



# **Energy Security: A Key Requirement for Sustainable Development**

## **Perspective and Action Plan**



### **Session One: Maintaining Energy Security**

**WSSD Side Event  
Energy for Sustainable Development  
IEA/UNEP/Eskom**

**Robert Card  
Under Secretary  
US Department of Energy  
August 30, 2002**



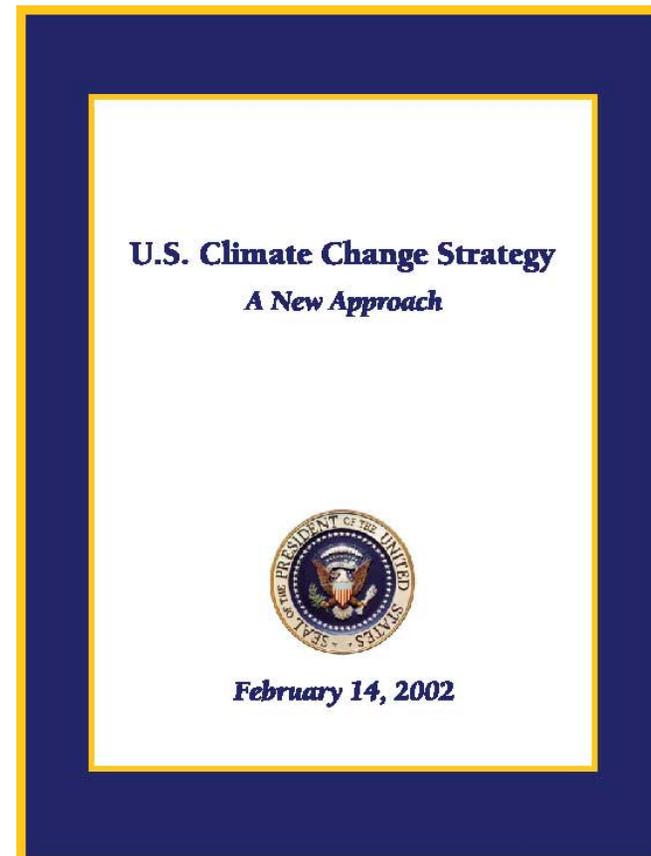
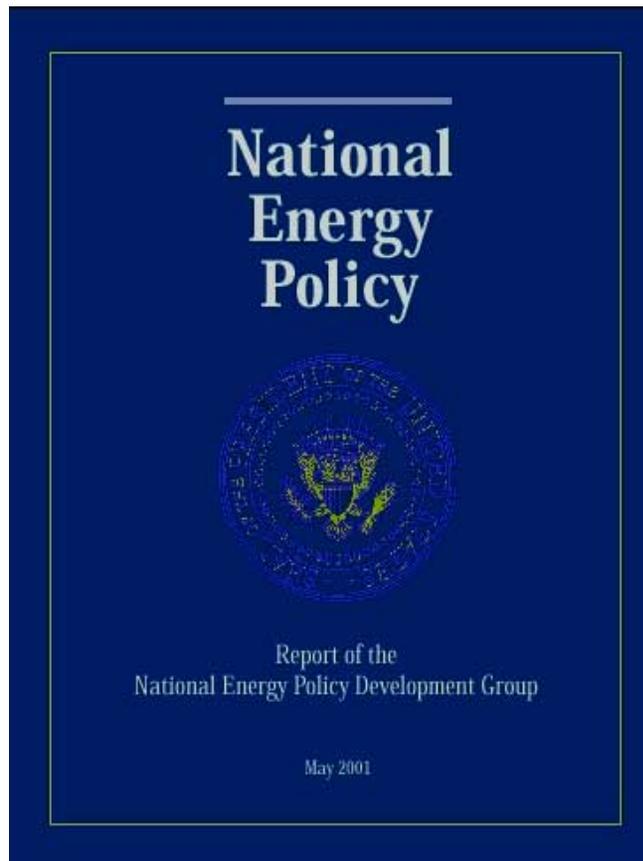
## **Energy Security is a Key Requirement for Sustainable Development**

- Energy supports economic health which, in turn, funds conservation, efficiency and environmental improvements for sustainable development
- Energy provides the basis for increasing the world's health, environment and standard of living
- Energy needs will grow much faster in the developing economies
- To meet energy security requirements, energy inputs required to fuel economic growth and the environmental impact of energy production must be reduced





# President Bush's Policy Framework Secures Energy, Sustains Development, Protects Environment





## **Elements of the US Energy Action Plan for Energy Security and a Sustainable Future**

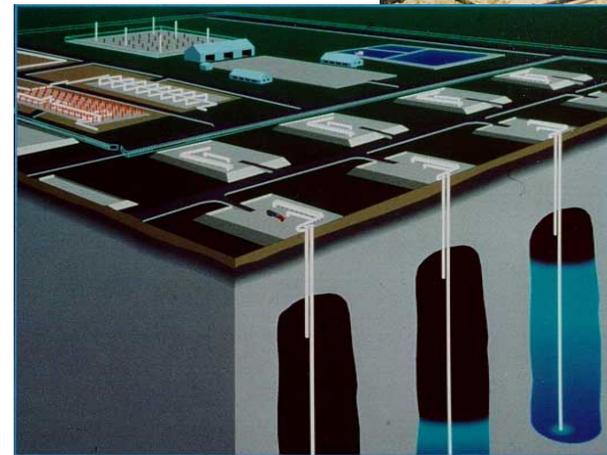
- Assure short term security by maximizing reserves
- Improve energy efficiency/reduce energy intensity
- Improve fuel and source diversity
- Fulfill the President's commitment to reduce greenhouse gas emissions
- Develop long term options for sustainable energy
- Develop and implement international partnerships and agreements – International Clean Energy Initiative



## US ENERGY ACTION PLAN

# Assure Short Term Security by Maximizing Reserves

- Fill strategic reserve to full capacity of 700 million barrels
- Under IEA umbrella working to bolster international capabilities
  - 90-day reserves
  - Coordinated disruption response
  - Non-member cooperative relationships





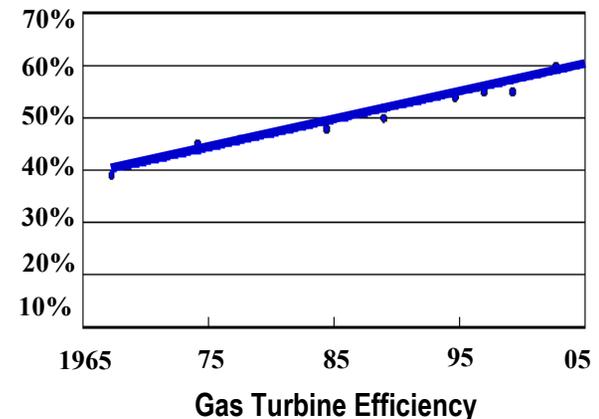
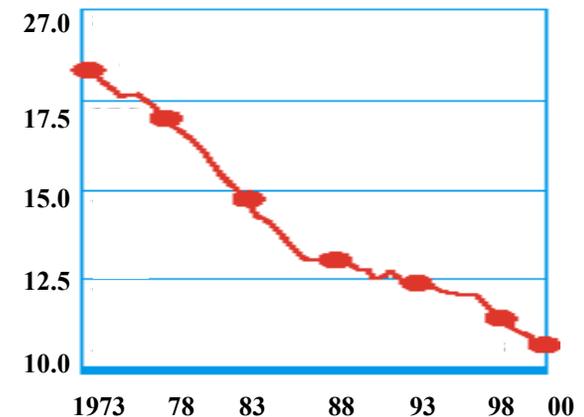
## US ENERGY ACTION PLAN

# Improve Energy Efficiency/Reduce Energy Intensity

- Reduce energy use -- examples
  - Wholesale and retail markets – transparency, cost allocations and price signals
  - Refocus research budget
  - Increase weatherization budget
  - Improve appliance/energy standards
  - Expand labeling and branding program
- Improve efficiency of energy production, conversion and delivery
  - Gains across the board in all energy sectors

Energy Consumption per Dollar of Real GDP

(Thousands of Btus)

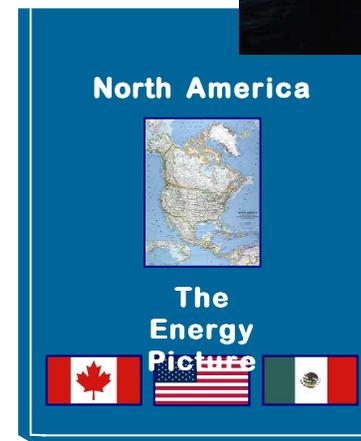




## US ENERGY ACTION PLAN

# Improve Fuel and Source Diversity

- Grow renewables
- Expand nuclear power
- Shore-up domestic supply
- Improve transmission and transportation infrastructure
- Integrate North American supply
- Diversify international supply





## **US ENERGY ACTION PLAN**

# **Fulfill the President's Commitment to Reduce Greenhouse Gas Emissions**

- Integrate environment and energy
- Increased research commitments to carbon sequestration and emissions reduction enabling the clean use of fossil energy
- Increased nuclear -- our largest source of emissions-free energy
- Increased renewables and energy efficiency -- resources of increasing importance



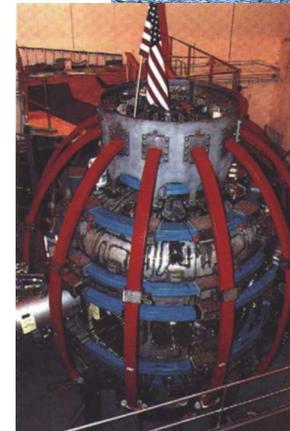
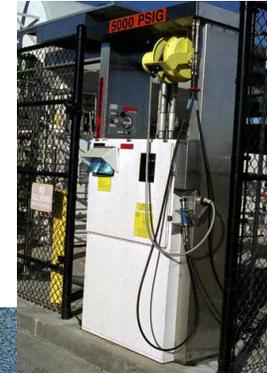


## US ENERGY ACTION PLAN

# Develop Long Term Options for Secure Sustainable Energy

- Hydrogen
  - Clean transportation fuel of the future
  - Produced from emissions-free nuclear, renewables, or emissions-trapped fossil
- Fusion
  - The US is one of the world's largest supporters of fusion research
  - Considering joining the ITER consortium
- Emissions-trapped fossil
  - Work with IEA
- Generation IV nuclear

Hydrogen  
Fueling Station





## US ENERGY ACTION PLAN

# Develop and Implement International Partnerships and Agreements

- Strengthen bilateral and multilateral relationships
- Prevent and effectively respond to supply disruptions
- Integrate and improve connectivity of regional energy systems
- Improve producing and consuming countries relationships
- Support development of transparent, open, fair, and competitive markets
- Clean Energy Initiative -- powering sustainable development



## North America



## Africa



## Central Asia



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## **INTERNATIONAL CLEAN ENERGY INITIATIVE**

# **Sustainable Development Partnerships with Developing Economies**

- Three performance-based, market-oriented, opportunities
  - 1 Global Village for Energy Development
    - New access for 150 million people
    - US Agency for International Development
  - Energy Efficiency for Sustainable Development
    - 20% energy intensity reduction, 20 countries
    - US Department of Energy
  - Healthy Homes and Communities for Children
    - Reduce the 3 million deaths attributable to indoor pollution
    - US Environmental Protection Agency



## Australian-US Expertise to Develop these Markets

- Peer relationship exchanges
  - Develop public leadership for stable markets
  - Experienced local-level US expertise in establishing fundamental market standards
- Local supplier-financier market equity teams
  - Equity development for entrepreneurs
  - Loan development for consumers





## Self-Sustaining National Markets

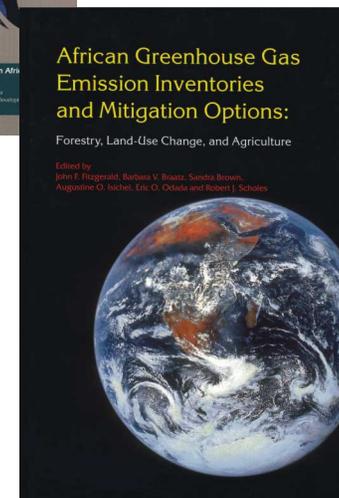
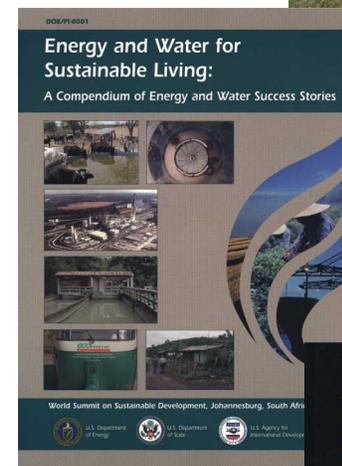
- Unleash the creativity of the private market
  - Couple public leadership and supplier-financier teams with parallel private sector firms
  - Develop successful local market level business models
  - Nurture consumer knowledge and sophistication
- Parallel national ministerial level policy development assistance
  - Replicate local-level successes nationwide
  - Develop self-sustaining nationwide markets for consumers, entrepreneurs, and financing





## Approach Builds on Previous Successes

- US Country Study Program
- International Clean Cities Transportation Program
- India – capacity building
- Morocco – renewable energy plan
- Cooperative Labeling and Appliance Standards Program
- Ghana rural electrification
- Botswana / Senegal clean coal for eco-tourism development





## Approach Builds on Previous Successes (cont.)

- US State and Local Government examples
  - Wisconsin/Brazil – biofuels
  - Hawaii/Philippines – energy efficiency technology
  - Southern States/Thailand – sustainable industry development
  - Southern States/Brazil – clean coal power development

