

established plays in the upper midcontinent region of the United States; and

(2) ensure that the results of the research described in paragraph (1) are transferred to users.

**(d) Research**

**(1) In general**

In conducting research under this section, the Center shall, to the extent practicable, cooperate with agencies of the Federal Government, the States in the midcontinent region of the United States, and the affected industry.

**(2) Programs**

Research programs conducted by the Center may include—

- (A) data base development and transfer of technology;
- (B) reservoir management;
- (C) reservoir characterization;
- (D) advanced recovery methods; and
- (E) development of new technology.

(Pub. L. 102-486, title XX, §2015, Oct. 24, 1992, 106 Stat. 3060.)

PART B—OIL AND GAS DEMAND REDUCTION AND SUBSTITUTION

**§ 13431. General transportation**

**(a) Program direction**

The Secretary shall conduct a 5-year program, in accordance with sections 13541 and 13542 of this title, on cost effective technologies to reduce the demand for oil in the transportation sector for all motor vehicles, including existing vehicles, through increased energy efficiency and the use of alternative fuels. Such program shall include a broad range of technological approaches, and shall include field demonstrations of sufficient scale and number in operating environments to prove technical and economic viability to meet the goals stated in section 13401 of this title. Such program shall include the activities required under sections 13432 through 13437 of this title, and ongoing activities of a similar nature at the Department of Energy.

**(b) Program plan**

Within 180 days after October 24, 1992, the Secretary shall prepare and submit to the Congress a 5-year program plan to guide activities under this part. In preparing the program plan, the Secretary shall consult with appropriate representatives of industry, utilities, institutions of higher education, Federal agencies, including national laboratories, and professional and technical societies.

**(c) Proposals**

Within 1 year after October 24, 1992, the Secretary shall solicit proposals for conducting activities under this section.

**(d) "Alternative fuels" defined**

For purposes of this part, the term "alternative fuels" includes natural gas, liquefied petroleum gas, hydrogen, fuels other than alcohol that are derived from biological materials, and any fuel the content of which is at least 85 percent by volume methanol, ethanol, or other alcohol.

**(e) Authorization of appropriations**

(1) There are authorized to be appropriated to the Secretary for carrying out this part, including all transportation sector energy conservation research and development (other than activities under section 13435 of this title) and all transportation sector biofuels energy systems under solar energy, \$119,144,000 for fiscal year 1993 and \$160,000,000 for fiscal year 1994.

(2) There are authorized to be appropriated to the Secretary for carrying out section 13435 of this title—

- (A) \$60,300,000 for fiscal year 1993;
- (B) \$75,000,000 for fiscal year 1994;
- (C) \$80,000,000 for fiscal year 1995;
- (D) \$80,000,000 for fiscal year 1996;
- (E) \$90,000,000 for fiscal year 1997; and
- (F) \$100,000,000 for fiscal year 1998.

(Pub. L. 102-486, title XX, §2021, Oct. 24, 1992, 106 Stat. 3061.)

**§ 13432. Advanced automotive fuel economy**

**(a) Program direction**

The Secretary shall conduct a program, in accordance with sections 13541 and 13542 of this title, to supplement ongoing research activities of a similar nature at the Department of Energy, to accelerate the near-term and mid-term development of advanced technologies to improve the fuel economy of light-duty passenger vehicles powered by a piston engine, and hybrid vehicles powered by a combination of piston engine and electric motor.

**(b) Program goal**

The goal of the program established under subsection (a) shall be to stimulate the development of emerging technologies with the potential to achieve significant improvements in fuel economy while reducing emissions of air pollutants.

**(c) Proposals**

Within 1 year after October 24, 1992, the Secretary shall solicit proposals for conducting activities under this section, making a special effort to involve small businesses in the program.

(Pub. L. 102-486, title XX, §2022, Oct. 24, 1992, 106 Stat. 3061.)

**§ 13433. Alternative fuel vehicle program**

**(a) Program direction**

The Secretary shall carry out a program, in accordance with sections 13541 and 13542 of this title, on techniques related to improving natural gas and other alternative fuel vehicle technology, including—

- (1) fuel injection;
- (2) carburetion;
- (3) manifolding;
- (4) combustion;
- (5) power optimization;
- (6) efficiency;
- (7) lubricants and detergents;
- (8) engine durability;
- (9) ignition, including fuel additives to assist ignition;
- (10) multifuel engines;
- (11) emissions control, including catalysts;