

mercial application for utilizing coal-derived liquid or gaseous fuels, including ultra-clean coal-water slurries, in diesel engines. The program shall address—

- (1) required engine retrofit technology;
- (2) coal-fuel production technology;
- (3) emission control requirements;
- (4) the testing of low-Btu highly reactive fuels;
- (5) fuel delivery and storage systems requirements; and
- (6) other infrastructure required to support commercial deployment.

(Pub. L. 102-486, title XIII, § 1302, Oct. 24, 1992, 106 Stat. 2972.)

#### § 13333. Clean coal, waste-to-energy

The Secretary shall establish a program of research, development, demonstration, and commercial application with respect to the use of solid waste combined with coal as a fuel source for clean coal combustion technologies. The program shall address—

- (1) the feasibility of cofiring coal and used vehicle tires in fluidized bed combustion units;
- (2) the combined gasification of coal and municipal sludge using integrated gasification combined cycle technology;
- (3) the creation of fuel pellets combining coal and material reclaimed from solid waste;
- (4) the feasibility of cofiring, in fluidized bed combustion units, waste methane from coal mines, including ventilation air, together with coal or coal wastes; and
- (5) other sources of waste and coal mixtures in other applications that the Secretary considers appropriate.

(Pub. L. 102-486, title XIII, § 1303, Oct. 24, 1992, 106 Stat. 2972.)

#### § 13334. Nonfuel use of coal

##### (a) Program

The Secretary shall prepare a plan for and carry out a program of research, development, demonstration, and commercial application with respect to technologies for the nonfuel use of coal, including—

- (1) production of coke and other carbon products derived from coal;
- (2) production of coal-derived, carbon-based chemical intermediates that are precursors of value-added chemicals and polymers;
- (3) production of chemicals from coal-derived synthesis gas;
- (4) coal treatment processes, including methodologies such as solvent-extraction techniques that produce low ash, low sulfur, coal-based chemical feedstocks; and
- (5) waste utilization, including recovery, processing, and marketing of products derived from sulfur, carbon dioxide, nitrogen, and ash from coal.

##### (b) Plan contents

The plan described in subsection (a) of this section shall address and evaluate—

- (1) the known and potential processes for using coal in the creation of products in the chemical, utility, fuel, and carbon-based materials industries;

(2) the costs, benefits, and economic feasibility of using coal products in the chemical and materials industries, including value-added chemicals, carbon-based products, coke, and waste derived from coal;

(3) the economics of coproduction of products from coal in conjunction with the production of electric power, thermal energy, and fuel;

(4) the economics of the refining of coal and coal byproducts to produce nonfuel products;

(5) the economics of coal utilization in comparison with other feedstocks that might be used for the same purposes;

(6) the steps that can be taken by the public and private sectors to bring about commercialization of technologies developed under the program recommended; and

(7) the past development, current status, and future potential of coal products and processes associated with nonfuel uses of coal.

(Pub. L. 102-486, title XIII, § 1304, Oct. 24, 1992, 106 Stat. 2973.)

#### § 13335. Coal refinery program

##### (a) Program

The Secretary shall conduct a program of research, development, demonstration, and commercial application for coal refining technologies.

##### (b) Objectives

The program shall include technologies for refining high sulfur coals, low sulfur coals, sub-bituminous coals, and lignites to produce clean-burning transportation fuels, compliance boiler fuels, fuel additives, lubricants, chemical feedstocks, and carbon-based manufactured products, either alone or in conjunction with the generation of electricity or process heat, or the manufacture of a variety of products from coal. The objectives of such program shall be to achieve—

(1) the timely commercial application of technologies, including mild gasification, hydrocracking and other hydrolysis processes, and other energy production processes or systems to produce coal-derived fuels and coproducts, which achieve greater efficiency and economy in the conversion of coal to electrical energy and coproducts than currently available technology;

(2) the production of energy, fuels, and products which, on a complete energy system basis, will result in environmental emissions no greater than those produced by existing comparable energy systems utilized for the same purpose;

(3) the capability to produce a range of coal-derived transportation fuels, including oxygenated hydrocarbons, boiler fuels, turbine fuels, and coproducts, which can reduce dependence on imported oil by displacing conventional petroleum in the transportation sector and other sectors of the economy;

(4) reduction in the cost of producing such coal-derived fuels and coproducts;

(5) the control of emissions from the combustion of coal-derived fuels; and

(6) the availability for commercial use of such technologies by the year 2000.