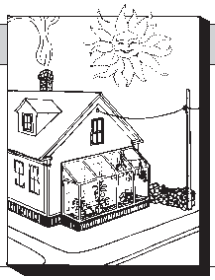
Whatever Happened to the Solar Tax Credits?



by Alex Wilson

Remember the 40 percent tax credits for solar and other renewable-energy systems? Though they expired at the end of last year in a flurry of solar-water-heater sales, there was talk—indeed *promise* from some experts—that they would be reinstated. As the tax-reform bill took shape, supporters lobbied gallantly to include renewable-energy credits in the final bill.

Despite some successes, for the most part those tax credits are gone, at least as they relate to most of us. Where do tax credits and other tax incentives for renewable energy now stand, and what will it mean for the renewable-energy industry?

Commercial Tax Credits for Renewable Energy

	Amount of Tax Credit (%)			
	1986	1987	1988	1989
Solar (incl. solar thermal and PV)	15	12	10	0
Geothermal	15	10	10	0
OTEC	15	15	15	0
Biomass	15	10	0	0
Wind	0	0	0	0
Small-Scale Hydro	0	0	0	0

First, Some Background

The solar tax credits went into effect in 1978 (retroactive to '76) as part of the National Energy Policy Act. They were designed to encourage the use of renewable-energy sources on both the residential and commercial level.

The residential credits provided 40 percent of the cost of a qualifying system. The residential energy-conservation credits for insulation and weatherstripping provided 15 percent. The commercial credits provided 15 percent. Caps on the credits were: residential solar, $4,000; residential energy conservation, $300; commercial solar, no ceiling.

Most people considered the program a tremendous success, and largely responsible for building the solar industry to the $950 million level by 1984. (For a somewhat dissenting view, see my column, "Solar Tax Credits: The End of an Error?," in the December 1985 *NEB*.)

In 1983, efforts were begun, well before their expiration, to extend the renewable-energy and energy-conservation credits. That effort; in fact, became almost the sole pursuit of the Solar Energy Industries Association (SEIA) and Solar Lobby, two Washington-based organizations. But as is often the case with government programs, nothing was decided until well after the credits expired.

Renewable-Energy Tax Credits in the Tax-Overhaul Bill

All residential tax credits for solar energy, other renewable-energy sources, and energy conservation are gone. Efforts to write a retroactive extension of the residential tax credits into the tax-reform package—even at a reduced rate—failed. This was a tremendous disappointment to SEIA and Solar Lobby. Tina Hobson, director of Solar Lobby, estimates that 90 percent of the solar industry is gone, due mainly to the uncertainty about, and then disappearance of, the residential solar tax credits.

Interestingly, SEIA program director Scott Sklar told me that there has been a dramatic shift in emphasis toward high-temperature solar and photovoltaic companies, and away from solar-hot-water and other low-temperature solar applications. (High-temperature solar includes process heat and electricity generation via steam turbines with collection temperatures exceeding 300 degrees F.) Dues collected at SEIA have remained fairly steady.

Commercial Tax Credits

The commercial tax credits for renewable-energy equipment fared somewhat better in the tax-reform package. The commercial credits for solar, geothermal, OTEC (ocean thermal-energy conversion), and biomass have been extended two to three years, retroactive to January of this year.

The commercial tax credits for solar, which cover solar thermal, photovoltaics, and certain passive-solar components (everything covered by the old credits) were revived at the following rates: 15 percent in 1986, 12 percent in '87, and 10 percent in '88 (see table).

Commercial credits for geothermal, OTEC, and biomass also were extended but at differing rates, as shown in the table. Wind energy and small-scale hydropower are not included in the package. To understand why certain renewable technologies were favored, and why the rates differ, look at who the proponents were. Sen. Matsunaga of Hawaii (the only place where OTEC is seriously being investigated), for example, was a prime supporter, and OTEC came out ahead. Wind energy, on the other hand, was written out of the tax bill altogether, largely because of Rep. Pete Stark's opposition to wind-farm tax shelters in his home state of California. Also, according to a member of Sen. Packwood's staff, the wind-energy lobbyists used the wrong approach in their efforts.

One major victory for renewable-energy advocates came with the inclusion of renewable-energy equipment in the list of items qualifying for five-year depreciation. This means that commercial users of renewable energy will be able to write off their investments over the relatively short period of five years. Under the old legislation, most renewable-energy property qualified for five-year depreciation, but the definitions were vague.

Few people expected the new tax package to include renewables under the five-year-depreciation rule. (The House version had included renewable-energy equipment under the ten-year depreciation rule, and few people expected to maintain the five-year depreciation.) Being able to depreciate renewable-energy equipment in five years is likely to have a greater effect than the tax credits in spurring company investment in renewable energy, particularly with the credits due to expire so quickly.

In terms of third-party financing of renewable-energy systems, such as solar thermal-power plants and wind farms, it appears that most of that will disappear. Most tax shelters and limited-partnership schemes depended on the investment tax credits that were repealed in the tax-reform package.

What Does This Mean for the Industry?

It is difficult to separate cause and effect when trying to explain trends. The solar industry, particularly companies that manufacture and install active-solar water-heating and space-heating equipment, has experienced a dramatic setback. From $950 million in sales in 1984 and about the same in '85, Scott Sklar estimates the figure will drop to between $220 and $300 million in 1986. But is this because of the expiration of the tax credits, the drop in oil prices, or other causes?

According to Solar Lobby's Hobson, 85 to 90 percent of the solar-thermal market (solar collectors) was for residential applications, and at least 40 percent of the home owner's cost was defrayed by tax credits (even more if state solar tax credits existed). So, clearly, the sudden loss of that 40 percent credit would hurt the market.

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But my opinion is that, assuming the same political climate and oil-price slide, there would be little difference if the tax credits had been extended—even if they had been extended two years ago and this period of uncertainty had not existed.

The other factors affecting solar were just too strong: dropping oil prices, the negative image solar energy acquired because of well-publicized "tax scams," and the persistent image presented by the Reagan Administration that energy conservation and solar energy are not important.

By the time the tax-reform package was worked out, the damage to the solar industry was completed. Retroactive residential tax credits wouldn't have made much difference. In fact, they could well have been harmful: with most of the large solar-collector manufacturers gone, the field would have been wide open for more disreputable companies to rip us off—both solar buyers and taxpayers. ■

Alex Wilson is a technical writer based in Brattleboro, Vt.