

Solar Energy: New Respectability

While Congress dawdles and industry fidgets over what to do about developing alternative energy sources, solar power is winning important new supporters. Within the last two weeks, some 100 legislators sponsored a joint House-Senate conference on solar energy, the optimistic results of NSF-sponsored solar research were announced and the U.S. General Accounting Office concluded that solar systems should become economically competitive provided the cost of collectors continues to decrease.

Though only about a half-dozen legislators even bothered to drop in on their conference, a confrontation between environmentalist advocates of solar energy and Administration spokesmen supporting a strong nuclear commitment focused attention on the issues that Congress will have to face when conflicting energy bills finally come to a vote. Barry Commoner drew the ire of AEC Chairman Dixy Lee Ray by suggesting her "conflict of interest" as head of an organization dedicated to producing a competitive source of energy should have prevented her from heading the Administration's review of the energy question, which resulted in the allocation of many times more money to atomic and coal research than to solar (SN: 4/13/74, p. 242). Ray replied that there was "certainly not" a conflict of interest, that solar energy had not yet reached to stage of

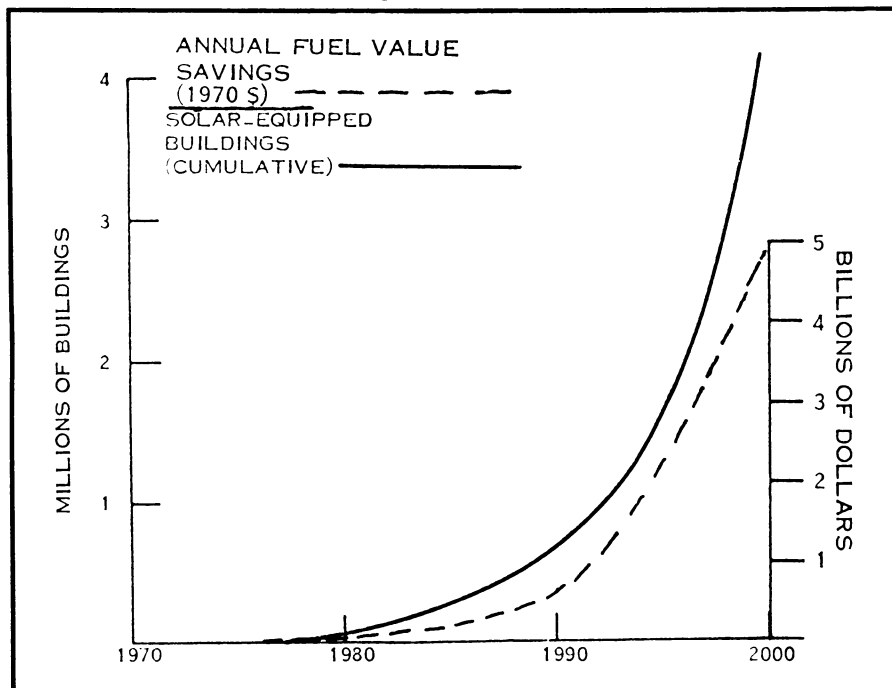
development of the other sources and that Commoner was "a little out of order" for bringing up the matter. Ralph Nader accused industry of dragging its feet on solar energy because a decentralized, low-level technology would "break the links to big companies." Energy-writer Wilson Clarke raised the spectre of materials scarcity becoming a limiting factor in development of high-technology energy installations, with solar energy emerging as an ideal alternative because it employs only relatively abundant raw materials.

Since most Federal money for solar R & D flows through the National Science Foundation, conference panelists were particularly responsive to the cautious optimism of NSF Assistant Director Alfred J. Eggers. Solar energy may someday supply a third of the country's energy needs, he said, but in the meantime there are "lots of ways the country could lose money."

Eggers' words were strongly supported by the reports of industry scientists who presented results of preliminary research into the feasibility of solar heating and cooling. Addressing a workshop of several hundred businessmen, engineers, architects and financiers, representatives of the three prime contractors, General Electric, Westinghouse and TRW, unanimously concluded that with proper governmental incentives a solar-heating industry would rapidly take shape.

Unlike the small entrepreneurs who insist they have already solved the engineering problems and just need the money to help bring their products to market (SN: 2/2/74, p. 69), the industry representatives insisted that at least a few years of experimentation and demonstration would be necessary before even the simplest heating systems would be ready for mass marketing. Quoting "Murphy's Law" (If something can possibly go wrong, it will), Albert Weinstein of Westinghouse said that a balance must be struck "between a sense of urgency and a sense of reality." Reality, in this case, means gaining public acceptance, working out sufficient economic incentives for installing costly solar units, reducing the costs of collectors and auxiliary equipment, and straightening out the bugs in existing systems. (SCIENCE NEWS has learned that two major problems in existing systems are corrosion of fluid-carrying pipes and cracking of glass collectors.)

These conclusions paralleled those of the General Accounting Office's review of solar projects. Local decisions on the feasibility of solar heating and cooling will depend primarily on the cost of competing conventional energy sources. What remains is for the Federal Government to formulate a real energy policy so that industry and localities can plan intelligently what new energy sources to develop. □



Projection of solar-energy market penetration and fuel saving by century end.



NSF's Eggers: Optimistic results.