretically possible to save 92 percent of all the electricity used for lighting – and this auditorium would be a good place to start."

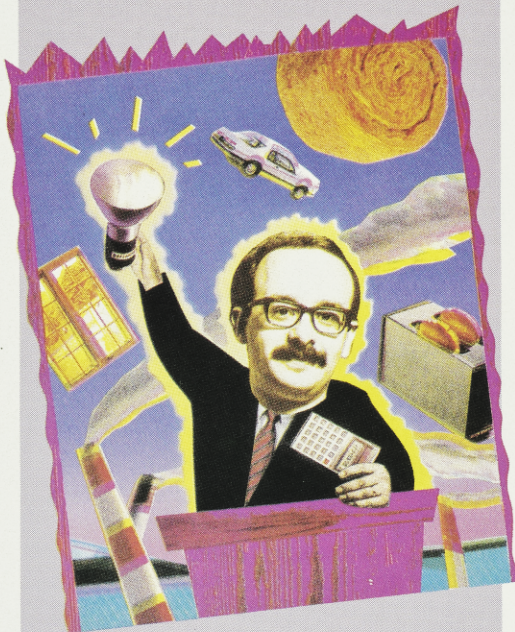
Applause, laughter. As Lovins leaves the room, small clusters of people form to discuss his speech. Two questions hang in the air: Who is this guy? And, is his good news too good to be true?

Environmental patriarch David Brower first met Amory Lovins in 1970, after Lovins mailed him a manuscript he had written about Snowdonia National Park, Britain's second largest. Brower found the manuscript riveting, both as an ode to Snowdonia and as a jeremiad against its exploitation. "Imagining it to be the work of someone middle-aged, I was astonished to discover that Amory was only 21," he recalls.

### Questioned Conventional Wisdom

Dropping out of school to take a job with Brower's organisation Friends of the Earth, Lovins expanded his studies of the energy problem. Trained as a scientist, he was comfortable, as few environmentalists are, with

# Amory Lovins



# Walking the Soft Path

by James R Udall

the topic's arcane jargon; perhaps more important, he had both the courage to question the conventional wisdom and Brower goading him on.

"My experiences in Snowdonia taught me that minerals and fossil fuels must be wrested from the earth with great violence; that their extraction, transportation, and usage all entail environmental costs," says Lovins. "But having been trained as a physicist, my initial assumption was that the best replacements for oil and gas would be the nuclear technologies."

Reading voraciously, attending seminars, playing what-if on his slide rule, Lovins discovered that nuclear power "made much less sense than I had presumed." Turning his back on such "hard" technologies, he began developing the case of an alternative energy future he called the "soft path." Soon Lovins was giving the seminars himself.

"Where most of us use 10 percent of our brainpower, Amory uses 90," Brower says. "He is extraordinarily dedicated. He's insightful, intuitive, great with numbers. He sees the linkages better than almost anybody. He's an absolute genius."

In the early 70s it was universally believed that a nation's energy consumption was the yardstick of its economic performance – hence US consumption was expected to double every 20 or 30 years. Then came the 1973 oil shock. The energy crisis was born.

It was against this backdrop that Lovins published the book that brought him to prominence, *Soft Energy Paths*. "According to conventional wisdom," he wrote, "the energy problem is how to increase energy supplies to meet projected demands. The [proposed] solution to this problem is familiar: Ever more remote and fragile places are to be ransacked, at ever greater risk and cost."

Lovins argued that a better answer was to wring more work from our energy. "We understand too little the wise use of power," he wrote. "We're like somebody who can't keep the bathtub full because the water keeps running out. Before we buy a bigger water heater, we ought to get a plug."

### Seminal Impact

By outlining a scenario in which the nuclear-power genie is rebottled, and oil, gas, and coal are replaced by hydropower, biomass, solar, and other sustainable-energy supplies, Lovins forever changed the context of the energy debate. Because of its seminal impact, *Soft Energy Paths*, which has been translated into eight languages, has been compared to *Silent Spring*.

The book touched off a firestorm of debate. Energy insiders vilified Lovins as a gadfly, a pie-in-the-sky dreamer, a dangerous eco-freak, a purveyor of naked nonsense, and Public Enemy Number One. Supremely, even arrogantly confident, Lovins did not mind being cast as the energy priesthood's Martin Luther. "All knowledge starts as heresy," he told his critics.

With "energy independence" as its slogan during the late 1970s, the US government was striding down the hard path. Billions were lavished on experimental technologies – synfuels, the breeder reactor, coal gasification. But as energy prices rose, Americans began buying gas-sipping cars, insulating