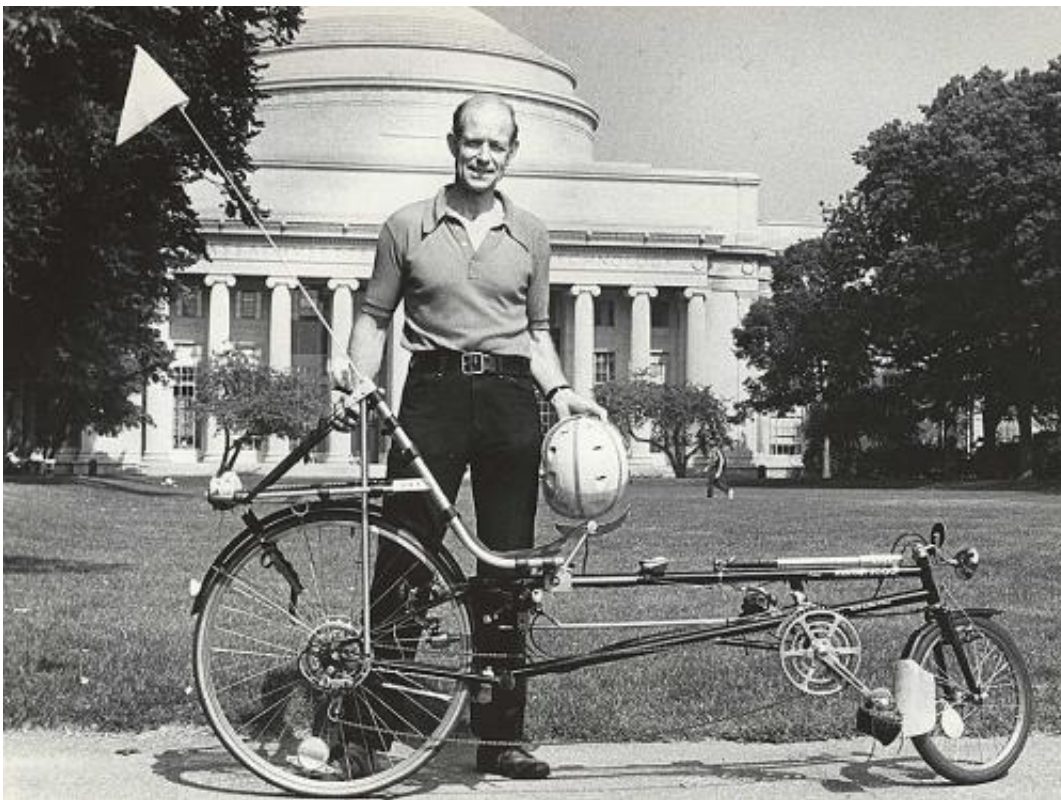


## Emeritus: David Wilson was an early proponent of the concept of energy-use fees

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David Gordon Wilson

The concept of a market-based mechanism to curb emissions of greenhouse gases—and thus slow the pace of climate change—has often been suggested in recent decades. But one particular version of such a strategy, devised in the 1970s by MIT professor of mechanical engineering David Gordon Wilson, has been adopted in one form in a

Canadian province, as well as in a handful of other places—and, so far, it seems to be having the desired effect.

One key to making such a mechanism more palatable politically, says Wilson, now professor emeritus, is to make it a fee rather than a carbon tax. The difference, he explains, is that tax money goes to the government, whereas the fees he envisions would be returned in full to citizens—although not necessarily the same ones who paid it.

This combination of a fee levied on the use of fossil fuel and a rebate has sometimes been dubbed a "feebate" plan. But a fuel-based tax is generally seen as regressive: Lower-income people would be hit harder by it, since they spend a greater percentage of their income on gas for their cars or heating oil for their houses.

Under Wilson's plan, however, every citizen would get an equal share of the monies collected, at the end of each month—meaning those with lower incomes would actually come out ahead. Instead of a regressive tax, the fees and rebates would constitute a progressive system.

The province of British Columbia has adopted such a system with great success, Wilson points out: A recent review by Paul Ekins of University College London and Stewart Elgie of the University of Ottawa concluded that of all carbon-tax approaches tried so far, British Columbia's system was "the best in the world."

Public policy and economics were not Wilson's original fields of study. A mechanical engineer who was born and educated in England, he first came to the United States in 1955, and then returned six years later after a two-year teaching stint in Nigeria—an assignment he loved, but had to leave after contracting a severe case of malaria.

In 1966, he came to MIT at the invitation of Richard Soderberg, then the

head of the Department of Mechanical Engineering. Soon after, his service on an advisory commission to the local transit system gave him a taste for the potential impact that the right kinds of policies and incentives could provide. "That turned me into an enthusiast for policy," Wilson says. He followed up with work on other commissions, dealing with issues such as energy and waste disposal.

Then came the oil shock of the early 1970s. "When the energy crisis hit, people wanted to go straight to gas rationing," he says. But Wilson thought he had a better idea: "It occurred to me that if we put a fee on gas, it could accomplish a lot of things at once."

Specifically, through a combination of a gradually increasing extra fee on gas and a rebate of the monies collected to all citizens, the use of gas would be curtailed without having to impose actual limits on its consumption; simultaneously, the rebate would provide an extra economic boost to those with the lowest incomes, Wilson says, as well as increasing employment for all. He outlined the concept in some newspaper op-ed pieces, and newspapers including the *Christian Science Monitor* touted the idea in their own news stories.

Wilson's presentation of the concept to five different congressional hearings earned mostly positive responses—Sen. William Proxmire (D-Wisc.), who had invited him to testify to one committee, "seemed to love this scheme," Wilson says—but there was one snag: The inflation rate at the time was over 20 percent, and Proxmire worried that "this will make it worse," Wilson recalls. The whole concept quickly faded from view.

But Wilson insists that this counterargument was flawed. "If you just looked at the increase in price [of fuel], that would be inflationary," he concedes. "But if the rebate is counted against that increase, that would completely nullify" the inflationary effect.

One obstacle to a fair hearing, Wilson says, was that he was making a recommendation about economic policy, but his training and position was in [mechanical engineering](#). "Nobody would publish a paper," he says. "They didn't want an engineer to tell them about economics."

Wilson still believes passionately in the concept, and presented the idea again last year, at a conference in Texas and in a paper in the *Journal of the Air & Waste Management Association*. "If this were adopted by Congress and the government, there would be no need for any other energy laws," he maintains: This one mechanism, he says, would provide a market-based mechanism to cut use of fossil fuels and promote the expansion of renewable energy—without picking winners and losers in energy technology.

While no nation has adopted the exact kind of policy Wilson outlines, he says, the [carbon tax](#) enacted in 2008 in British Columbia was recently lauded by *The Economist* as an exemplary system. Several studies have documented the success of this plan, including the one by Ekins and Elgie, which showed that the policy lowered per-capita gasoline use by more than 17 percent—and with no harm to British Columbia's economy, which actually fared slightly better than other provinces through the economic downturn. A 2012 study by Nicholas Rivers and Brandon Schaufele of the University of Ottawa showed that the policy cut gasoline usage by almost five times as much as an equivalent increase in the gasoline tax.

After decades of lobbying for such a system, Wilson sees the studies showing the success of British Columbia's approach, and polls showing a very high approval rate among its citizens, as a long-overdue vindication.

The idea is getting some renewed interest, Wilson says. A group called Citizens Climate Lobby has backed the measure, he says; Wilson went to Washington with members of the group last year to visit members of the

House and Senate and tout the plan. Despite decades of frustration, Wilson sees some hope for a turnaround in what he regards as a perverse set of incentives under current policy.

"In 100 years," he says, "people will look back at this time, and the fact that we're subsidizing conventional fossil fuel, and they'll say, 'These people were nuts, absolutely nuts!'"

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