



U.S. DEPARTMENT OF  
**ENERGY**

## **Office of Energy Efficiency and Renewable Energy (EERE)**

Energy Efficiency and Renewable Energy Overview and Direction  
U.S. Department of Energy

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Biomass 2009: Fueling Our Future  
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# New Administration Clean Energy Goals



“Double energy from clean, renewable sources like wind power or solar power and 60 billion gallons of advanced biofuels.”

“Help create five million new jobs by strategically investing \$150 billion over the next ten years to catalyze private efforts to build a clean energy future.”

“Put 1 million Plug-In Hybrid cars -- cars that can get up to 150 miles per gallon -- on the road by 2015, cars that we will work to make sure are built here in America.”

“Implement a market-based cap-and-trade program to reduce greenhouse gas emissions 80 percent by 2050.”

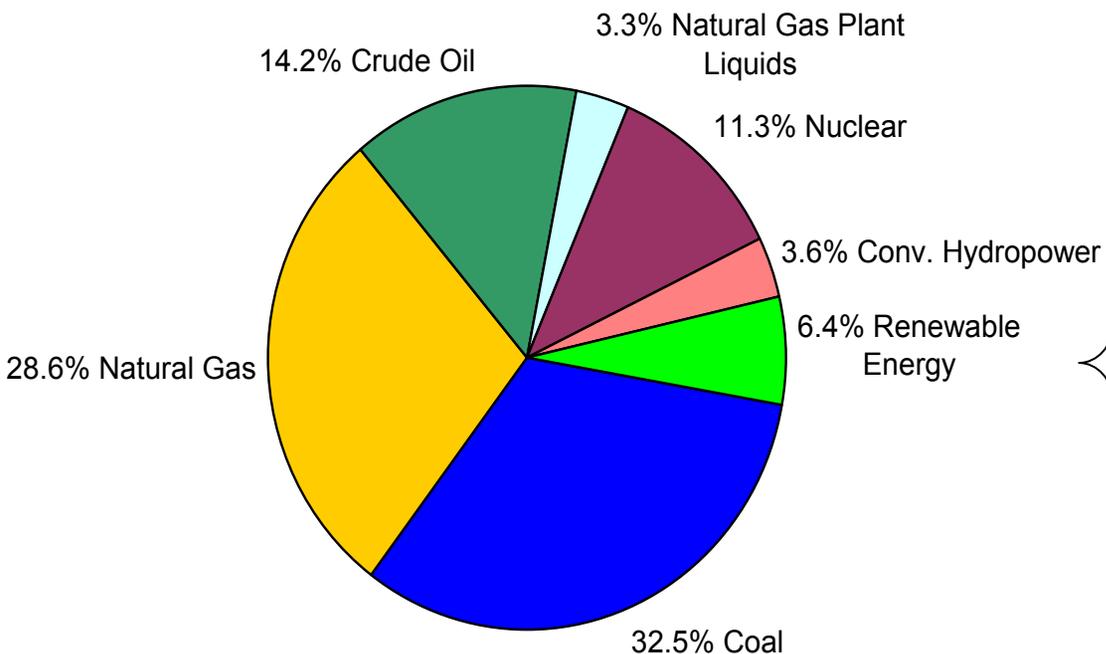


# U.S. Renewable Energy Production

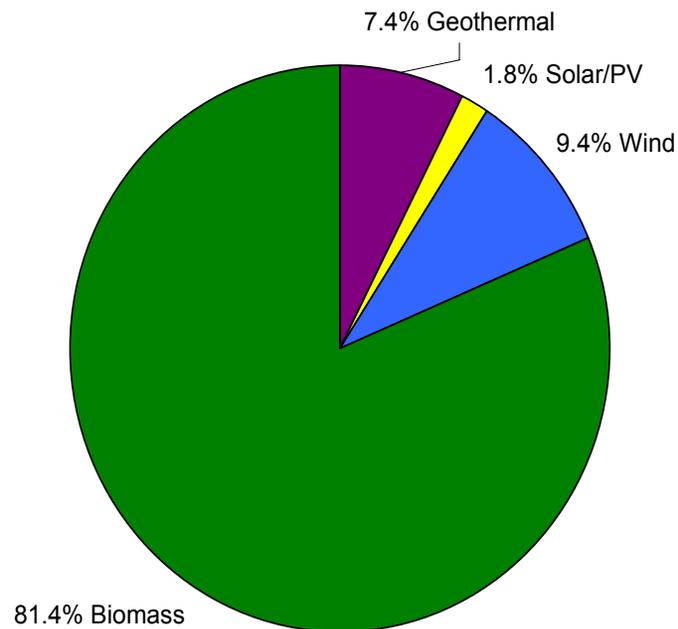


## U.S. Energy Production (2008\*) with Renewable Energy Break Down

U.S. Energy Production (2008\*)



U.S. Renewable Energy Production (2008\*):  
6.4% of Total U.S. Energy Production



\*2008 Figures are 11-Month Totals

Source: EIA

# EERE is dedicated to accelerating market penetration of America's abundant, secure, affordable and clean renewable energy and energy efficiency technologies



## Power Generation

- Geothermal
- Wind
- Solar
- Water Power

## Fuels & Vehicles

- Biomass/Biofuels
- Hydrogen
- Vehicle Technologies

## Energy Efficiency

- Buildings Technologies
- Industrial Technologies
- Weatherization
- Federal Energy Management

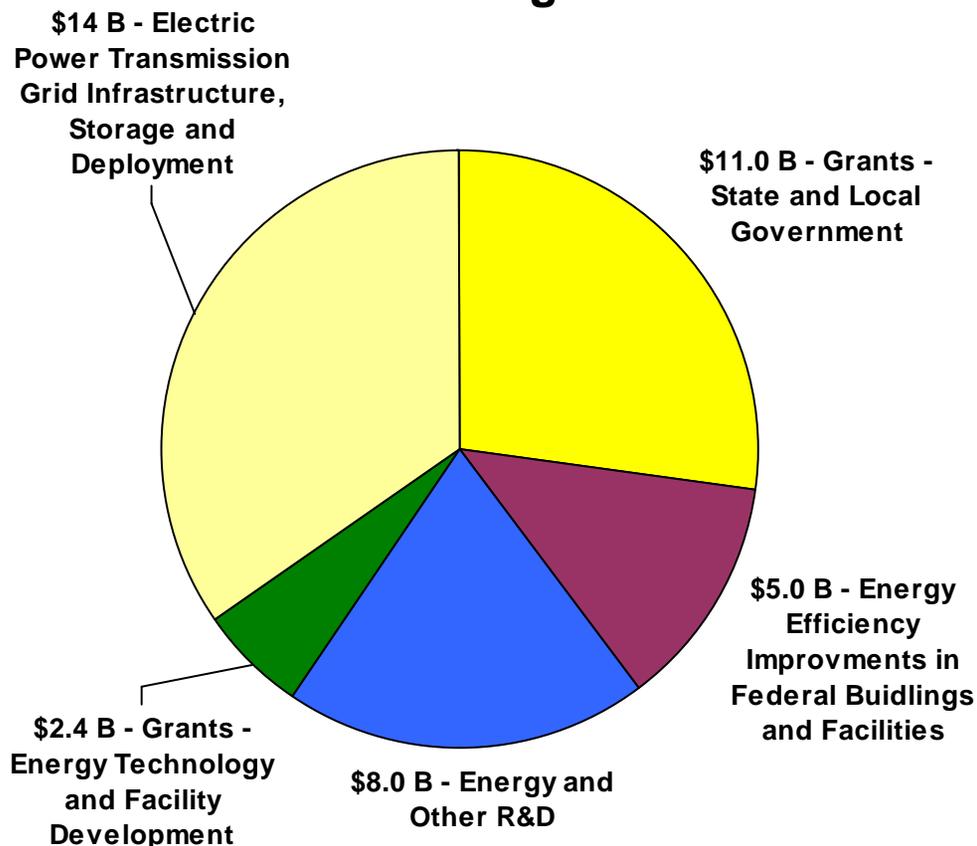


# American Recovery and Reinvestment Act of 2009



- Over \$40 billion of the \$787 billion recovery plan is allocated for clean energy
- Investment focus:
  - \$16.8 billion for EERE
  - \$14.0 billion for electric power transmission grid infrastructure, storage and deployment  
*- incl. \$6 billion for loan guarantees*
  - \$9.6 billion for other energy programs
  - Expanding workforce training
  - Promoting Mass Transit Systems
- New and modified clean energy tax incentives are estimated at \$20+ billion

## Breakdown of Clean Energy Funding



Funds are supplemental to annual appropriations

# Biomass Support from the American Recovery and Reinvestment Act, 2009



- **Renewable R&D and Demonstration Projects:** \$2.5 billion to support DOE RD&D activities, including biomass technologies (\$800 million)
- **Renewable Energy Loan Guarantee Program:** \$6 billion to support loan guarantees for renewable energy projects. Up to \$500 million of this amount is allocated to innovative biofuels technologies that are capable of deployment on a commercial scale. Must begin construction by September 30, 2011.
- **Tax credits:**
  - Extends the Production Tax Credit for biomass and other renewable energy facilities through 2013
  - Extends the Investment Tax Credit, allowing owners of biomass and other renewable technology projects that are eligible for the PTC to use the full 30% ITC previously available only to solar facilities
  - Allows renewable energy project developers to apply for a Treasury Dept. grant equal to 30% of the cost of an eligible project if construction starts in 2009 or 2010 (in lieu of ITC)

# Energy Efficiency and Renewable Energy Programs

## U.S. Department of Energy



### Energy Efficiency Programs:

- Building Technologies Program
- Federal Energy Management Program
- Industrial Technologies Program
- Vehicle Technologies Program
- Weatherization & Intergovernmental Program

### Renewable Energy Programs:

- Biomass Program
- Geothermal Technologies Program
- Hydrogen, Fuel Cells & Infrastructure Technologies Program
- Solar Energy Technologies Program
- Wind & Hydropower Technologies Program



# 2009 Biomass Program Priorities and Goals



*Advancing Presidential Objectives*

## **Science & Discovery**

- Connecting basic and applied bioscience
- Conducting R&D at universities and national labs to achieve transformational breakthroughs:
  - Advances in enzymes and catalysis
  - Engineering of new microorganisms
  - Novel sustainability indicators

## **Clean, Secure Energy**

- Developing & demonstrating cellulosic and advanced biofuels to meet RFS

## **Economic Prosperity**

- Creating 50 to 75 jobs per new biorefinery
- Creating major new energy crop markets
- Reinvigorating rural economies

## **Climate Change**

- Reducing GHG emissions by up to 90% with advanced biofuels (compared to gasoline)

# EERE Commercialization and Deployment Activities



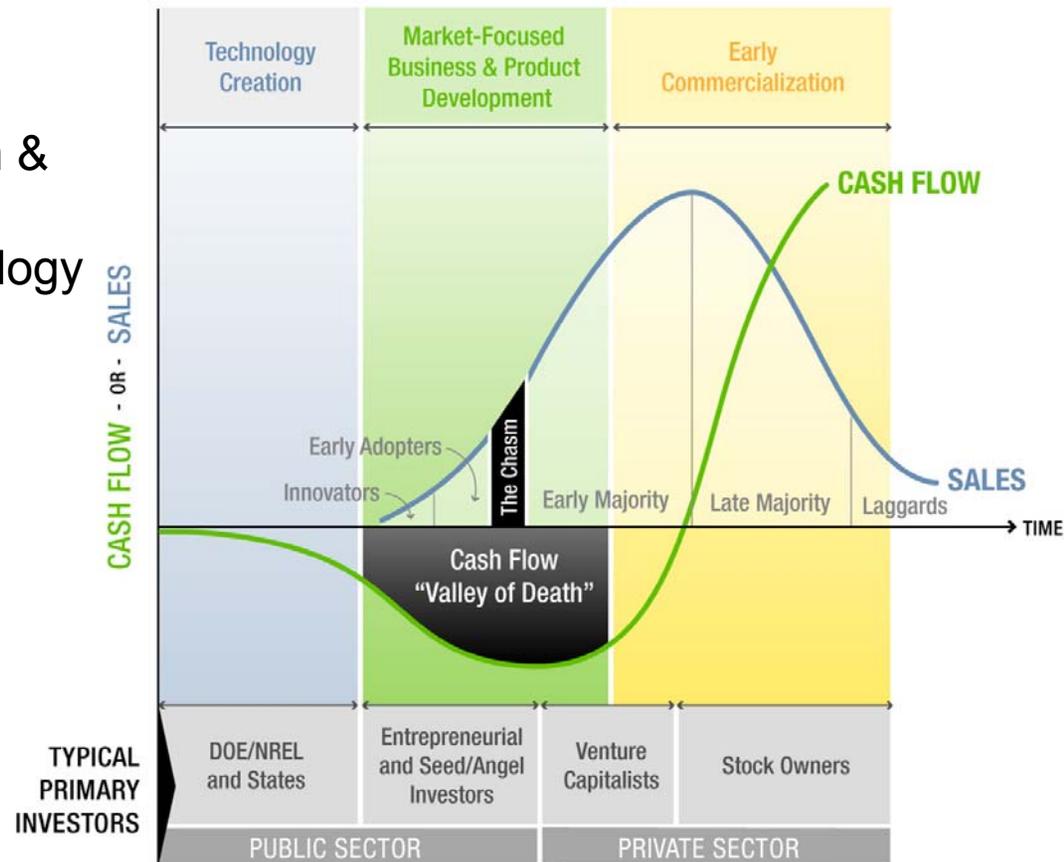
*Focus on accelerating the deployment the most promising energy technologies into the commercial marketplace*

## Technology Commercialization

- Entrepreneur in Residence program
- Technology Commercialization & Deployment Fund
- EERE Venture Capital Technology Showcase

## Deployment

- State Energy Program
- Hawaii Clean Energy Initiative
- DOE TEAM Initiative
- National Parks Deployment Partnership
- Freedom Prize
- Large-Scale Weatherization





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***Thank you!***