

(Pub. L. 110-140, title VI, §607, Dec. 19, 2007, 121 Stat. 1677.)

EFFECTIVE DATE

Section effective on the date that is 1 day after Dec. 19, 2007, see section 1601 of Pub. L. 110-140, set out as a note under section 1824 of Title 2, The Congress.

PART B—GEOTHERMAL ENERGY

§ 17191. Definitions

For purposes of this part:

(1) Engineered

When referring to enhanced geothermal systems, the term “engineered” means subjected to intervention, including intervention to address one or more of the following issues:

(A) Lack of effective permeability or porosity or open fracture connectivity within the reservoir.

(B) Insufficient contained geofluid in the reservoir.

(C) A low average geothermal gradient, which necessitates deeper drilling.

(2) Enhanced geothermal systems

The term “enhanced geothermal systems” means geothermal reservoir systems that are engineered, as opposed to occurring naturally.

(3) Geofluid

The term “geofluid” means any fluid used to extract thermal energy from the Earth which is transported to the surface for direct use or electric power generation, except that such term shall not include oil or natural gas.

(4) Geopressured resources

The term “geopressured resources” mean geothermal deposits found in sedimentary rocks under higher than normal pressure and saturated with gas or methane.

(5) Geothermal

The term “geothermal” refers to heat energy stored in the Earth’s crust that can be accessed for direct use or electric power generation.

(6) Hydrothermal

The term “hydrothermal” refers to naturally occurring subsurface reservoirs of hot water or steam.

(7) Systems approach

The term “systems approach” means an approach to solving problems or designing systems that attempts to optimize the performance of the overall system, rather than a particular component of the system.

(Pub. L. 110-140, title VI, §612, Dec. 19, 2007, 121 Stat. 1679.)

EFFECTIVE DATE

Section effective on the date that is 1 day after Dec. 19, 2007, see section 1601 of Pub. L. 110-140, set out as a note under section 1824 of Title 2, The Congress.

SHORT TITLE

This part known as the “Advanced Geothermal Energy Research and Development Act of 2007”, see Short Title note set out under section 17001 of this title.

§ 17192. Hydrothermal research and development**(a) In general**

The Secretary shall support programs of research, development, demonstration, and commercial application to expand the use of geothermal energy production from hydrothermal systems, including the programs described in subsection (b).

(b) Programs**(1) Advanced hydrothermal resource tools**

The Secretary, in consultation with other appropriate agencies, shall support a program to develop advanced geophysical, geochemical, and geologic tools to assist in locating hidden hydrothermal resources, and to increase the reliability of site characterization before, during, and after initial drilling. The program shall develop new prospecting techniques to assist in prioritization of targets for characterization. The program shall include a field component.

(2) Industry coupled exploratory drilling

The Secretary shall support a program of cost-shared field demonstration programs, to be pursued, simultaneously and independently, in collaboration with industry partners, for the demonstration of advanced technologies and techniques of siting and exploratory drilling for undiscovered resources in a variety of geologic settings. The program shall include incentives to encourage the use of advanced technologies and techniques.

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§ 17193. General geothermal systems research and development**(a) Subsurface components and systems**

The Secretary shall support a program of research, development, demonstration, and commercial application of components and systems capable of withstanding extreme geothermal environments and necessary to cost-effectively develop, produce, and monitor geothermal reservoirs and produce geothermal energy. These components and systems shall include advanced casing systems (expandable tubular casing, low-clearance casing designs, and others), high-temperature cements, high-temperature submersible pumps, and high-temperature packers, as well as technologies for under-reaming, multilateral completions, high-temperature and high-pressure logging, logging while drilling, deep fracture stimulation, and reservoir system diagnostics.

(b) Reservoir performance modeling

The Secretary shall support a program of research, development, demonstration, and commercial application of models of geothermal reservoir performance, with an emphasis on accurately modeling performance over time. Models shall be developed to assist both in the develop-