(D) tracer development;
(E) three-dimensional tomography; and
(F) understanding seismic effects of reservoir engineering and stimulation.

(2) Enhanced geothermal systems reservoir stimulation

(A) Program

In collaboration with industry partners, the Secretary shall support a program of research, development, and demonstration of enhanced geothermal systems reservoir stimulation technologies and techniques. A minimum of 4 sites shall be selected in locations that show particular promise for enhanced geothermal systems development. Each site shall—

(i) represent a different class of subsurface geologic environments; and
(ii) take advantage of an existing site where subsurface characterization has been conducted or existing drill holes can be utilized, if possible.

(B) Consideration of existing site

The Desert Peak, Nevada, site, where a Department of Energy and industry cooperative enhanced geothermal systems project is already underway, may be considered for inclusion among the sites selected under subparagraph (A).

(Pub. L. 110–140, title VI, §615, Dec. 19, 2007, 121 Stat. 1680.)

§17195. Geothermal energy production from oil and gas fields and recovery and production of geopressured gas resources

(a) In general

The Secretary shall establish a program of research, development, demonstration, and commercial application to support development of geothermal energy production from oil and gas fields and production and recovery of energy, including electricity, from geopressured resources. In addition, the Secretary shall conduct such supporting activities including research, resource characterization, and technology development as necessary.

(b) Geothermal energy production from oil and gas fields

The Secretary shall implement a grant program in support of geothermal energy production from oil and gas fields. The program shall include grants for a total of not less than three demonstration projects of the use of geothermal techniques such as advanced organic rankine cycle systems at marginal, unproductive, and productive oil and gas wells. The Secretary shall, to the extent practicable and in the public interest, make awards that—

(1) include not less than five oil or gas well sites per project award;
(2) use a range of oil or gas well hot water source temperatures from 150 degrees Fahrenheit to 300 degrees Fahrenheit;
(3) cover a range of sizes up to one megawatt;
(4) are located at a range of sites;
(5) can be replicated at a wide range of sites;
(6) facilitate identification of optimum techniques among competing alternatives;
(7) include business commercialization plans that have the potential for production of equipment at high volumes and operation and support at a large number of sites; and
(8) satisfy other criteria that the Secretary determines are necessary to carry out the program and collect necessary data and information.

The Secretary shall give preference to assessments that address multiple elements contained in paragraphs (1) through (8).

(c) Grant awards

Each grant award for demonstration of geothermal technology such as advanced organic rankine cycle systems at oil and gas wells made by the Secretary under subsection (b) shall include—

(1) necessary and appropriate site engineering study;
(2) detailed economic assessment of site specific conditions;
(3) appropriate feasibility studies to determine whether the demonstration can be replicated;
(4) design or adaptation of existing technology for site specific circumstances or conditions;
(5) installation of equipment, service, and support;
(6) operation for a minimum of 1 year and monitoring for the duration of the demonstration; and
(7) validation of technical and economic assumptions and documentation of lessons learned.

(d) Geopressured gas resource recovery and production

(1) The Secretary shall implement a program to support the research, development, demonstration, and commercial application of cost-effective techniques to produce energy from geopressured resources.

(2) The Secretary shall solicit preliminary engineering designs for geopressured resources production and recovery facilities.

(3) Based upon a review of the preliminary designs, the Secretary shall award grants, which may be cost-shared, to support the detailed development and completion of engineering, architectural and technical plans needed to support construction of new designs.

(4) Based upon a review of the final design plans above, the Secretary shall award cost-shared development and construction grants for demonstration geopressured production facilities that show potential for economic recovery of the heat, kinetic energy and gas resources from geopressured resources.

(e) Competitive grant selection

Not less than 90 days after December 19, 2007, the Secretary shall conduct a national solicitation for applications for grants under the programs outlined in subsections (b) and (d). Grant recipients shall be selected on a competitive basis based on criteria in the respective subsection.

(f) Well drilling

No funds may be used under this section for the purpose of drilling new wells.

(Pub. L. 110–140, title VI, § 616, Dec. 19, 2007, 121 Stat. 1681.)

§ 17196. Cost sharing and proposal evaluation

(a) Federal share

The Federal share of costs of projects funded under this part shall be in accordance with section 16352 of this title.

(b) Organization and administration of programs

Programs under this part shall incorporate the following elements:

(1) The Secretary shall coordinate with, and where appropriate may provide funds in furtherance of the purposes of this part to, other Department of Energy research and development programs focused on drilling, subsurface characterization, and other related technologies.

(2) In evaluating proposals, the Secretary shall give priority to proposals that demonstrate clear evidence of employing a systems approach.

(3) The Secretary shall coordinate and consult with the appropriate Federal land management agencies in selecting proposals for funding under this part.

(4) Nothing in this part shall be construed to alter or affect any law relating to the management or protection of Federal lands.

(Pub. L. 110–140, title VI, § 617, Dec. 19, 2007, 121 Stat. 1682.)

§ 17197. Center for Geothermal Technology Transfer

(a) In general

The Secretary shall award to an institution of higher education (or consortium thereof) a grant to establish a Center for Geothermal Technology Transfer (referred to in this section as the ''Center'').

(b) Duties

The Center shall—

(1) serve as an information clearinghouse for the geothermal industry by collecting and disseminating information on best practices in all areas relating to developing and utilizing geothermal resources;

(2) make data collected by the Center available to the public; and

(3) seek opportunities to coordinate efforts and share information with domestic and international partners engaged in research and development of geothermal systems and related technology.

(c) Selection criteria

In awarding the grant under subsection (a) the Secretary shall select an institution of higher education (or consortium thereof) best suited to provide national leadership on geothermal related issues and perform the duties enumerated under subsection (b).

(d) Duration of grant

A grant made under subsection (a)—

(1) shall be for an initial period of 5 years; and

(2) may be renewed for additional 5-year periods on the basis of—

(A) satisfactory performance in meeting the duties outlined in subsection (b); and

(B) any other requirements specified by the Secretary.

(Pub. L. 110–140, title VI, § 618, Dec. 19, 2007, 121 Stat. 1683.)

§ 17198. GeoPowering America

The Secretary shall expand the Department of Energy's GeoPowering the West program to extend its geothermal technology transfer activities throughout the entire United States. The program shall be renamed ''GeoPowering America''. The program shall continue to be based in the Department of Energy office in Golden, Colorado.

(Pub. L. 110–140, title VI, § 619, Dec. 19, 2007, 121 Stat. 1683.)

§ 17199. Educational pilot program

The Secretary shall seek to award grant funding, on a competitive basis, to an institution of higher education for a geothermal-powered energy generation facility on the institution's campus. The purpose of the facility shall be to provide electricity and space heating. The facility shall also serve as an educational resource to students in relevant fields of study, and the data generated by the facility shall be available to students and the general public. The total funding award shall not exceed $2,000,000.

(Pub. L. 110–140, title VI, § 620, Dec. 19, 2007, 121 Stat. 1683.)

§ 17200. Reports

(a) Reports on advanced uses of geothermal energy

Not later than 3 years and 5 years after December 19, 2007, the Secretary shall report to the Committee on Science and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate on advanced concepts and technologies to maximize the geothermal resource potential of the United States. The reports shall include—

(1) the use of carbon dioxide as an alternative geofluid with potential carbon sequestration benefits;

(2) mineral recovery from geofluids;

(3) use of geothermal energy to produce hydrogen;

(4) use of geothermal energy to produce biofuels;

(5) use of geothermal heat for oil recovery from oil shales and tar sands; and

(6) other advanced geothermal technologies, including advanced drilling technologies and advanced power conversion technologies.

(b) Progress reports

(1) Not later than 36 months after December 19, 2007, the Secretary shall submit to the Committee on Science and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate an interim report describing the progress made under this part. At the end of 60 months, the Secretary shall submit to Congress a report on the results of projects undertaken under this part and other