

5814(f) of this title. Energy Research and Development Administration terminated and functions vested by law in Administrator thereof transferred to Secretary of Energy (unless otherwise specifically provided) by sections 7151(a) and 7293 this title.

§ 5554. Solar energy resource determination and assessment program; objectives; implementation

(a) The Chairman shall initiate a solar energy resource determination and assessment program with the objective of making a regional and national appraisal of all solar energy resources, including data on insolation, wind, sea thermal gradients, and potentials for photosynthetic conversion. The program shall emphasize identification of promising areas for commercial exploitation and development. The specific goals shall include—

- (1) the development of better methods for predicting the availability of all solar energy resources, over long time periods and by geographic location;
- (2) the development of advanced meteorological, oceanographic, and other instruments, methodology, and procedures necessary to measure the quality and quantity of all solar resources on periodic bases;
- (3) the development of activities, arrangements, and procedures for the collection, evaluation, and dissemination of information and data relating to solar energy resource assessment.

(b) The Chairman, acting through the National Aeronautics and Space Administration, the National Oceanic and Atmospheric Administration, and other appropriate agencies, shall—

- (1) develop and carry out a general plan for inventorying all forms of solar energy resources associated with Federal lands and (where consistent with property rights) non-Federal lands;
- (2) conduct regional surveys based upon such general plan, using innovative meteorological, oceanographic, and space-related techniques, in sufficient numbers to lead to a national inventory of solar energy resources in the United States;
- (3) publish and make available maps, reports, and other documents developed from such surveys to encourage and facilitate the commercial development of solar energy resources; and
- (4) make such recommendations for legislation as may appear to be necessary to establish policies for solar resources involving Federal lands and waters, consistent with known inventories of various resource types, with the state of technologies for solar energy development, and with evaluation of the environmental impacts of such development.

(Pub. L. 93-473, § 5, Oct. 26, 1974, 88 Stat. 1433.)

§ 5555. Research and development program

(a) Purpose

The Chairman shall initiate a research and development program for the purpose of resolving the major technical problems inhibiting commercial utilization of solar energy in the United States.

(b) Implementation

In connection with or as a part of such program, the Chairman shall—

- (1) conduct, encourage, and promote scientific research and studies to develop effective and economical processes and equipment for the purpose of utilizing solar energy in an acceptable manner for beneficial uses;
- (2) carry out systems, economic, social, and environmental studies to provide a basis for research, development and demonstration planning and phasing; and
- (3) perform or cause to be performed technology assessments relevant to the utilization of solar energy.

(c) Scope

The specific solar energy technologies to be addressed or dealt with in the program shall include—

- (1) direct solar heat as a source for industrial processes, including the utilization of low-level heat for process and other industrial purposes;
- (2) thermal energy conversion, and other methods, for the generation of electricity and the production of chemical fuels;
- (3) the conversion of cellulose and other organic materials (including wastes) to useful energy or fuels;
- (4) photovoltaic and other direct conversion processes;
- (5) sea thermal gradient conversion;
- (6) windpower conversion;
- (7) solar heating and cooling of housing and of commercial and public buildings; and
- (8) energy storage.

(Pub. L. 93-473, § 6, Oct. 26, 1974, 88 Stat. 1433.)

§ 5556. Solar energy demonstration facilities program

(a) Authorization for design and construction of facilities; objectives

The Chairman is authorized to initiate a program to design and construct, in specific solar energy technologies (including, but not limited to, those listed in section 5555(c) of this title,¹ facilities or powerplants of sufficient size to demonstrate the technical and economic feasibility of utilizing the various forms of solar energy. The specific goals of such programs shall include—

- (1) production of electricity from a number of powerplants, on the order of one to ten megawatts each;
- (2) production of synthetic fuels in commercial quantities;
- (3) large-scale utilization of solar energy in the form of direct heat;
- (4) utilization of thermal and all other by-products of the solar facilities;
- (5) design and development of hybrid systems involving the concomitant utilization of solar and other energy sources; and
- (6) the continuous operation of such plants and facilities for a period of time.

¹So in original. Probably should be preceded by a closing parenthesis.