

Current New and Renewable Energy Priorities in the U.S.

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EGNRET-37
Taipei, Chinese Taipei
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Presentation overview

- ▶ Where are we now
- ▶ Actions at the State level
- ▶ New initiatives at the National level
 - Blue Print for a Secure Energy Future
 - A Policy Framework for the 21st Century Grid

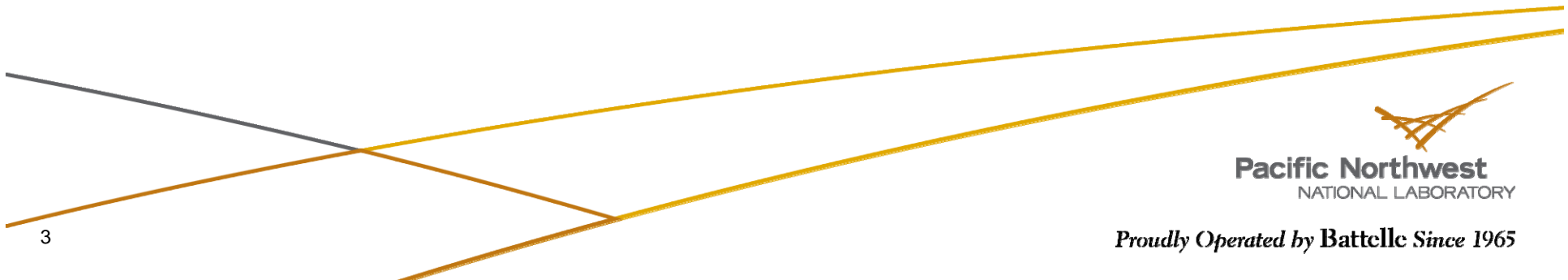


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US DOE Energy Information Administration provides monthly energy consumption

- Monthly Energy Review (MER) - the latest energy statistics all in one place
- July Monthly Energy Review
Release Date: July 27, 2011
Next Update: Last Week of August 2011
- <http://www.eia.gov/totalenergy/data/monthly/>

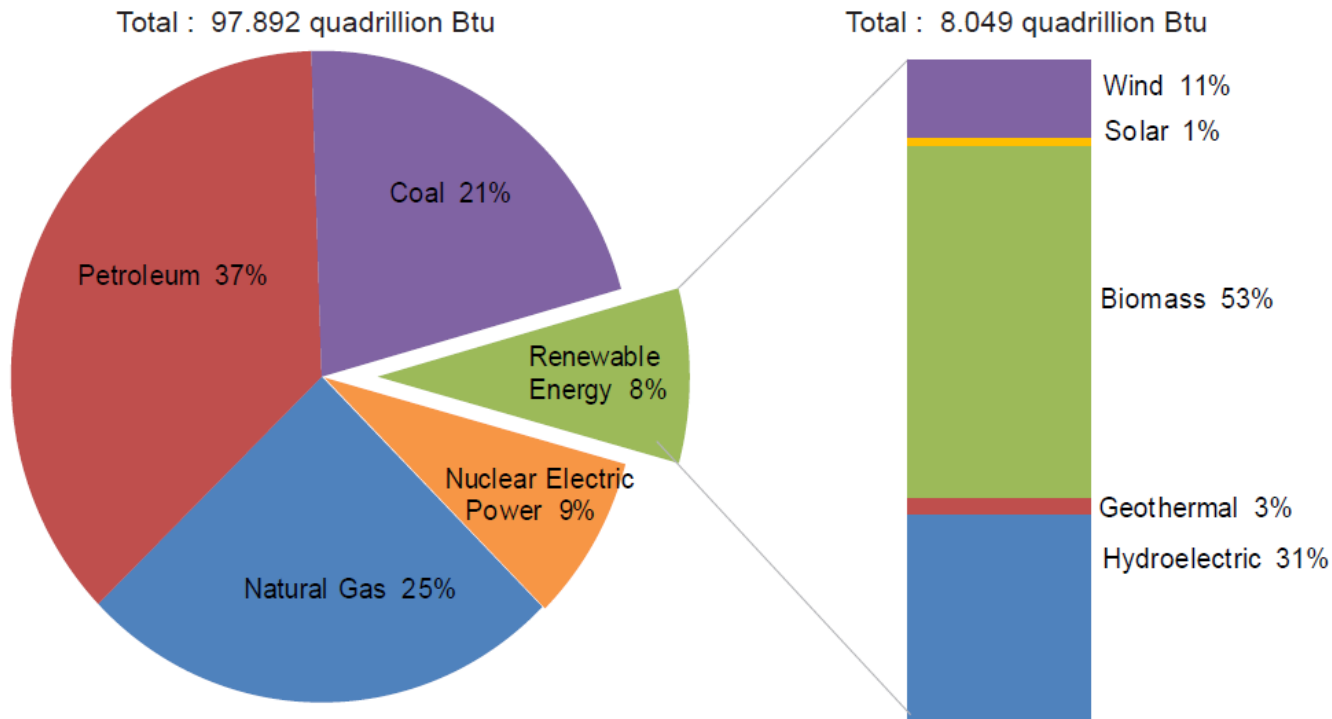


US Renewable Energy Consumption in 2010

(<http://www.eia.gov/renewable/annual/preliminary/>)

Report Released: June 28, 2011

Next Release Date: June 2012

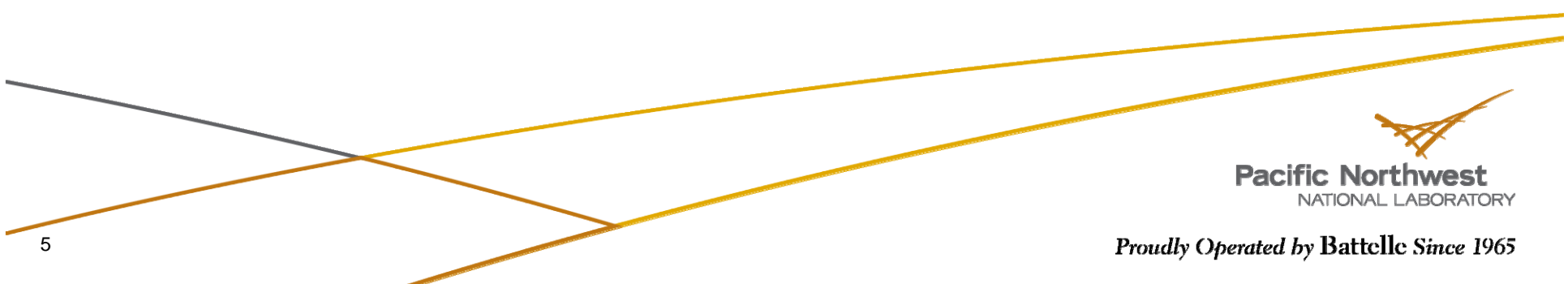
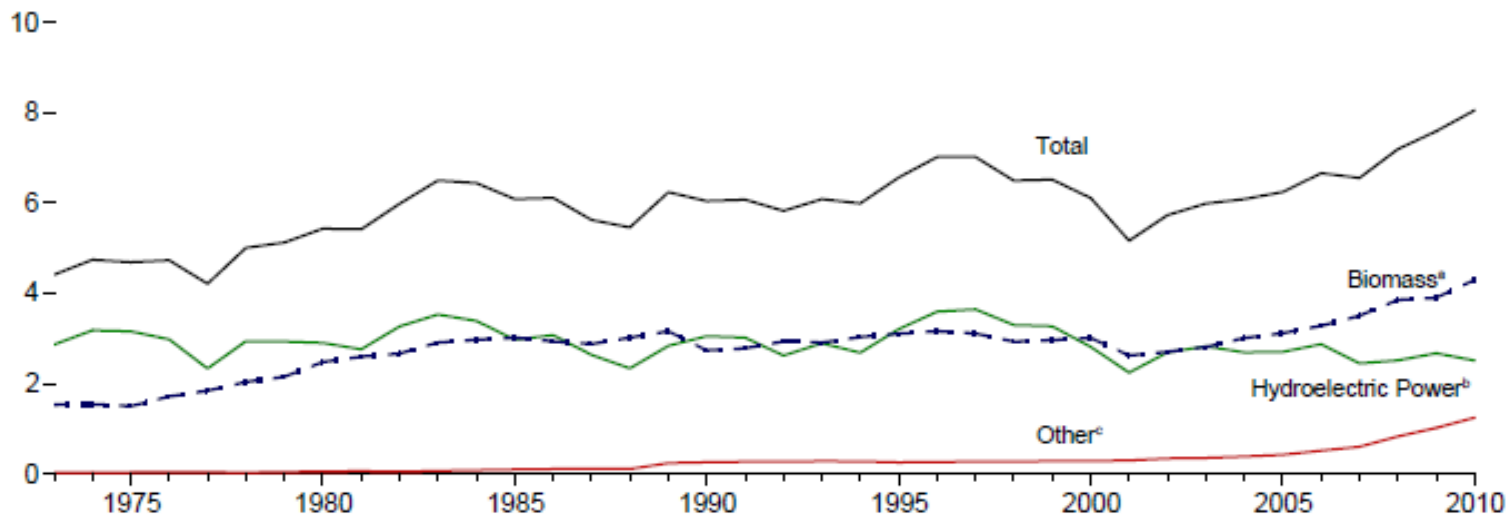


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Renewable Energy Consumption (Quadrillion Btu)

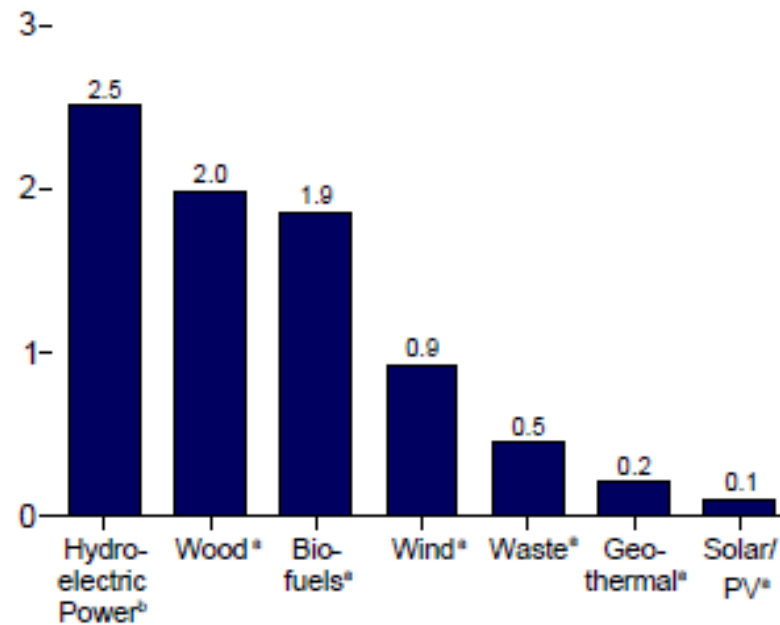
Total and Major Sources, 1973-2010



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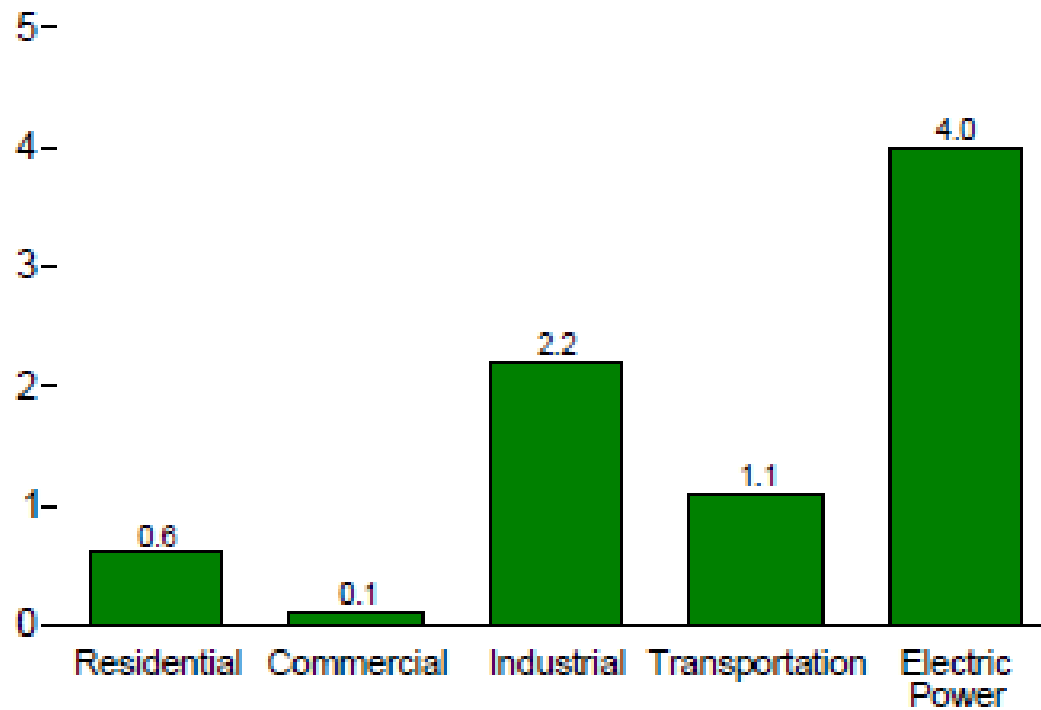
Renewable Energy by Source, 2010 (Quadrillion Btu)



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Renewable Energy by Sector, 2010 (Quadrillion Btu)

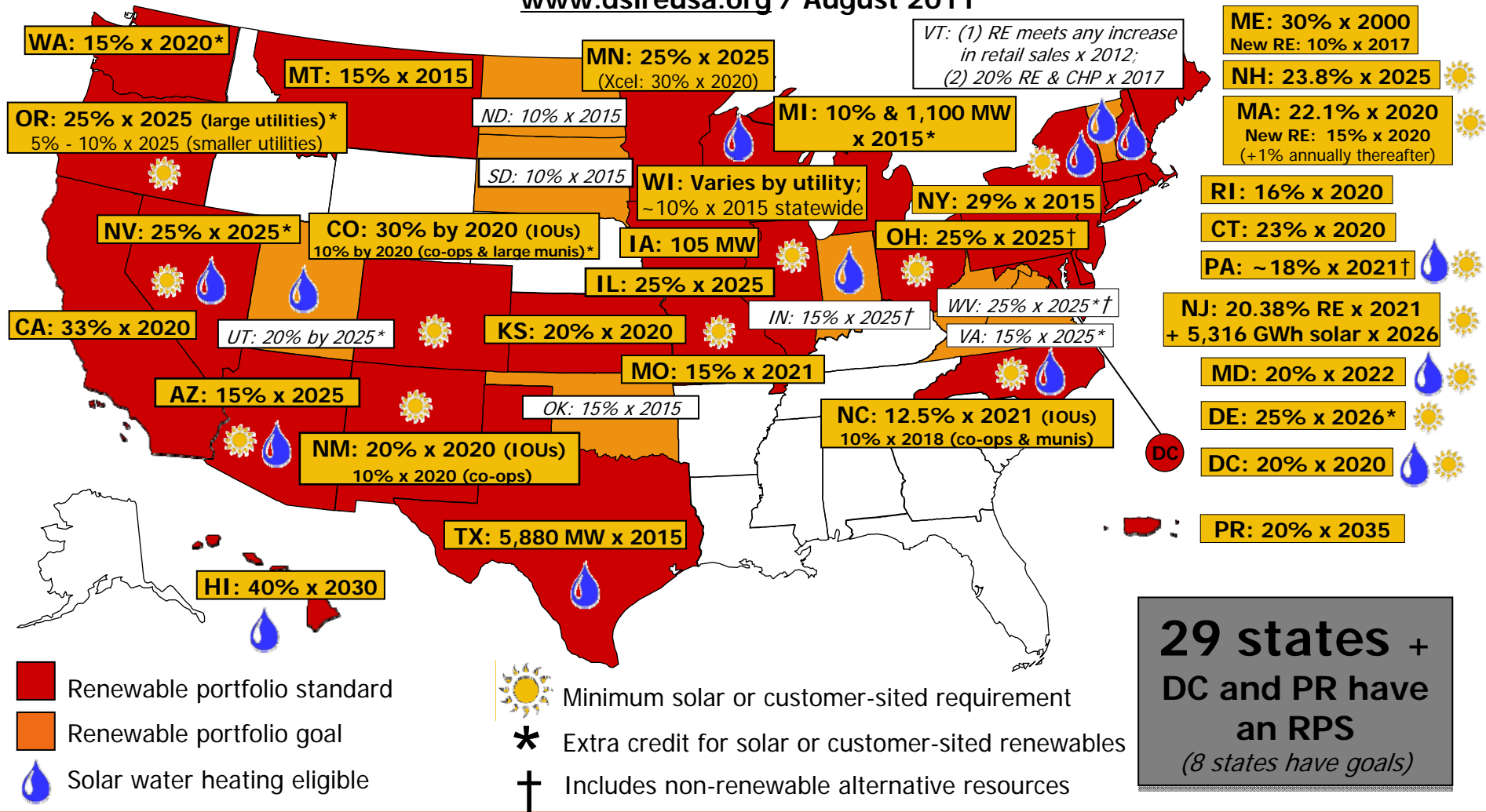



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RPS Policies

www.dsireusa.org / August 2011



Examples of new major U.S. renewable energy initiatives (1)

- ▶ President Obama today announced that the U.S. Departments of Agriculture, Energy, and Navy will invest up to \$510 million during the next three years in partnership with the private sector to produce advanced drop-in aviation and marine biofuels to power military and commercial transportation (August 16, 2011)
- ▶ U.S. Energy Secretary Steven Chu today announced a \$50 million investment over two years for the SUNPATH program, aimed to help the nation reclaim its competitive edge in solar manufacturing. SUNPATH, which stands for Scaling Up Nascent PV At Home (August 2, 2011)

<http://www.eere.energy.gov/>



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Examples of new major U.S. renewable energy initiatives (2)

- ▶ U.S. Energy Secretary Steven Chu today announced more than \$175 million over the next three to five years to accelerate the development and deployment of advanced vehicle technologies. The funding will support 40 projects across 15 states and will help improve the fuel efficiency of next generation vehicles (August 10, 2011)
- ▶ The U.S. Department of Energy today released a report – [2011 U.S. Billion-Ton Update: Biomass Supply for a Bioenergy and Bioproducts Industry](#) – detailing U.S. biomass feedstock potential nationwide. The report examines the nation's capacity to produce a billion dry tons of biomass resources annually for energy uses without impacting other vital U.S. farm and forest products (August 10, 2011)

Blueprint for a Secure Energy Future

- ▶ Defined in terms of a three part strategy
 - Develop and secure America's energy supply
 - Provide consumers with choices to reduce costs and save energy
 - Innovate our way to a clean energy future

(March 31, 2011: <http://www.whitehouse.gov/energy/our-environment>)



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(I) Develop and Secure America's Energy Supply

- ▶ Expand safe and responsible domestic oil and gas development and production
- ▶ Lead the world towards safer, cleaner and more secure energy supplies
 - USDOE is leading an unconventional gas census for APEC
 - Working to make international bioenergy sustainable
 - Promoting the transition to electric vehicles
 - Encouraging the transition to clean energy technologies (convened the Clean Energy Ministerial)
 - Reducing oil use with bioenergy (launching the Global Bioenergy Partnership directed at West Africa to encourage the transition from traditional biomass to modern bioenergy)
 - Encourage alternative fuels and mass transit in developing countries (includes support of natural gas and hybrid-diesel buses in APEC economies of Thailand and Vietnam as part of Clean Technology Fund)



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(II) Provide Consumers with Choices to Reduce Costs and Save Energy

- ▶ Reduce consumer costs at the pump with more efficient cars and trucks
- ▶ Cut energy bills with more efficient homes and buildings



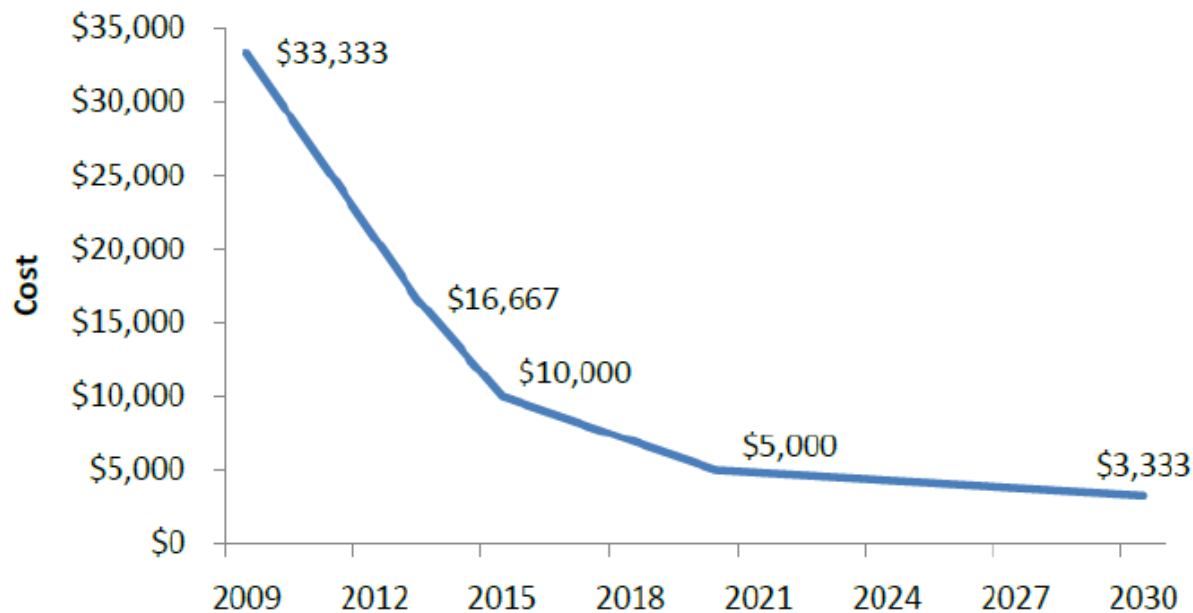
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(II) Provide Consumers with Choices to Reduce Costs and Save Energy

- ▶ Investing in Advanced Vehicle Technology and Infrastructure (Recovery Act: \$2.5 billion for EV R&D)

Forecasted Cost of a Typical Electric-Vehicle Battery



Note: Assumes 3 miles per kilowatt hour and 100-mile range. Source: U.S. DOE Vehicle Technologies Program.

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(II) Provide Consumers with Choices to Reduce Costs and Save Energy

- ▶ Cut energy bills with more efficient homes and buildings
 - Specific activities are proposed for the residential, commercial and industrial sectors
 - The President signed an Executive Order directing Federal agencies to achieve zero net energy by 2030



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(III) Innovate our Way to a Clean Energy Future

- ▶ Harness America's clean energy potential
- ▶ Win the future through clean energy research and development
- ▶ Lead by example: Clean Energy and the Federal Government



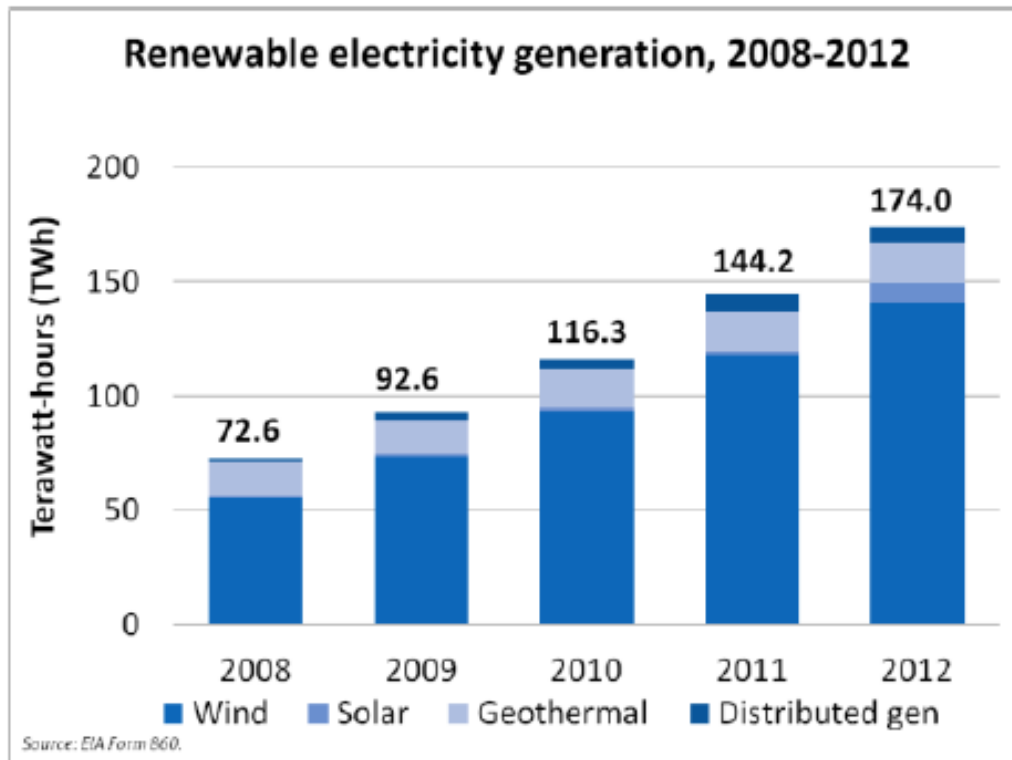
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(III) Innovate our Way to a Clean Energy Future

► Harness America's clean energy potential

- Issue permits for 10,000 MW of renewable power on public lands and offshore waters by the end of 2012



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(III) Innovate our Way to a Clean Energy Future

- ▶ Set a new Clean Energy Standard (CES) which sets an annual target for electricity from clean energy sources
 1. Credit a broad range of clean energy sources
 2. Double the share of clean electricity over the next 25 years (currently at 40%)
 3. Protect consumers from rising energy bills
 4. Include energy efficiency policies that will lower consumers' energy bills (e.g., appliance efficiency standards, tax credits)
 5. Help manufactures improve efficiency and reduce energy costs (e.g., combined heat and power and waste-heat recovery)

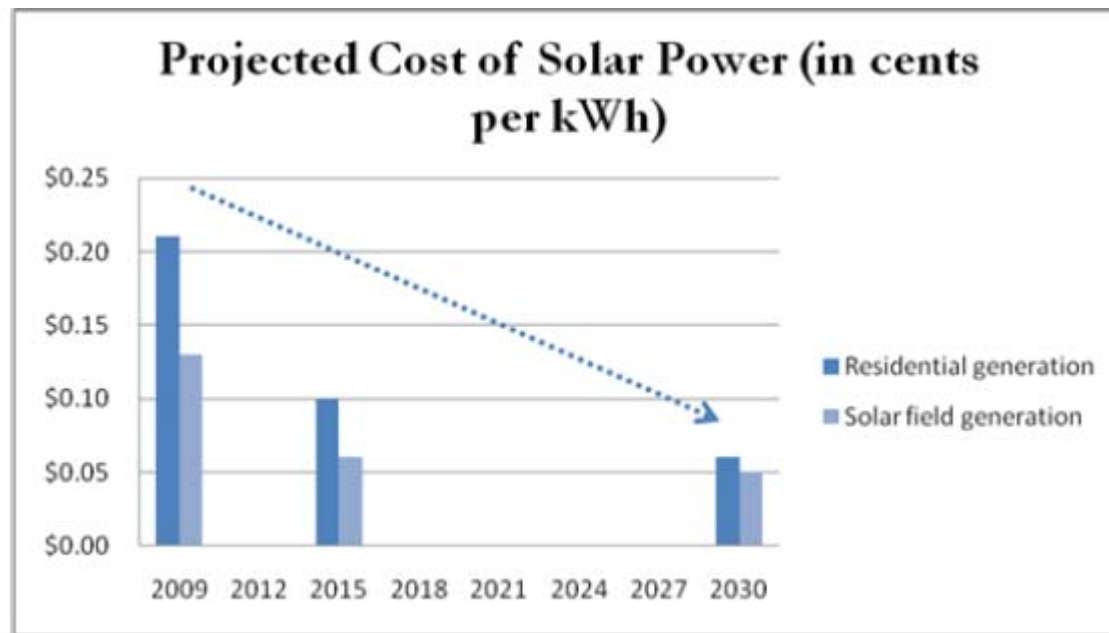


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(III) Innovate our Way to a Clean Energy Future

- ▶ Win the future through clean energy research and development



Source: DOE



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(III) Innovate our Way to a Clean Energy Future

- ▶ Lead by example: Clean Energy and the Federal Government
- ▶ The Federal government owns and manages over 500,000 buildings and operates more than 600,000 fleet vehicles



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A Policy Framework for the 21st Century Grid

- ▶ Produced by the Cabinet-level National Science and Technology Council
- ▶ It is a framework to ensure that all Americans benefit from investments in the Nation's electric infrastructure
- ▶ To spur the development of a smarter grid, the Recovery Act invested \$4.5 billion which was matched by over \$5.5 billion of private funding

(June 2011: <http://www.whitehouse.gov/administration/eop/ostp>)



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A Policy Framework for the 21st Century Grid

- ▶ The framework is based on four pillars and recognized the importance of State and local jurisdictions and offers a collaborative path forward to modernize the grid
 1. Enabling cost-effective smart grid investments
 2. Unlocking the potential of innovation in the electricity sector
 3. Empowering Consumers and enabling informed decision making
 4. Securing the grid

- The 86 page document provides an up to date resource on current U.S. grid modernization efforts with 19 case studies and 21 pages of internet linked references



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Thank you for you attention!

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