

SUMMARY OF NATIONAL ENERGY POLICY ACHIEVEMENTS

TRANSFORMING ENERGY TECHNOLOGY INITIATIVES

- **Hydrogen Technology:** In February 2003, you launched the Hydrogen Fuel Initiative to develop commercially viable hydrogen-powered fuel cells with no pollution or greenhouse gases. Combined with the FreedomCAR initiative, \$1.7 billion has been proposed to develop hydrogen-powered fuel cells, hydrogen infrastructure and advanced automotive technologies.

- **Carbon Sequestration Technologies:** DOE launched FutureGen, a \$1 billion demonstration project, in partnership with private industry, to develop the world's first coal-based, zero-emissions electricity and hydrogen power plant. The U.S. created the Carbon Sequestration Leadership Forum to work with other countries to develop cutting edge pollution-control and carbon-sequestration technologies.

- **Fusion Energy Technology:** In January 2003, the U.S. joined ITER, to study how to produce useable energy from nuclear fusion and the feasibility of commercial fusion energy systems.

- **Generation IV Nuclear Energy Systems:** The U.S. has led the creation of the Generation IV International Forum of leading nuclear countries, to develop next-generation nuclear energy systems. The Forum has agreed to pursue six advanced designs that reduce nuclear waste and the risk of proliferation, and significantly increase safety.

- **Advanced Fuel Cycle Initiative:** DOE launched research on advanced, proliferation-resistant nuclear fuel cycles, including technologies that would extend the useful life of the Yucca Mountain repository and dramatically reduce the time during which nuclear waste remains toxic.

- **Bioenergy:** As part of a three-year program, DOE and its industry partner Genencor International, Inc., have succeeded in making a 10-fold improvement in the economics of breaking down biomass and complex carbohydrates into fermentable sugars. These sugars are the raw materials necessary for future biorefineries that will produce fuels, chemicals, and other bioproducts like plastics.

- **Methane Hydrates Well:** Called "Hot Ice," the well will extract core samples of Alaska's hydrate resource, to gain a better understanding of hydrates and of how to extract natural gas from them. Hydrates could dramatically alter the natural gas supply. On the North Slope alone, the hydrate resource has been estimated at 590 trillion cubic feet – many times the 100 trillion to 150 trillion cubic feet of gas thought to exist on the North Slope in more conventional gas-bearing formations.

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ACTIONS TO ENABLE AND ACCELERATE OUR TRANSITION TO MORE ADVANCED ENERGY SYSTEMS

Enhancing Domestic Energy Supplies

- **Effort to develop a permanent nuclear repository:** Congress approved your recommendation on Yucca Mountain and you signed House Joint Resolution 87 to advance the process of developing the nation's first permanent nuclear repository. The Nuclear Regulatory Commission is currently undertaking an independent site review.
- **Energy Policy and Conservation Act:** A January 2003 DOE/Interior study, requested by the Congress in a provision of the 2000 Energy Policy and Conservation Act (EPCA), assessed five Rocky Mountain basins with the most significant amounts of oil and gas under onshore public lands. It links surface access data on public lands to the underground resources, providing a new tool to inform policy decisions regarding land access.
- **Nuclear Power 2010:** DOE has developed a roadmap to deploy new, Generation III nuclear power plants in the United States by the end of the decade, utilizing the Nuclear Regulatory Commission's Early Site Permit process at three utility-owned sites.
- **Offshore Oil & Gas:** A proposed rule was published in March 2003 that would extend royalty relief to natural gas from deep formations in shallow water of the Gulf of Mexico, for leases issued prior to 2001.
- **Renewable Energy Programs:** Through public-private partnership DOE is mobilizing our nation's resources in developing affordable and reliable energy technologies.
- **FERC's LNG permit streamlining:** FERC's December 2002 preliminary decision to approve new LNG terminal permits without requiring open access tariffs or Commission-approved cost-based rates, signaling a new policy toward permitting LNG facilities in competitive markets. This will result in faster siting and construction of LNG terminals.
- **Clean Coal Power Initiative:** Eight clean coal projects have been selected to use advanced technology to utilize the energy potential of waste coal piles.

Efficiency & Conservation: Decreasing Demand & Developing Bridging Technologies

- **Increasing Energy Efficiency:** DOE initiated various programs and incentives to increase the use of energy efficient and renewable technologies including combined heat and power systems and Zero Energy Building technologies.
- **Increased Funding for Weatherization:** Your 2004 Budget requests an increase in funding for the Weatherization Assistance Program which enables low-income families to reduce their energy bills by making their homes more energy efficient.
- **Corporate Average Fuel Economy (CAFE):** On April 1, 2003, the National Highway Traffic Safety Administration (NHTSA) issued a Final Rule increasing CAFE standards for light trucks (pickups, vans and sport utility vehicles). The new standards result in a savings of approximately 3.6 billion gallons of gasoline over the lifetime of these trucks.

Increasing Energy Security and Supply Diversification

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- ***SPR reaches record level:*** Oil deliveries to the SPR, through the federal oil royalty program, increased the SPR inventory to 601 million barrels, its largest volume ever.
- ***Advances in North American energy integration:*** The North American Energy Working Group issued a joint assessment of North American energy resources, published a joint study on electricity trade, and harmonized energy efficiency requirements.
- ***Energy cooperation with Russia:*** In May 2002, you and President Putin launched the Energy Working Group, which has met three times and focuses on oil markets, investment opportunities and advanced energy technologies. The U.S. and Russia co-hosted a Commercial Energy Summit to promote private sector development of Russia's energy sector, and plan a second summit this fall.
- ***Effort to strengthen dialogue between producing and consuming countries:*** The U.S. stepped up participation in the International Energy Forum (IEF), a multilateral effort to enhance relationships between oil producing and consuming nations. DOE has pledged \$500,000 to support the establishment of a coordinating body.
- ***Western Hemisphere Energy Cooperation:*** DOE has supported the creation of a hemispheric energy center at Florida International University to strengthen cooperation on policy, commercial, technical, infrastructure, and regulatory issues and enhance U.S. access to oil and natural gas resources in the region.
- ***US-Africa Energy Ministerial:*** In June 2002, DOE organized the 3rd US-Africa Energy Ministerial in Morocco which included approximately 40 African countries, and focused on energy security and economic challenges and strategies to protect against supply disruptions, reduce oil demand growth, promote natural gas development, and deploy clean energy technologies.
- ***Asia Pacific Economic Cooperation:*** APEC Leaders and Ministers endorsed the continued development of APEC Energy Security Initiative, which works to improve oil market data transparency and information exchange on options to address oil market disruptions.
- ***Oil and Gas Cooperation in India and China:*** DOE organized activities in India and China to stimulate reforms in the energy sector and promote private sector investment.
- ***Arab States Initiative:*** DOE organized various activities to enhance energy relationships with Saudi Arabia, Kuwait, Algeria, Qatar, and the United Arab Emirates.
- ***WSSD:*** The U.S. launched a program to increase access to affordable, reliable, clean, and efficient energy services through public-private partnerships at the U.N. World Summit on Sustainable Development in Johannesburg in August 2002.
- ***CETE:*** An interagency team completed the five-year plan for the Clean Energy Technology Export Initiative, a multi-technology partnership between the U.S. government and the private sector to facilitate the export of clean and efficient energy technologies.

Integrating Energy and Environmental Interests

- ***Clear Skies:*** Your administration worked with Congress to propose legislation to establish a flexible, market-based program to significantly reduce and cap emissions of sulfur dioxide, nitrogen oxide, and mercury from electric power generators.
- ***New Source Review:*** Rules were proposed and finalized to provide greater regulatory certainty for industry in order to encourage adequate refining and energy production capability.

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- ***Climate Change Technology Program:*** A program was developed to focus multi-agency R&D activities more effectively on your climate change goals, near- and long-term.
- ***Climate VISION:*** Your Administration launched a voluntary, public-private partnership to pursue cost-effective initiatives that will reduce the projected growth in America's greenhouse gas emissions in response to your national goal to reduce GHG intensity 18% by 2012.
- ***Section 1605(b):*** DOE is leading an interagency effort to revise our Voluntary Greenhouse Gas Reporting Program to improve how we measure and keep track of efforts undertaken to reduce greenhouse gas emissions.
- ***International Climate Cooperation:*** The U.S. has initiated action-oriented, climate change dialogues with more than 14 nations and regional entities, which together represent more than 75% of the world's greenhouse gas emissions.
- ***New Office of National Energy Policy:*** DOE established a new office to assist in coordinating and communicating interagency efforts to implement further the NEP recommendations and objectives.

Modernizing Energy Infrastructure

- ***Progress in removing Path 15 bottleneck in California:*** The California Independent System Operator (ISO) accepted the Path 15 upgrade proposal submitted by DOE to resolve the bottleneck and help ensure more reliable power in California.
- ***New Electricity Transmission and Distribution Office:*** DOE established a dedicated office to manage transmission and distribution research and development efforts and increase the reliability and efficiency of the transmission system.
- ***Alaskan Gas Pipeline Task Force:*** An interagency task force was created in the summer of 2001 in order to expedite the construction of a pipeline to bring Alaskan natural gas to the lower 48 market. It determined that administrative actions were sufficient to streamline the permitting process known as ANGTA.
- ***Distributed Energy and Electricity Reliability Program:*** DOE is developing advanced transmission and distribution infrastructure technologies that improve the efficiency of the U.S. grid system and develop next generation clean and efficient distributed energy technologies.
- ***Pipeline Safety:*** In December 2002, H.R. 3609, "Pipeline Safety Improvement Act of 2002," was signed into law and interagency pipeline R&D strategy is under development.

Legislative Actions to Bolster Domestic Energy Supplies and Efficiency

- ***Renewable and efficiency investments:*** Both the House and Senate energy bills include significant new incentives for solar energy, hybrid and fuel cell vehicles, landfill methane and other efficiency and renewable energy investments. Congress has recently extended existing tax incentives for clean coal technology, electricity produced from wind and biomass, and the gasoline blended with ethanol produced from corn or other biomass.
- ***Nuclear power:*** Pending energy legislation will extend the Price-Anderson Act, which limits the financial risks faced by nuclear power plant operators, and will provide authority for other Federal initiatives to ensure that the contribution of nuclear energy to the Nation's electric power requirements is maintained or increased.

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- ***Oil and Natural Gas:*** H.R. 6 would provide for the opening of a small portion of the Arctic National Wildlife Refuge (ANWR) to environmentally responsible oil and gas exploration and development, and would expedite federal permitting of a commercially viable Alaska natural gas pipeline. The energy legislation would also support the Administration's efforts to increase production on the Outer Continental Shelf, Federal onshore lands, and Indian lands.
- ***Electric Sector Reliability and Regulatory Reform:*** Pending energy legislation will modernize the Nation's outdated electricity laws and allow consumers to benefit from lower-cost and more reliable electricity supply.
- ***Increasing Equipment and Product Efficiency:*** Both the House and Senate bills would expand the coverage of existing product efficiency programs to new types of equipment used in residences and commercial buildings. In some cases, new efficiency standards would be specified, while for other products voluntary improvements would be encouraged.

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