



U.S. Department of Energy
**Energy Efficiency
and Renewable Energy**

Bringing you a prosperous future where energy
is clean, abundant, reliable, and affordable

Weatherization & Intergovernmental Program

Federal Policy Update

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U.S. Department of Energy

State and Local Programs

June 24, 2008



Outline

- I. Federal Policy Update
- II. The Future
- III. Partnerships & Resources



Our Challenge

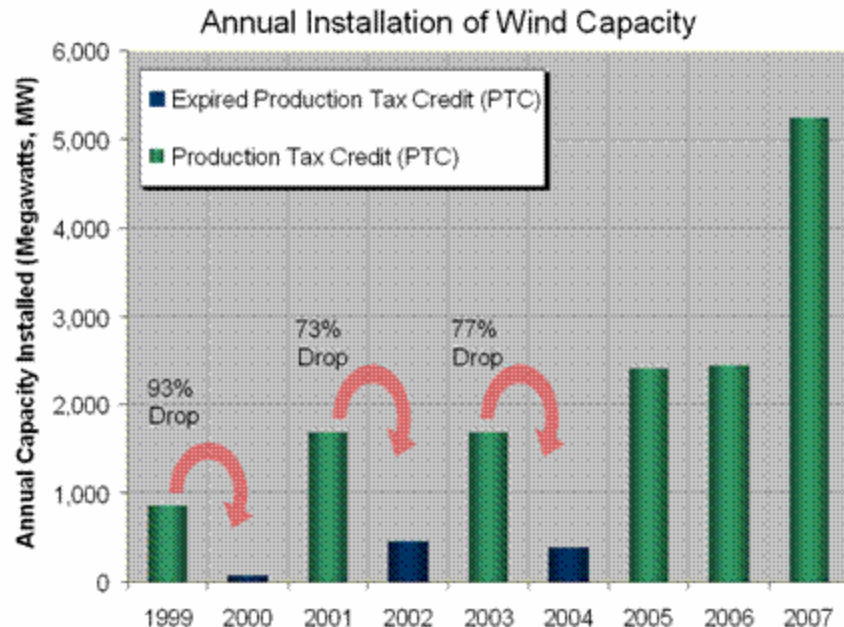
We need a more coordinated effort at the State, Local and Federal jurisdictions to design a policy framework that recognizes the strengths and responsibilities at each level.



Production Tax Credit - Wind

At Risk:

- \$11.5 billion in investment
- 76,000 Jobs



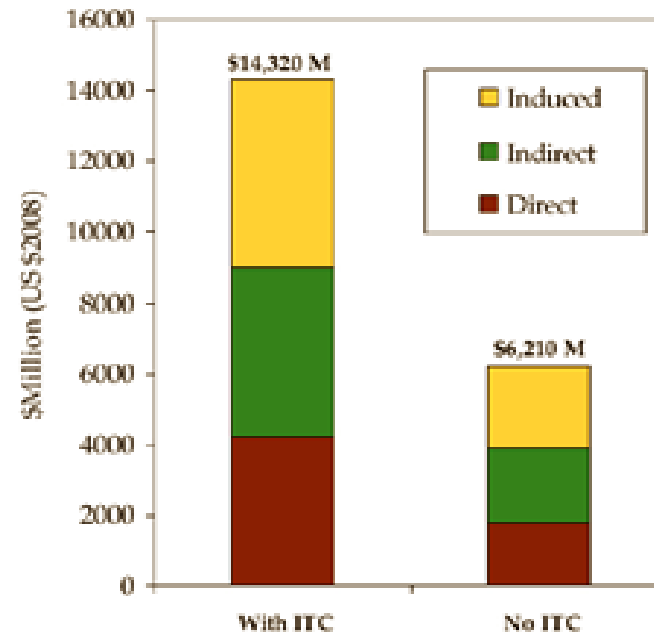
Source: American Wind Energy Association



Investment Tax Credit - Solar

At Risk:

- \$ 8.1 Billion loss in 2008-2009
- 39,000 Jobs



Source: Navigant Consulting



Climate Change



- S.3036, the Lieberman-Warner Climate Security Act of 2008
- 1st time a GHG and Cap-and-trade bill has ever gone to the floor of the Senate thru regular order
- As of March 2008, 195 bills, resolutions, and amendments were made in the 110th Congress.



Energy Independence and Security Act of 2007

- “Omnibus” energy policy law
- Authorization legislation
- Provisions to increase energy efficiency and the availability of renewable energy
- Predecessors: EPACK 1992 and EPACK 2005

Quick estimate (ACEEE) of 2020 impact:

Consumption: 198 TWh reduction
(~5% of EIA 2020 projection 4571 TWh)

Peak Demand: 44 GW reduction
(5% of EIA summer 2020 peak demand projection of 878 GW*)



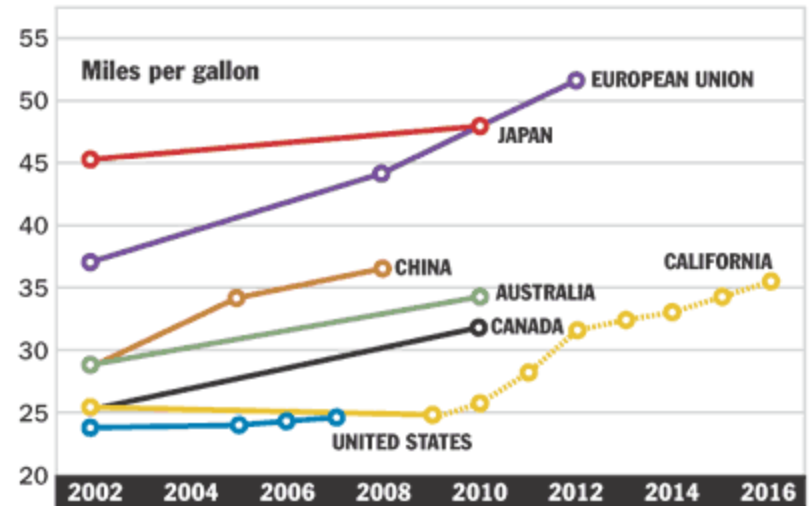
Signed into law by President Bush on December 19, 2007 at DOE



EISA Highlights

- New Café Standards –
 - Average 35 mpg by 2020
- Incandescent bulbs:
 - 30% less energy use by 2014
 - Alliance to Save Energy estimates *just* the light bulb standards total more than EPACT 05 savings
- Standby power
 - Avg 75% of the electricity used to power home electronics is consumed while the products are turned off..
 - New Test procedures (battery chargers, power supplies, heaters, dryers etc...)

Fuel economy trend lines





Leadership is Found in the State

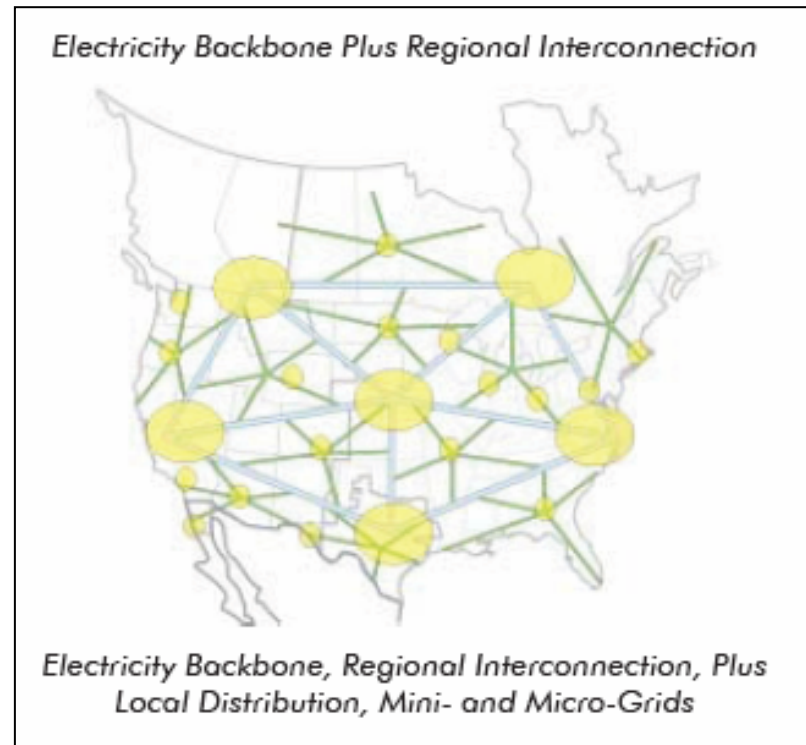


State policies are driving, or have the potential to drive, high performance technologies into the market place to address our energy challenges today.



A Vision of a 2030 Electricity Grid

Three Layers:
Superhighway Grid
on top of an
Improved Regional Grid
on top of the
***Distribution Grid with
MicroGrids/MiniGrids/
Distributed Generation***



Source: "GRID 2030" A National Vision For Electricity's Second 100 Years, July 2003,
U.S. Department of Energy Office of Electric Transmission and Distribution
www.oe.energy.gov/DocumentsandMedia/Elec_Vision_2-9-4.pdf



Emerging Technologies



POLICIES

Utility Incentives for cost-effective energy efficiency

Aggressive Codes and Standards

Net metering & Feed-in Tariffs

Siting and permitting

Interconnection

More debt financing needed





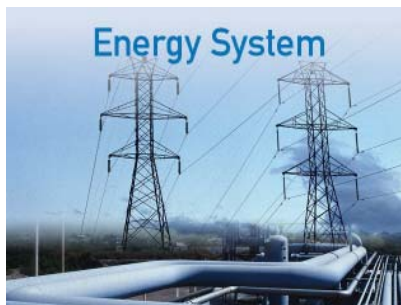
Achieving All Cost-Effective EE: Key Perspectives



- Efficient home envelope
- Efficient windows, lighting, appliances
- Efficient, properly sized/installed HVAC
- Low-standby energy use
- Verification of home energy efficiency
- Grid-connected controls and appliances
- Good information
- Whole-building design



- Energy-efficient equipment
- Low-standby energy
- Efficient lighting systems
- Properly sized, efficient HVAC
- Commissioning/recommissioning
- Routine assessment of performance
- Grid-connected controls/equipment
- Good information
- Whole-building design



- Pursue all cost-effective EE resources
- Universal efficiency services across all customer classes
- Enhanced use of clean DG
- Modernized grid supports greater data analysis, customer control, utility control of peak-driving equipment, self-healing capabilities



- Lower energy bills
- Environmental benefits
- Lower greenhouse gas emissions
- Enhanced reliability
- Low-income and elderly assistance
- New jobs/growing local services
- Increased fuel diversity



- Efficient equipment/motor systems
- Efficient lighting systems using good design, controls, daylighting, and efficient technology
- Processes tuned for efficiency
- Waste heat recovered and utilized
- Good information



National Action Plan for Energy Efficiency Addresses Policy Barriers

- DOE & EPA only facilitate
- **Goal:** To create a sustainable, aggressive national commitment to energy efficiency through gas and electric utilities, utility regulators, and partner organizations
- DOE's Technical Assistance to MD, HI, IL, KS, & HI for increasing utility investment in efficiency –
 - strategic input to commissioners
 - technical assistance in ee dockets
 - help develop ee programs

National Action Plan for Energy Efficiency Recommendations

1. Recognize energy efficiency as a high-priority energy resource.
2. Make a strong, long-term commitment to implement cost-effective energy efficiency as a resource.
3. Broadly communicate the benefits of and opportunities for energy efficiency.
4. Provide sufficient, timely and stable program funding to deliver energy efficiency where cost-effective.
5. Modify policies to align utility incentives with the delivery of cost-effective energy efficiency and modify ratemaking practices to promote energy efficiency investments.



ENERGY STAR®: jointly managed **DOE/EPA** label

More than **20,000** retail partners, **1,200** product manufacturers,
400 utility partners

- ENERGY STAR labeled product (DOE managed)
 - **Existing**: Clothes Washers, Dishwashers, Refrigerators, Room A/Cs, CFLs, Windows
 - **Emerging**: Solid State Lighting, Advanced Technology Water Heaters and Packaged Terminal Air-Conditioners
 - **Evaluation** of future technologies, e.g. PV, Fuel Cells and Dynamic Windows
- National campaigns (e.g., Change-a-Light)
- Home Performance with ENERGY STAR
 - DOE, EPA, HUD: target is energy efficiency in existing homes



DOE Resources for States

- Strategic partnership with National Governor's Association
 - Workshops, Information tools, Technical Assistance
- SEP Competitive Grants – Market Transformation
 - FY08 - \$7.5M – Advanced Building Codes, Gigawatt scale
- Best Practices in Energy Policies and Programs
 - First evaluation completed on EEPS, RPS, and RFS policies
 - http://www.nrel.gov/applying_technologies/scepa.html
- Accelerating state/local performance contracting
 - Energy Services Coalition, NASEO, NAESCO, NCSL
- TAP – Technical Services/Access to National Laboratories
 - Contact James Ferguson/Julie Riel
 - <http://www.eere.energy.gov/wip/tap.cfm>



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QUESTIONS?

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