

Jimmy Carter's Energy Plan: Myths vs. Realities

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Part I: Solar Energy

Solar energy as it is treated in "The National Energy Plan" issued by the White House, April 29, 1977.

Myth:

The Carter Plan will give us solar energy much faster than the Nixon-Ford plans, and

Carter is "aggressively" promoting solar energy.

(The term "aggressively" is taken from the National Energy Plan, p. xxii)

Facts:

The Carter Plan relegates almost every application of solar energy to "beyond 1985" (p.100) and "in the next century" (p.32).

Carter is explicitly aware (p.101) that at least ONE-THIRD of our entire energy-demand can be met by low-grade heat---temperatures below the boiling point of water---and that solar heat is a suitable source of such energy.

Nevertheless, the use of solar energy to supply some of the low-temperature heat needed in industry and agriculture is relegated to "The Future beyond 1985" section of the Plan, except for a few government-sponsored demonstrations!

Windpower is mentioned (EVERYTHING gets mentioned, for credit) as a medium-term technology, i.e., after 1985, as are ocean-thermal and photovoltaic power.

What, if any, solar energy applications will be introduced during the next 8 years?

a.) The Plan states that its "fuel conversion program" (tax credits to encourage a shift by utilities and industries away from oil and gas) would encourage the use of "biomass" like waste wood, garbage, and alcohol, presumably as soon as the tax-incentives are enacted.

b.) The Plan states a goal of solarizing 2½ million homes by 1985 through tax-incentives. This is truly a drop in the bucket, since there are 74 million "residential units" today in the U.S., and $2.5 \div 74 = 3.4\%$. After issuing the Plan, the Carter Administration reduced even that goal from 2.5 to 1.3 million, or 1.8% of the total residential units! Meanwhile, the Solar Energy Industries Assn. claims that 11 (eleven) million homes could be solarized by 1985.

What is the planned contribution from solar energy in 1985?

The grand contribution from solar energy by 1985 under Carter's solar energy plan will be a maximum of 0.4 Quad*, or 0.44% of the projected energy-need of 91.65 Quads. Although solar is so neglected in the Plan that it does not even appear separately as an energy source by 1985, it was possible to derive an upper limit for this figure from the increment listed (p.96) for "other" sources between 1976 and 1985. So, 0.44%.

* One Quad = 10^{15} BTU's, or the energy equivalent of 180 million barrels of crude oil.

It is remarkable to compare this figure with the figure published by the Federal Energy Administration (FEA) in Nov. 1974; it is reproduced below. The FEA shows that by 1985 with an "accelerated implementation plan", we could have 1.44 Quads from solar energy, or 3 times more than Carter's plan for 1985.

The FEA said that even with a "business as usual" implementation program, by 1985 we should have 0.84 Quads from solar energy---approximately double Carter's Plan.

Even if one assumes that no progress at all was made on solar energy in the intervening 2½ years (an absurd assumption), it would seem that Carter's commitment to solar energy is less than "business as usual".

One might note that the FEA, which was not gung-ho for solar energy under previous Administrations, said that the U.S. could have nearly 40 Quads from solar energy by the year-2000. That would be more than half of the entire U.S. 1976 energy-consumption (75 Quads).

Another interesting contrast to Carter's pitiful 0.4% (four-tenths of one percent) contribution from solar energy in 1985 is an estimate by the well-respected ecologist, Dr. Barry Commoner (author of The Poverty of Power, 1976). His current estimate is that the U.S. could get up to 20% of its energy in the next 10 years from solar energy. (Source: his presentation May 10, 1977 at the National League of Cities, p.23).



Source: Federal Energy Administration, Project Independence Blueprint, Final Task Force Report on Solar Energy, Nov. 1974, page I-7.

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SUMMARY OF POTENTIAL IMPACTS OF SOLAR ENERGY TECHNOLOGIES

(Units of 10¹⁵ Btu/Yr of Output Energy Provided by Solar Energy Systems)

	1980	1985	1990	1995	2000
Heating and Cooling	0.3 (0.01)	0.6 (0.3)	1.5 (0.6)	2.4 (1.3)	3.5 (2.3)
Solar Thermal	.0 (.0)	0.002 (0.002)	0.02 (0.02)	0.2 (0.1)	1.3 (0.6)
Wind Conversion	0.01 (0.008)	0.5 (0.4)	2.0 (1.6)	3.4 (2.7)	5 (4.0)
Bioconversion	0.06 (0.06)	0.3 (0.1)	0.9 (0.2)	3.3 (0.4)	15 (0.7)
Ocean Thermal	0 (0)	0.03 (0.03)	0.2 (0.1)	1.0 (0.4)	7 (1.7)
Photovoltaic Conversion	Neg. (Neg.)	0.01 (0.003)	0.3 (0.07)	2.4 (0.3)	7 (1.5)
Total U.S. Demand*	93	120	144	165	180

* Assumptions include (1) the successful completion of the recommended R&D program plan for solar energy technologies; and, (2) conventional fuel prices equivalent to \$11 per barrel of oil.

* Numbers shown without parentheses are for the Accelerated implementation plan; those shown in parentheses are for the Business-as-Usual implementation plan.

* Estimates based on pre-embargo analyses. See, "The Nation's Energy Future", AEC, 1 December 1973.

For useful, up-to-date information about solar energy potential, see the five issues of the "ECO" newspaper, put out in May 1977 by Friends of the Earth, 124 Spear St., San Francisco, CA 94105).