SPECIAL ALERT:

AN OVERVIEW OF SIGNIFICANT PROVISIONS OF THE ENERGY POLICY ACT OF 2005

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On August 8, 2005, President George W. Bush signed into law the Energy Policy Act of 2005 (Act). The Act is the most comprehensive piece of legislation affecting the nation's energy industry and markets since passage of the Energy Policy Act of 1992.

The major goals of the Act are to foster energy efficiency, to maximize development and use of domestic energy resources, including renewable energy resources, and to lessen the nation's dependence on foreign oil. Hence, the Act contains provisions designed to make America's homes, offices, buildings, automobiles and machinery more energy efficient, to increase the production of domestic coal, oil and gas supplies, to promote the development and use of renewable energy resources, to encourage the construction of new nuclear power plants and develop "next generation" nuclear facilities, and to provide incentives to the nation's electric utility and natural gas industries to construct facilities that will foster open and efficient electric and gas markets.

Congress also used the Act to respond to the meltdown of the California energy market in 2000, the collapse of Enron, and the 2003 Northeast Blackout. To address these issues, Congress enhanced the ability of the Federal Energy Regulatory Commission (FERC) to regulate the sale and transmission of natural gas and electricity,

gave the FERC new tools to ensure transparency in wholesale gas and electricity markets and to punish market manipulation, and took action to enhance investment in, and reliability of, the nation's electric transmission grid. Finally, the Act contains a variety of new tax incentives designed to encourage investment in energy facilities and the development of projects that Congress deems necessary to fulfill the goals of the Act.

There follows a summary of the major provisions of the Act. The complete text of the Act can be found at the following web address: <http://energy.senate.gov/public/_files/ConferenceReport0.pdf>.

ENERGY EFFICIENCY: The Act seeks to promote energy efficiency through creation of new federal programs, the production of energy efficient products, and through the use of renewable fuels and energy efficient products in public buildings.

- Authorizes the Secretary of the Department of Energy (DOE) to enter into agreements with industrial energy users to encourage them to reduce energy consumption by more than two and one-half percent annually, authorizes the Secretary of the Department of Transportation (DOT) and the heads of other federal agencies that regulate or oversee highways, other transportation facilities, federal, state, or local government buildings, or other public facilities to foster the use of recovered minerals, such as ground granulated blast furnace slag, coal combustion fly ash, and other waste byproducts, in their projects (§§ 106, 108); and amends the Uniform Time Act of 1966 to extend the period of daylight savings time by four weeks beginning on March 1, 2007. (§§ 106, 108, and 110).

- Provides funds to States to assist low-income families to meet their immediate energy needs and authorizes States to purchase renewable fuels for use in low-income households; requires States receiving federal assistance for State energy conservation plans to seek to improve energy efficiency by 25 percent by 2012, as compared to 1990 levels; and authorizes the DOE to grant funds to local governments, private, non-profit community development organizations, and Indian tribe economic development entities to improve energy efficiency and foster development of renewable and distributed energy sources. (§§ 121, 123, and 126).
- Encourages the manufacturing of energy efficient products and building materials by creating an Energy Star Program, a voluntary program of the DOE and the U.S. Environmental Protection Agency (EPA) to identify and promote energy-efficient products and buildings in order to reduce energy consumption, improve energy security, and reduce pollution. The Act also requires the DOE to educate homeowners and small businesses about the benefits of properly maintained HVAC units; adopts new requirements for (1) very large commercial package air conditioning and heating equipment and (2) commercial refrigerators, freezers, automatic ice makers, and clothes washers (§ 136); and requires the DOE, in consultation with the National Association of Regulatory Utility Commissioners, to study State and regional policies that promote cost-effective programs by regulated and unregulated utilities to reduce energy consumption. This study must be completed by August 9, 2006. (§§ 131, 132, 136, and 139).
- Authorizes the DOE to provide funds to public housing agencies for the installation of fixtures and fittings to improve energy efficiency, requires public housing agencies

to purchase Energy Star-compliant products in their normal procurement activities, and requires the Secretary of Housing and Urban Development to develop and implement a strategy to reduce utility expenses through energy efficient measures. (§§ 151, 152, and 154).

RENEWABLE ENERGY: The Act provides incentives to develop and use renewable energy resources, including geothermal, hydroelectric, and biomass resources.

- Amends the Energy Policy Act of 1992 to extend payments to certain qualified renewable energy facilities (including landfill gas, livestock gas and ocean resources owned by a State, a subdivision of a State, or a non-profit cooperative) used to generate electricity. (§ 202).
- Imposes a renewable energy requirement on the federal government by requiring the DOE to ensure that, to the extent economically feasible and technically practicable, the total amount of electric energy the federal government consumes during any fiscal year includes not less than three percent renewable energy in years 2007 through 2009; not less than five percent in years 2010 through 2012; and not less than seven and one-half percent in year 2013 and each year thereafter. (§ 203).
- Establishes a photovoltaic energy commercialization program for procuring and installing photovoltaic solar electric systems for electric production for use in new and existing public buildings. (§ 204).
- Establishes economic incentives for the use of renewable energy systems in dwelling units or small businesses. (§ 206).

- Creates grants to encourage rural and remote communities to increase energy efficiency, including a preference for renewable energy facilities. (§ 209).
- Establishes grants to improve the commercial value of forest biomass for electric energy, useful heat, transportation fuels, and other commercial purposes. (§ 210).
- Amends the Geothermal Steam Act of 1970 to encourage the use of geothermal resources. The Act, among other things, changes the leasing and lease procedures for geothermal resource purposes, as well as the royalty fee structure for use of geothermal resources on federal lands. (§§ 221-237).
- Amends Section 4(e) of the Federal Power Act (FPA), which governs the licensing of hydroelectric facilities and gives the Departments of Agriculture and the Interior the power to condition such licenses for facilities upon federal reservations, conditions which the FERC must accept. As a result of the Act, an applicant or other party to a licensing proceeding and subject to licensing conditions imposed by those Departments now may challenge a proposed condition in an expedited (90 days) trial-type hearing before the agency seeking the license condition. The Act also amends the provision of the FPA that governs the authority of the Secretaries of Commerce and the Interior to prescribe the installation of fish passage facilities at a licensed project to similarly give the applicant or other party to a licensing proceeding the right to challenge a proposed condition regarding fishways in an expedited trial-type hearing before the Department proposing the condition. The Act gives the Departments of the Interior, Commerce and Agriculture until early November 2006 to issue procedures to allow these expedited trial-type hearings. (§ 241).

- Amends Part I of the FPA by adding Section 33 that permits participants in hydro licensing proceeding to propose alternative conditions to those that may be prescribed under sections 4(e) or 18 by either the Secretary of Agriculture, Commerce, or the Interior, as appropriate under the two sections. The alternative condition must be accepted if it meets the standards set forth in Section 33. (§ 241)
- In an effort to increase electrical output at existing hydroelectric facilities, the Act establishes incentive payments for hydroelectric generating devices that (1) are owned or operated by a non-federal entity that generates hydroelectric energy for sale and (2) is added to an existing dam or conduit. The generating device does not qualify for the incentive payment if it necessitates the construction or enlargement of impoundment or diversion structures other than for repair or reconstruction. The incentive payments for any one facility are up to $750,000 per calendar year for up to 10 fiscal years. The Act also establishes an incentive payment program for capital improvements at hydro projects that are directly related to improving the efficiency of such facilities by at least 3 percent. The incentive payment is limited to the lesser of 10 percent of the costs of the capital improvement or $750,000 for the particular project. (§§ 242-243).
- Requires the DOE to publish a report by early August 2006 that contains a detailed inventory describing the available amount and characteristics of renewable energy resources within the United States as well as other information that would be useful in developing renewable energy resources. (§ 201).
- Requires various governmental agencies to perform studies to maximize the use of renewable energy resources. (§§ 931-948).

- Extends to December 31, 2007, the "placed in service" deadline for facilities to qualify for tax credits for electricity produced from certain renewable sources under Internal Revenue Code Section 45. This two-year extension applies to wind, closed-loop biomass, open-loop biomass, geothermal, small irrigation power, landfill gas, and trash combustion facilities. The deadline was not extended for solar facilities. (§ 1301).
- Expands the list of sources qualifying for Section 45 credits to include incremental hydropower, new units at existing trash combustion facilities, coke and coke gas facilities, and coal owned by Indian tribes. (§ 1301).
- Authorizes the issuance, before December 31, 2007, of $800 million of tax-credit bonds (*i.e.*, bonds that give tax credits to their holders instead of interest) to support renewable energy investments by municipal power authorities, rural cooperatives and others. (§ 1303).

OIL AND GAS: The Act provides production incentives for domestic oil and gas supplies and permanently authorizes the Strategic Petroleum Reserve. The Act expands the FERC's jurisdiction over the import and export of natural gas and the permitting of Liquified Natural Gas (LNG) facilities. The Act increases penalties under the Natural Gas Act (NGA) and Natural Gas Policy Act (NGPA) and gives the FERC additional tools to ensure market transparency and to deter market manipulation of the wholesale gas market.

- Amends the NGA to extend FERC jurisdiction over the importation and exportation of natural gas in foreign commerce (in addition to current jurisdiction over such activities in interstate commerce). (§ 311).
- Gives FERC exclusive jurisdiction over the siting, construction and operation of LNG import terminals. The Act designates the FERC as the lead agency for permitting LNG facilities, but requires the FERC to consult with affected states, local authorities and the Department of Defense on matters pertaining to the siting and characteristics of LNG terminals. Prohibits the FERC (until 2015) from denying an LNG terminal application solely on the ground that the proposed terminal would handle only the applicant's (or its affiliate's) LNG; likewise prohibits any directive to force a terminal operator to offer open access to the terminal. Requires the FERC to establish schedules for LNG permit application proceedings to ensure expeditious consideration of such applications and gives applicants rights to enforce the schedule in appellate court. Once built, states will have the right, under certain conditions, to perform safety inspections of LNG facilities. By early October 2005, the FERC must issue regulations establishing the pre-filing process it will follow under the National

Environmental Policy Act (NEPA) when reviewing applications for LNG facilities. (§ 311).

- To encourage the construction of gas storage facilities, the Act gives the FERC authority to approve market-based rates for gas storage and storage-related services associated with new storage facilities placed into service after August 8, 2005. The FERC may authorize market-based rates, even if the applicant cannot demonstrate a lack of market power, if the FERC finds that market-based rates will encourage the construction of new gas storage capacity. (§ 312).
- Vests the United States Courts of Appeals with original and exclusive jurisdiction over the review of an order or action of any Federal agency (other than the FERC) or a state agency issuing, conditioning, or denying any permit required under Federal law, other than the Coastal Zone Management Act, or delaying the issuance of such a permit, as related to a facility subject to section 3 or section 7 of the NGA. (§ 313).
- Increases criminal penalties under the NGA to up to $1 million from $5,000, and possible imprisonment from two to five years for violations of the NGA; and increases fines to up to $50,000 per day for violation of a rule or order issued pursuant to the NGA. Establishes civil penalties under the NGA of up to $1 million per day. The Act also increases criminal penalties under the NGPA to up to $1 million and five years imprisonment for violations of the NGPA, and increases fines to up to $50,000 per day for violations of a rule or order issued pursuant to the NGPA. The Act also increases civil penalties under the NGPA to up to $1 million. (§ 314).

- Expressly outlaws market manipulation and requires market transparency with regard to the purchase, sale and transportation of natural gas. The Act authorizes a court to preclude a person who has violated the market manipulation rules from serving as an officer or director of a natural gas company or from engaging in the purchase or sale of natural gas or jurisdictional transmission services. (§§ 315 and 318).
- Directs the FERC to issue any rules necessary to facilitate price transparency in gas sale and transportation markets. (§ 316).
- Authorizes the Strategic Petroleum Reserve (SPR) on a permanent basis; requires the DOE to fill the SPR to its authorized one billion barrel capacity; directs the DOE to take market conditions into account when acquiring oil for the SPR; and, in making siting decisions, to give special consideration to five specified sites. (§§ 331-333).
- Eliminates EPA authority under the Safe Drinking Water Act to regulate hydraulic fracturing operations in energy production activities. (§ 322).
- Establishes production incentives through royalty and competitive leasing provisions. (§§ 341-357).
- Requires the Department of the Interior (DOI) to review its procedures for making federal lands available for lease, with an eye toward expanding oil and gas production activities. (§§ 361-374).
- Establishes programs for federal-state cooperation on efforts to establish new refineries and add refinery capacity. (§§ 391-392).
- Accelerates depreciation deductions for new investments in qualified refinery property, half of which can be expensed and the balance of which will continue to be written off over 10 years. For existing refineries to qualify, the new equipment must

increase capacity by at least 5% or increase the throughput of certain qualified fuels by at least 25% on an average daily basis. (§ 1323).

- Accelerates depreciation deductions for new investments in natural gas distribution lines, which can now be written off over 15 years instead of 20. (§ 1325).
- Confirms that natural gas gathering lines are depreciable over seven years, rather than 15 years as the Internal Revenue Service (IRS) had unsuccessfully claimed in several appeals court cases. (§ 1326).
- Provides a safe harbor exception from the tax arbitrage rules for prepaid natural gas purchases by municipal utilities and certain other tax-exempt purchasers, which is expected to encourage such arrangements more than existing IRS regulations and rulings. (§ 1327).
- Permits two-year amortization of (domestic) geological and geophysical costs, a key cost in oil and gas exploration. (§ 1329).

ELECTRICITY: To ensure the reliable operation of the nation's bulk-power grid, the Act creates a reliability organization, provides incentives to the construction of new transmission facilities, and gives the FERC authority to order the construction of certain transmission facilities. The Act also repeals the Public Utility Holding Company Act of 1935 (PUHCA), amends major provisions of the Public Utilities Regulatory Policies Act of 1978 (PURPA), expands the FERC's merger review authority, increases civil and criminal penalties under the Federal Power Act (FPA) and gives the FERC new tools to ensure transparency in, and deter manipulation of, the wholesale electric market.

- Requires the creation of an Electric Reliability Organization (ERO) to oversee and ensure the reliability of the nation's high voltage bulk power grid. Within 180 days of enactment, the FERC must issue new rules establishing the criteria an ERO must meet, and thereafter approve one ERO to act as the reliability entity for the nation's grid. The ERO, subject to FERC approval, will develop and enforce rules to ensure that all users of the grid, as well as the owners and operators of the grid (including entities previously exempt from FERC jurisdiction), will act in a manner to ensure the reliable operation of the transmission grid. (§ 1211).
- Establishes a procedure under which the DOE may designate certain regions of the country as suffering from transmission congestion and thereby seek to have transmission facilities constructed in the region to alleviate the congestion. The Act also gives the FERC "backstop" authority to grant regulatory approval for the construction of transmission facilities in such designated regions if the FERC can make certain findings and if a state commission does not have the authority to do so,

does not exercise that authority within a certain time, or conditions the authority such that the transmission facility will not lessen congestion or is not economically feasible. The Act authorizes entities permitted by the FERC to build a transmission facility under this "backstop" authority to obtain a necessary right-of-way from a recalcitrant landowner by the exercise of eminent domain in a federal or state court. (§ 1221).

- Requires municipalities that own transmission facilities, and are otherwise exempt from FERC regulation, to offer non-discriminatory open access over their transmission facilities to others under certain conditions. (§ 1231).
- Requires the FERC to issue new rules providing rate incentives to transmission owners to build new transmission facilities to relieve congestion. (§ 1241).
- Repeals the PUHCA effective early February 2006. The repeal, among other things, removes geographic and business restrictions on holding company systems. However, the FERC is granted authority over certain recordkeeping requirements previously imposed on holding company systems under the PUHCA. The Act gives the FERC and, under certain instances state commissions, access to those records. The Act also grants to the FERC, at the election of a holding company system or an applicable state commission, authority to allocate costs of non-power goods and administrative and management services provided to a public utility by a service company in the same holding company system. (§§ 1261-1277).
- Amends the PURPA to change prospectively the obligations of utilities to sell power to, and to buy power from, qualifying small power production facilities and cogeneration facilities if these facilities have access to competitive markets. Also

eliminates the restriction on a utility owning more than 50 percent of a qualifying facility. (§§ 1251-1254).

- Authorizes the FERC to collect data to ensure market transparency with regard to wholesale electric power sales. Also the Act makes it unlawful for any person to knowingly provide false market information to the FERC. (§§ 1281-1283).
- Increases the penalties for violations of the FPA or of rules, orders or regulations of the FERC. Criminal penalties for violations of the FPA are increased to a maximum of $1 million from $5,000 and the maximum jail time to five years. Criminal penalties for violations of the FERC's rules, orders or regulations increase from $500 per day of violation to $25,000 per day of violation. The FERC's ability to impose civil penalties is increased to a maximum of $1 million from $10,000. Also, the Act expands the civil penalty provisions to cover violations of any provision of the FPA, and not just sections 211 through 214 as was previously the case. (§ 1284).
- Provides that a refund effective date for a FERC proceeding may commence upon the date a complaint is filed or a proceeding is instituted. Previously, if the FERC found that rates were not just and reasonable, it could not order refunds of the unjust rates collected during the first 60 days following the institution of the complaint or proceeding. (§ 1285).
- Makes clear that entities that are otherwise beyond the FERC's jurisdiction will be subject to refunds for any short-term sales (term of 31 days or less) they make in an organized market in which the rates for power sales are established by a FERC-approved tariff and the seller violates the tariff or FERC rules. However, such power

sellers are not subject to this refund liability if they sell less than 8 million megawatt hours of electricity per year or are an electric cooperative. (§ 1286).

- Limits the FERC's authority to regulate the transfer of jurisdictional assets (mergers, acquisitions, assignments) under the FPA to assets that have a value in excess of $10 million, increased from the previous $50,000 limit. However, the Act gives the FERC clear authority over transactions that involve only the transfer of a generating facility. The Act also amends the FPA to add that the FERC must consider, in addition to whether the transfer is consistent with the public interest, whether the transfer will result in cross-subsidization of a non-utility associate company or the pledge or encumbrance of utility assets for the benefit of any associate company in a holding company system. The Act requires the FERC to establish procedures for the expeditious consideration of Section 203 applications. The changes to the FERC's merger jurisdiction are to become effective in early February 2006. However, the changes will not apply to any application that was filed with FERC on or before August 8, 2005. (§ 1289).
- Accelerates tax depreciation deductions for new electrical transmission equipment, which now can be written off over 15 years instead of 20. (§ 1308).
- Accelerates (to 84 months) tax amortization of the cost of air pollution control facilities used in connection with an electric generation plant which is primarily coal-fired and which was not in operation before January 1, 1976. (§ 1309).
- Provides that tax losses of electric utilities in 2003, 2004 and 2005 may be carried back five years (rather than the usual two) to the extent of the utility's investment in

electric transmission property or pollution control equipment, thus generating tax refunds. (§ 1311).

COAL: The Act creates new programs to foster the development of clean coal technologies and power projects. The Act also amends certain restrictions on federal coal leases.

- Establishes a Clean Coal Power Initiative (CCPI), providing funding and loan guarantees for clean coal technology that promotes efficient, environment-friendly, and cost-competitive coal technologies. At least 70% of the funded projects must be related to coal gasification and the remainder may be used for other coal technologies. (§§ 401-402).
- Establishes targets for reduction of certain specified pollutants and energy efficiency goals for projects funded under the CCPI. (§ 402).
- Amends the Energy Policy Act of 1992 to create the Clean Air Coal Program. This provision is designed to increase use of coal in the interest of energy security, supply diversity, and economic competitiveness, by providing financial assistance to (1) projects that facilitate production of power using clean coal generating equipment that improve energy efficiency or environmental performance but are not yet cost-competitive and (2) existing projects that facilitate the use of existing coal-based generating plants by deploying advanced air pollution control equipment and processes. (§ 421).
- Amends the Minerals Leasing Act to increase the limit on certain leases from 160 acres to 960 acres and to allow the development of consolidated mining leases to

beyond 40 years if necessary to maximize recovery of coal deposits or in the interest of efficient development of the coal resource. (§§ 432-433).

- Provides three new investment tax credits for clean coal projects (integrated gasification combined cycle (IGCC) projects, other advanced coal-based projects that produce electricity; and qualified gasification projects which convert coal into a synthetic gas). These credits are only available, however, if the project is certified by the Secretary of the Treasury in consultation with the DOE, and there are caps on the amounts that can be certified under each category (a combined $1.65 billion). (§ 1307).

NUCLEAR MATTERS: The Act provides for the development and use of nuclear power, encourages the development of "next generation" nuclear generating facilities, and seeks to ensure the safe operation of nuclear facilities.

- Extends to December 31, 2025 the indemnification provisions of the Price-Anderson Act, which provides for public compensation in the event of a nuclear power reactor accident. The Act also increases compensation limits. (§ 602).
- Extends whistleblower protections for both DOE and NRC activities, including contractors, and provides for *de novo* review of whistleblower complaints in federal district court in the event of prolonged inaction. (§ 629).
- Establishes a loan/insurance program to allow the DOE to enter into "standby support contracts" that would, under certain circumstances, cover costs of delays in commencement of operations of certain new nuclear power plants. (§ 638).

- Establishes the "Next Generation Nuclear Plant Project" and designates the DOE Idaho National Laboratory as lead laboratory to research and develop a prototype plant that would generate electricity and hydrogen. (§§ 641-645).
- Allows for the continued export of highly enriched uranium for use in the production of medical isotopes that are used for medical diagnostic and therapeutic procedures or for research and development. The Act also allows the NRC to issue new rules if it finds need for limits on such exports. (§ 630).
- Prohibits export of certain nuclear materials and equipment to countries that sponsor terrorism. (§ 632).
- Directs the NRC to conduct security evaluations, including armed force exercises, at each licensed nuclear facility and to issues rules on "design basis threat" including terrorist risks. (§ 651).
- Expands the tax deduction for contributions to a qualified nuclear decommission fund under Internal Revenue Code Section 468A in several key respects, so that it now extends to unregulated merchant producers, to costs for pre-1984 facilities, and to costs in excess of limits specified in earlier private letter rulings. (§ 1310).
- Establishes a new production tax credit (1.8 cents/kwh for eight years) for power produced from certain advanced nuclear plants. (§ 1306).

VEHICLES AND FUELS: The Act encourages the use of alternative fuels in vehicles, development of hybrid vehicles, and automobile efficiency.

- Establishes a program to encourage domestic production and sales of efficient hybrid vehicles and advanced diesel vehicles. (§ 712).

- Establishes a pilot program providing grants to state and local governments or metropolitan transportation authorities to acquire alternative fueled vehicles or fuel cell vehicles, including passenger vehicles, motorized two-wheel bicycles or other vehicles used for law enforcement personnel, as well as buses, delivery vehicles, and ground support vehicles at public airports. In addition to covering vehicle acquisition costs, the grants will cover the installation or acquisition of infrastructure necessary to directly support such alternative fuel cell vehicles or hybrid vehicles as well as the operation and maintenance of such vehicles. (§ 721).
- Creates a transit bus demonstration program to make competitive, merit-based awards for five-year projects to demonstrate not more than 25 fuel cell transit buses in five geographically dispersed localities. (§ 731).
- Establishes a "clean" school bus program that awards grants for the replacement and/or retrofitting of school buses so that the buses use alternative fuels that emit less air pollution. (§ 741).
- Establishes a grant program under which state agencies or local governments retrofit and modernize their diesel trucks that operate at ports or undertake other major hauling operations. (§ 742).
- Establishes a program for entering into cooperative agreements for the development of fuel cell powered school buses. (§ 743).

ETHANOL AND MOTOR FUELS: These provisions promote the use of ethanol in motor fuels.

- Directs the Administrator of the EPA, within one year of the date of enactment, to promulgate regulations to ensure that gasoline sold in the contiguous United States, on an average annual basis, contains the applicable volume of renewable fuel. The applicable volume is determined by the schedule set forth in the statute for gasoline sold or introduced from 2006 through 2012, starting with 4.0 billion gallons and rising to 7.5 billion gallons. Thereafter, the EPA, in coordination with the DOE and the Secretary of Agriculture, shall determine the appropriate volume, which must include a minimum quantity of fuel derived from cellulosic biomass. (§ 1501).
- Addresses claims and legal actions associated with the production and use of methyl tertiary butyl ether (MTBE) by providing that any such actions filed after August 8, 2005 related to allegations involving actual or threatened contamination of MBTE may be removed to the appropriate United States district court. (§§ 1502-1503).
- Eliminates the oxygen content requirement for reformulated gasoline. The provision also amends the Clean Air Act by adding a provision governing the maintenance of toxic air pollutant emissions reductions for reformulated gasoline. (§ 1504).
- Directs the EPA to conduct studies or analyses concerning, among other things, (1) the feasibility of using certain designated substitutes for MTBE; (2) changes in emissions of air pollutants and air quality due to the use of motor fuel and fuel additives; and (3) demand for renewable fuels in the motor vehicle fuels market. The EPA must conduct a study of federal, state, and local requirements concerning motor vehicle fuel, such as requirements relating to reformulated gasoline, volatility,

oxygenated fuel, and diesel fuel and other requirements that vary from state to state. Based on that study, the EPA and the DOE must report to Congress with recommendations for both legislative and administrative actions to improve air quality, reduce costs to consumers and producers, and increase supply liquidity. (§§ 1505, 1506, 1508 and 1509).

- Authorizes the DOE to establish a program for providing guarantees of loans by private institutions for the construction of facilities for the processing and conversion of municipal solid waste and cellulosic biomass into fuel ethanol and other commercial byproducts; amends the Clean Air Act to accommodate under that statute the construction of demonstration projects; authorizes the DOE to provide grants to merchant producers of cellulosic biomass ethanol, waste-derived ethanol, and approved renewable fuels to assist the producers in building eligible facilities for the production of ethanol or approved renewable fuels; and provides for loan guarantees for demonstration projects designed to test the feasibility and viability of producing ethanol using sugarcane, sugarcane bagasse, and other sugarcane byproducts as feedstock. (§§ 1510, 1511, 1512, and 1516).
- Directs the EPA and the Secretary of Agriculture, along with the previously established Biomass Research and Development Technical Advisory Committee, to set up a program to demonstrate advanced technologies for the production of alternative transportation fuels. (§ 514).
- Enacts the Underground Storage Tank Compliance Act to provide for the inspection of underground storage tanks, and establishes guidelines for the training of those operating and maintaining such storage facilities. (§§ 1521-1530).

HYDROGEN: These provisions are deigned to foster hydrogen production, storage, distribution and use.

- Requires the DOE, in consultation with other federal agencies and the private sector, to implement a research and development program relating to the production, purification, distribution, storage, and use of hydrogen energy, fuel cells, and related infrastructure, with particular emphasis on vehicles and electric power for critical consumer and commercial applications. The objectives are to (1) enable a commitment by automobile manufacturers to offer safe, affordable, and technically viable hydrogen fuel cell vehicles in the mass consumer market by 2015, and (2) allow the production, delivery, and consumer acceptance of model year 2020 hydrogen fuel cell and other hydrogen-powered vehicles with substantially higher fuel economy and substantially less pollution than model year 2005 light duty vehicles. (§ 805).
- Requires the President to form an interagency task force chaired by the DOE to develop safe, economical, and environmentally sound fuel infrastructure for hydrogen and hydrogen-carrier fuels. (§ 806).
- Requires the DOE to form the Hydrogen Technical and Fuel Cell Advisory Committee to advise and make recommendations to the DOE on hydrogen programs. (§ 807).
- Requires the DOE to develop a detailed plan for developing and promoting solar and wind energy technologies. (§ 812).

RESEARCH AND DEVELOPMENT: The Act requires various agencies to research, among other things, increased efficiency, diversity of energy supply,

means to decrease dependence on foreign supply, improved energy security, and environmental impacts of energy-related activities.

- Requires studies of, among other things, methods to improve energy efficiency in vehicles (§ 911), development of solid-state lighting technologies (§ 912), secondary uses of batteries used in electric vehicles (§ 915), efficiency and reliability of distributed energy resources and systems (§§ 917-925), assessment of the potential of federal lands as feedstock resources for biomass fuels (§§ 941-948), operation and maintenance of nuclear energy research infrastructure for FY 2007-FY 2009, including for fuel recycling, disposal of radioactive sources and educational fellowships (§§ 951-957), exploration, production, reservoir life extension, emissions reduction, transportation and distribution infrastructure, maximizing production of marginal wells, gas turbine efficiency, conservation, alternative fuels, and related environmental research for oil and gas (§§ 961-968), and for research and support for facilities, education and analysis of high energy physics, nuclear physics, biological and environmental science, basic energy sciences, advanced computing, and fusion energy. (§ 971-980). Also, the DOE is to construct a rare isotope accelerator, which is funded up to $1.1 billion (§ 981), and to establish a R&D program for ultra-deepwater and unconventional resource exploration and production (§§ 999A - 999H).
- The Act mandates that 20 percent of the research costs and 50 percent of the development costs for many of these initiatives come from non-federal sources. (§ 988).

NATIVE AMERICAN ENERGY: The Act creates a new office to oversee and promote Indian tribal energy development and efficiency.

- Creates the Indian Tribal Energy Development and Self-Determination Act of 2005.
- Establishes an Office of Indian Energy within the DOE, charged with promoting energy development by Indian tribes, reduction in tribes' energy costs and enhancement and expansion of tribes' energy infrastructure and services. The office will provide support for development of energy resources on tribal land, including oil, natural gas, clean coal, wind, solar, geothermal, biomass and hydropower. (§ 502).

DEPARTMENT OF ENERGY MANAGEMENT: The Act requires certain changes to management of the DOE to fulfill goals of the Act.

- Establishes within the DOE a Technology Transfer Coordinator, a Technology Transfer Working Group, and a Technology Commercialization Fund (0.9 % of annual budget for R&D) to foster sharing of technology, and requires the DOE to report their findings to Congress by early February 2006 and each year thereafter. (§ 1001).
- Establishes a Technology Infrastructure Program to stimulate development of technology clusters and promote sharing of technological expertise. Also funds technology projects that meet the criteria to be established and further the Department's mission and requires the DOE to report to Congress by July 1, 2008 whether the program should be continued. The program is funded with $10 million/year through FY 2008. (§ 1002).
- Establishes the Under Secretary of Science (appointed by the President with Senate approval) to serve as science and technology advisor to the Secretary of Energy, to

monitor R&D programs to ensure no duplication or gaps, to advise the Secretary of Energy on the management of labs, education and training activities, and a long-term R&D plan. The Act also creates an Assistant Secretary for Nuclear Energy. (§ 1006).

PERSONNEL AND TRAINING: The Act requires the DOE to monitor, and develop guidelines for, training to support energy technologies and systems.

- The DOE, with the Department of Labor (DOL), is to monitor trends in the workforce of skilled technical personnel that support energy technology industries, report to Congress on such trends and report any predicted shortage in skilled personnel. (§ 1101).
- The DOE, with the DOL and in conjunction with electric industry and employee representatives, must develop model personnel training guidelines to support the reliability and safety of non-nuclear electric system. These guidelines must include requirements for certification (and recertification), competency, and assessment for personnel in construction, operations, inspections and maintenance for transmission, generation and distribution systems. (§ 1103).

CLIMATE CHANGE: The Act provides for the creation of a national strategy to promote technologies to reduce greenhouse gasses.

- Allows for the establishment within the DOE of the Climate Change Technology Advisory Committee that must submit to the President within 18 of months of

enactment a national strategy to promote the deployment and commercialization of greenhouse gas intensity reducing technologies. (§ 1610).

INCENTIVES FOR INNOVATIVE TECHNOLOGIES

- Provides financial incentives, mainly in the form of guarantees, that the DOE may offer for projects that (1) avoid, reduce, or sequester air pollutants or anthropogenic emissions of greenhouse gases and (2) employ new or significantly improved technologies. Guarantees may also be offered for integrated gasification combined cycle projects meeting certain emissions levels. (§§ 1701-1704).

STUDIES: The Act requires a variety of studies regarding, among other things, oil and gas production and use, energy efficiency, new fuel technologies, and the transition to new fuel sources.

- Requires studies of: petroleum and natural gas storage capacity and operational inventory levels (§ 1801); an examination of whether the goals of energy efficiency are best served by efficiencies at the point of consumption or through the full fuel cycle (§ 1802); the effect on energy conservation through the possible widespread adoption of telecommuting by federal employees (§ 1803); oil bypass filtration technology (§ 1805); and integrated thermal systems (§ 1806); and requires that the DOE submit an annual report on the status of energy export development in Latin America and efforts by the federal government to promote energy integration with that region. (§ 1807).

- Also requires studies of: low-volume natural gas reservoirs (§ 1808); the effect of coalbed natural gas production on surface and ground water resources, including aquifers (§ 1811); the liquid and other fuel backup capability at gas-fired power generation and industrial facilities (§ 1812); rights-of-way on tribal lands (§ 1813); the effect of policies or procedures of a contractor operating a National Laboratory or research facility that create disincentives to the temporary or permanent transfer of scientific and technical personnel among such facilities (§ 1814); the benefits of using mobile transformers and substations for rapid restoration of electrical service during blackouts (§ 1816); the potential benefits of distributed generation and any rate-related issues that may impede or discourage the expansion of co-generation and small power production facilities (§ 1817); evaluation of hydrogen participation and the likely effects of a transition to a hydrogen economy on overall employment in the United States (§§ 1819 and 1820); best management practices for research, development, and demonstration programs (§ 1821); fuel cell technologies that provide a roadmap for the development of such technologies and the transition from petroleum to hydrogen in a significant percentage of vehicles sold by 2020 (§ 1825); the economic effects that may arise from increased use of passive solar energy (§ 1826); the implications on energy use and efficiency of land development patterns in the United States (§ 1827); the risks or benefits presented by cumulative impacts of offshore liquefied natural gas facilities reasonably assumed to be constructed in an area of the Gulf of Mexico using the open-rack vaporization system (§ 1828); the availability, short-term and long-term, of skilled workers to meet the energy and mineral security requirements of the United States (§ 1830); the effects of certain

provisions of the Energy Policy Act of 1992 with regard to alternative fuels for vehicles (§ 1831); the benefits of economic dispatch as used by electric utilities and possible revisions to those procedures (§ 1832); the energy requirements of the People's Republic of China and the implications of such growth on the political, strategic, economic, or national security interests of the United States (§ 1837); and the energy and environmental benefits of re-refining used lubricating oil (§ 1838).

- Directs the Federal Trade Commission to investigate whether the price of gasoline is being artificially manipulated by reductions in refinery capacity or by any other form of market manipulation or price gouging practices (§ 1809). The Act also requires the FERC to: periodically to report to Congress on the status of construction of the Alaska natural gas pipeline (§ 1810); provide a report on the status of refunds of overcharges from the 2000-2001 electricity crises in California and to conclude those proceedings as soon as possible (§ 1824); and, with the DOE, report on the establishment of a system to make available to all transmission system owners and Regional Transmission Organizations within the Eastern and Western Interconnections real-time information on the functional status of all transmission lines within such Interconnections. (§ 1839).
- Directs the DOE to conduct a study of the potential of developing wind, solar, and ocean energy on federal lands (§ 1833); the potential of increasing electric power production capability at federally owned or operated water regulation, storage, and conveyance facilities (§ 1834); the current policies and practices with respect to management of federal subsurface oil and gas development activities and their effects on privately owned surface land (§ 1835); federal and state laws that might conflict

relating to the Powder River Basins in Wyoming and Montana between the development of federal coal and the development of federal and non-federal coalbed methane (§ 1836); and the status of potential hydropower facilities included in water surface storage studies for projects that have not been completed or authorized for construction. (§ 1840).

MISCELLANEOUS

- Allows a state to provide tax credits with respect to the production in the state of electricity from coal mined in the state, subject to certain environmental considerations and other limitations, and provides that such a credit will be considered a reasonable regulation of commerce by the state and not considered to be an undue burden on interstate commerce or to otherwise impair, restrain, or discriminate against interstate commerce. (§ 1402).
- Establishes, under the auspices of the DOE, a program on oxygen-fuel systems that allows for the renovation of at least one existing large unit (100 MW or more) and one existing small unit (10-50 MW range), and the construction of one new large unit and one new small unit. The systems must benefit from the efficient use of oil, gas, coal, and biomass combustion generation from using substantially pure oxygen, with high flame temperatures and the exclusion of air from the boiler, in industrial or electric utility steam generation units. (§ 1407).
- Establishes the United States Commission on North American Energy Freedom to make recommendations for a coordinated and comprehensive North American energy

policy that will achieve energy self-sufficiency by 2025 within Canada, Mexico, and the United States. (§§ 1421 and 1424).