



The Federal Debate and National Impact: Energy, Climate Change, Global Warming

***National Association of Regional Councils
National Conference of Regions***

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Environmental & Energy Study Institute (EESI)

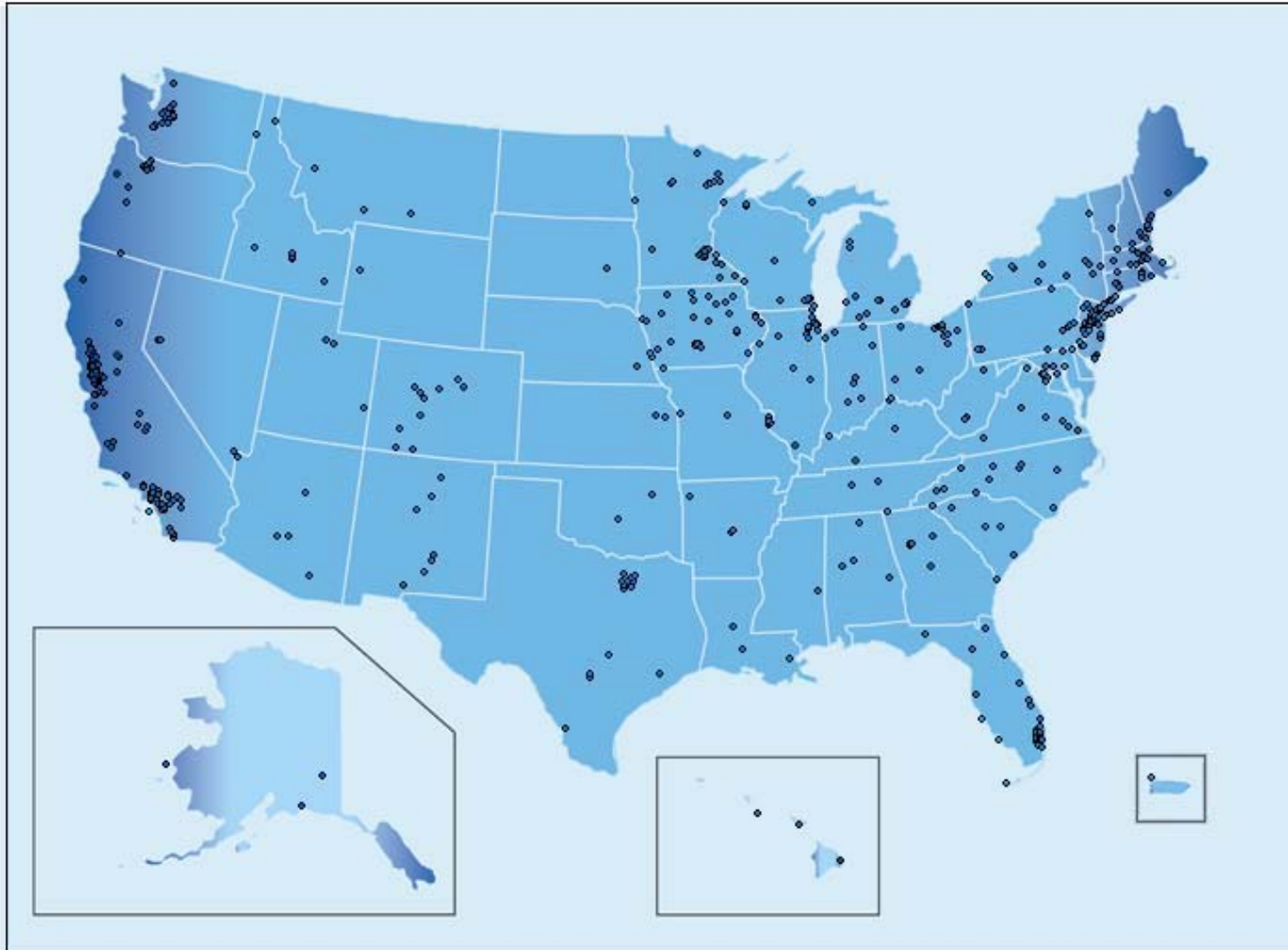
Seeking Innovative Environmental and Energy Solutions



- Dedicated to promoting sustainable societies through innovative policies on energy, climate, transportation, agriculture, and smart growth
- Founded in 1984, by a bipartisan Congressional Caucus
- Provides timely information regarding science, policy, and technologies
- Organizes ~ 25 Congressional briefings a year
- Builds coalitions and networks
- Publishes 3 electronic newsletters: *Climate Change News*, *BCO (Bioenergy/Climate Protection/Oil Reduction)*, *Clean Motion*
- EESI Associates Program allows companies and individuals to participate

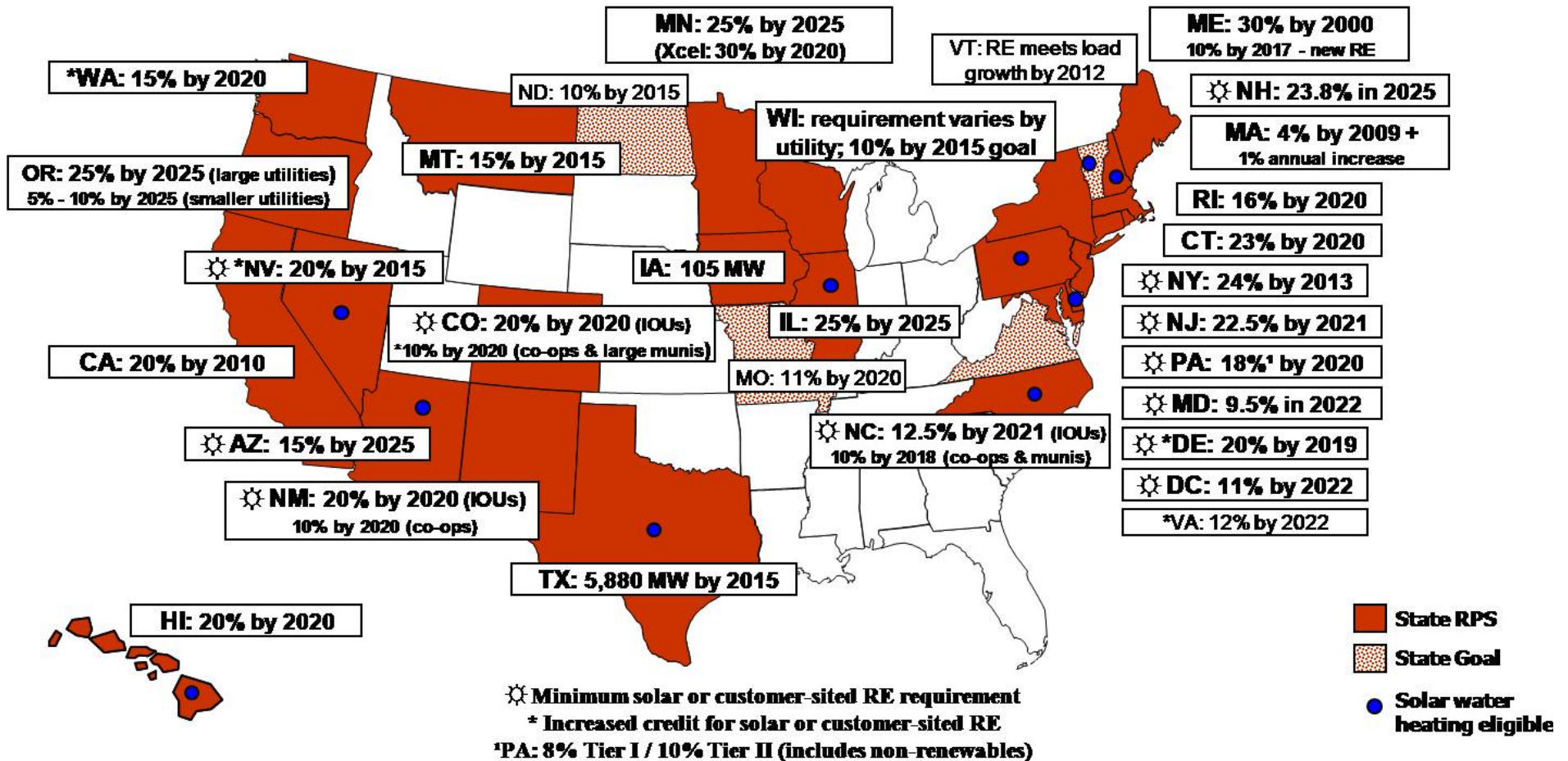
U.S. Conference of Mayors Climate Protection Agreement

780 Mayors have signed the agreement as of February 1, 2008



Renewable Portfolio Standards in 25 States + DC

January 2008

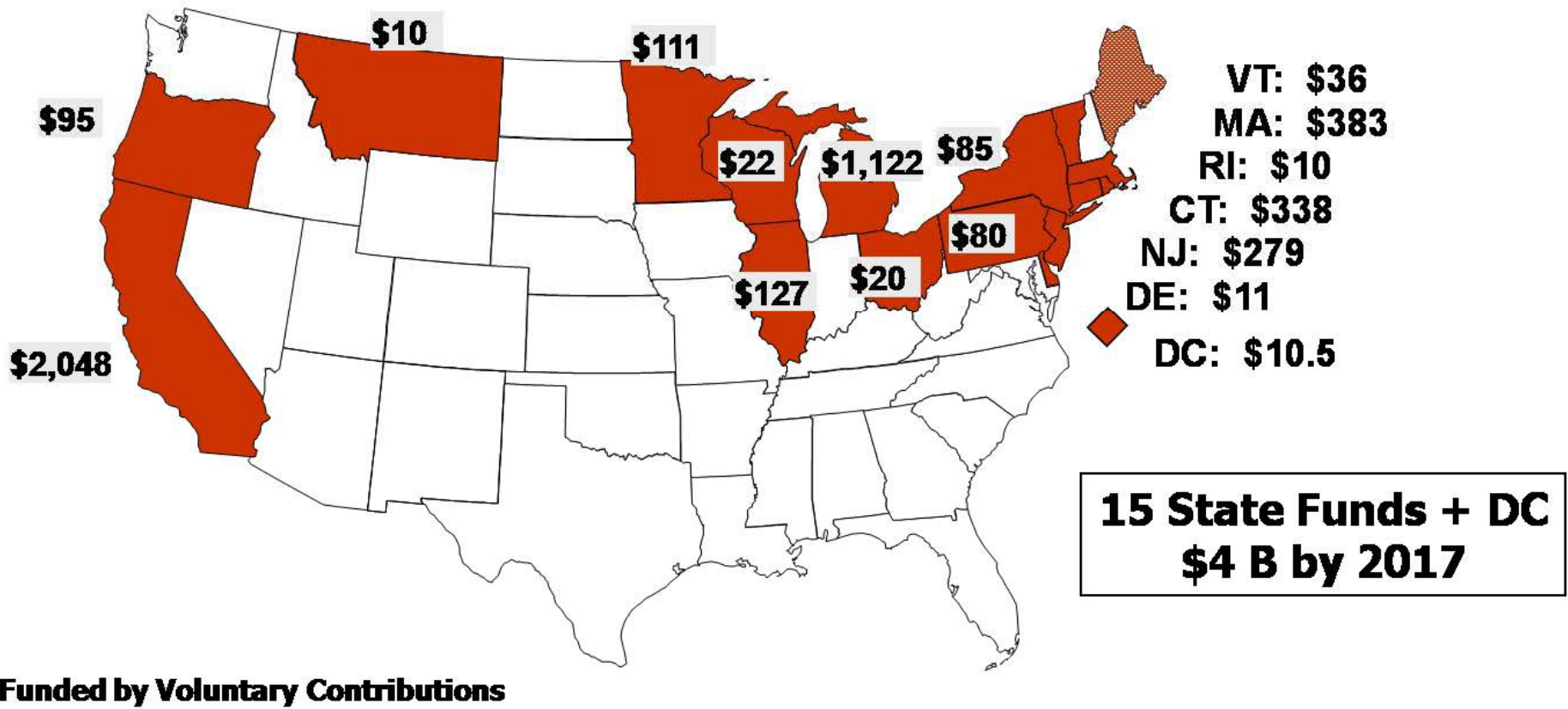


Source: North Carolina Solar Center and IREC

Public Benefit Funds for Renewables

Cumulative 1998 – 2017 (Million \$)

July 2007



Local and State Actions

- **780 Mayors** have called for national action on climate change.
- **25 States** have Renewable Portfolio Standards (RPS).
- **34 States** have climate action plans (13 are in development).
- **15 States** have Public Benefit Funds (PBF) for renewable energy.

Regional Actions

- **Western Climate Initiative (WCI)** -- Collaboration of Governors (AZ, CA, NM, OR, UT, WA) and Premiers of British Columbia and Manitoba developing regional climate strategies. Goal is aggregate reduction of 15% below 2005 levels by 2020
- **Western Governors Association (WGA)** – 18 states joined by tribal groups, Mexican border states, and Canadian provinces. Goal to develop 30,000 MW of clean energy by 2015
- **Midwestern Regional Greenhouse Gas Reduction Accord** -- Collaboration of 9 Governors (WI, MN, IL, IN, IA, MI, KS, OH, SD) and the Premier of Manitoba developing regional strategies to achieve energy security and reduce greenhouse gas emissions
- **Northeast Regional Greenhouse Gas Initiative (RGGI)** – 10 states developing a multi-state cap-and-trade program covering GHG emissions
- **New England Governors and Eastern Canadian Premiers Climate Change Action Plan** began August 2001 – six states and six provinces

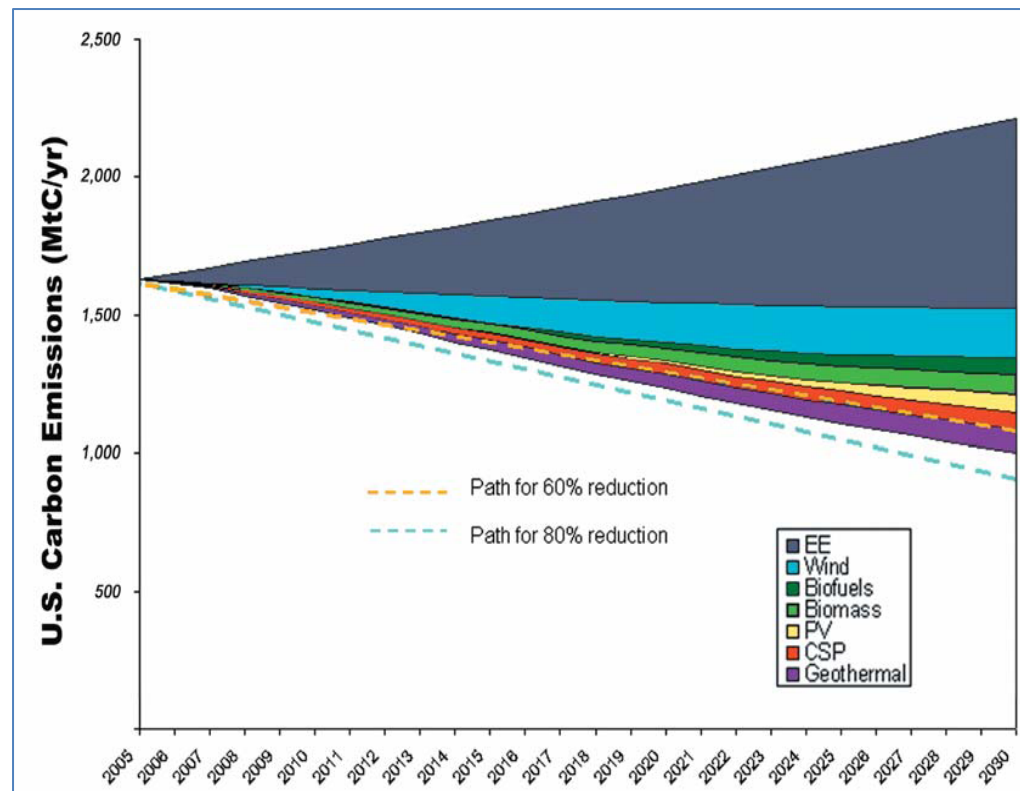
Regional Renewable Energy Resource Assessment

Western Governors Association - Clean and Diversified Energy Initiative (CDEAC)

- Launched June, 2004. Now 19 states and three U.S. protectorates.
- Develop 30,000 Megawatts (MW) of clean and diverse energy by 2015.
- Increase energy efficiency 20 percent by 2020.
- Provide adequate transmission to meet region's needs through 2030.
- WGA Clean and Diversified Energy Advisory Committee (CDEAC) task forces have completed resource assessments for biomass, geothermal, solar, wind, energy efficiency, transmission and advanced coal.
- The WGA leads for energy issues are Govs. Bill Richardson (NM) Arnold Schwarzenegger (CA), Dave Freudenthal (WY), Jon Huntsman (UT) and John Hoeven (ND).
- The first annual report tracking progress on achieving these goals was released in June 2007.
- WGA Website: www.westgov.org

Energy Efficiency and Renewable Energy Can Play a Key Role in Climate Mitigation

- Approximately 57% of the total carbon reduction contribution is from energy efficiency (EE) and about 43% is from renewables by 2030.
- Energy efficiency measures can allow U.S. carbon emissions to remain about level through 2030, whereas the renewable supply technologies can provide large reductions in carbon emissions below current values.



Potential carbon reductions in 2030 from energy efficiency and renewable technologies and paths to achieve reductions of 60% and 80% below today's emissions value by 2050.

Source: American Solar Energy Society. Tackling Climate Change in the U.S.—Potential U.S. Carbon Emissions Reductions from Renewable Energy and Energy Efficiency by 2030. January, 2007.

Energy Independence and Security Act of 2007 (P.L. 110-140)

- Renewable Energy R&D
- Biofuels (RFS, R&D, Infrastructure)
- Transportation
- Vehicle Fuel Economy (CAFÉ, plug-ins, fed.fleets)
- Buildings and Industry
- Appliance and Lighting Efficiency Standards
- Energy Efficiency and Conservation Block Grants
- Green Jobs
- Small Business Assistance for EE Purchases

NOT Included in EISA

- Renewable Energy Portfolio Standard (RPS)
 - Target of 15% total electricity sales to be met by renewable energy sources by 2020 (of 15%, can count 4 % from efficiency)
- Renewable Energy and Energy Efficiency Tax Incentives
 - Repeal of oil and gas subsidies, 4-year extension of renewable energy electricity production tax credit, solar investment credit, and CREBS
- Building energy code improvements

Renewable Energy R&D

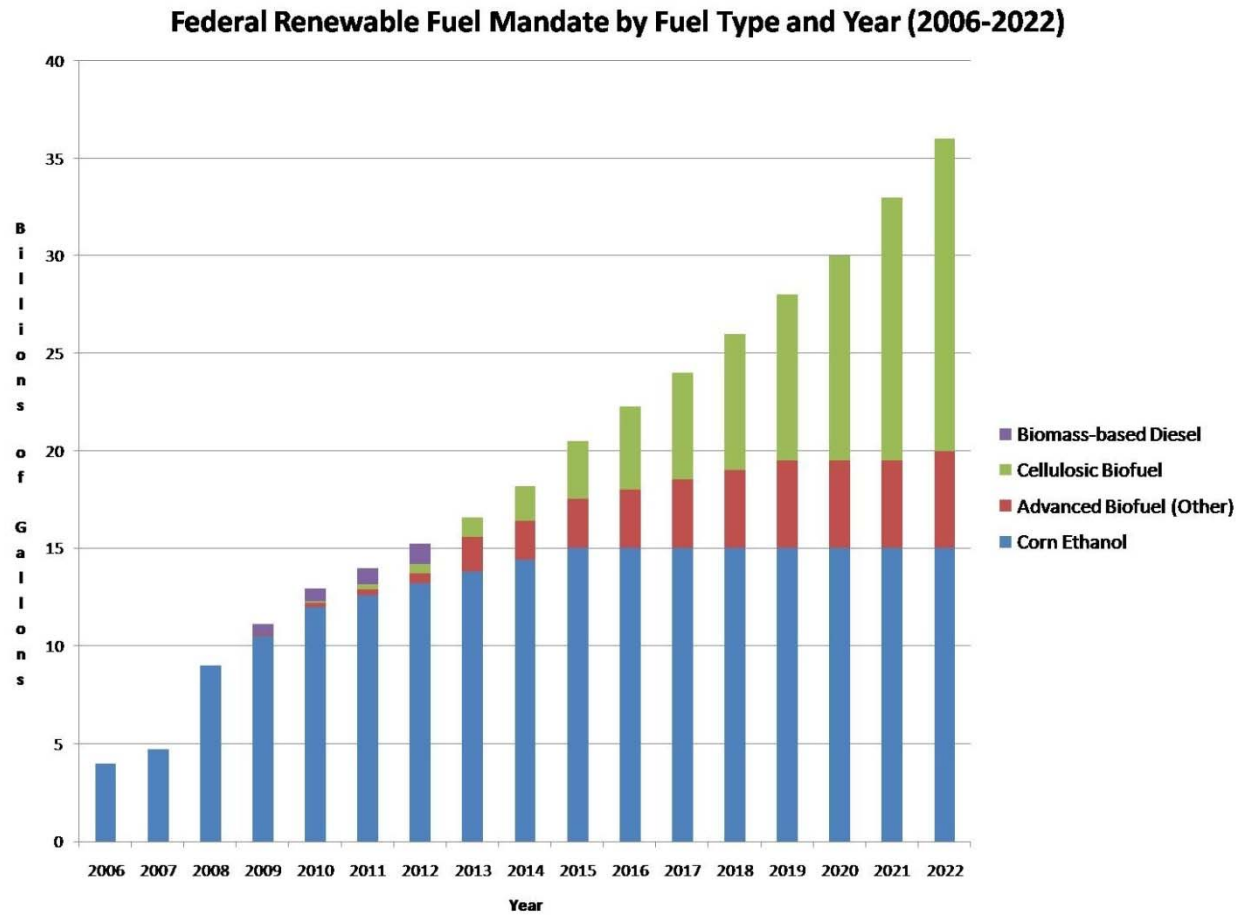
- Solar
 - Solar thermal storage technologies
 - Concentrating solar power electric generation
 - Integration of concentrating solar power into regional electricity transmission systems
- Bioenergy
- Geothermal
- Waves, tides, currents, ocean thermal
- Energy storage for transportation and electric power

Renewable Fuel Standard (RFS)

New target of 36 billion gallons by 2022 (9 billion in 2008)

- 15 billion gallons of conventional biofuel (ethanol from corn starch) – Lifecycle GHG emissions from new fuel production must be 20% less than 2005 baseline
- 21 billion gallons from advanced biofuels: 50% less than baseline
 - Biomass-based diesel: 50% less than baseline
 - Cellulosic biofuel: 60% less than baseline

Federal Renewable Fuel Mandate



RFS – A Step Forward, But More is Needed

- From feedstock production to end-use consumption, infrastructure is needed to make renewable fuels work
- There are authorizations for a number of R&D programs and studies – but much more is needed
- Regional/state-by-state biomass assessments not addressed
- RFS mandates fuel production, but EISA does not provide adequately for fuel infrastructure and vehicles

Energy Transportation & Infrastructure

- **Railroads** -- Capital grants for rehab of railroad tracks
- **Highways** – 100% federal share for congestion mitigation and air quality (CMAQ) projects
 - DOT directed to redistribute within each state unobligated balances of Highway Trust Fund rescinded in FY '08 & '09
 - State and local governments encouraged to accommodate all users including pedestrians, cyclists

Buildings

Residential

- Authorizes \$3.75 billion over 5 years for DOE's Weatherization Program
- Requires DOE to establish energy efficiency standards for manufactured housing

Commercial

National goal of high-performance, zero-net-energy use new buildings after 2025; retrofit pre-2025 buildings by 2050

Federal

Requires high-performance, carbon-neutral by 2030

Schools

EPA grants to ensure healthy, high-performance schools

Definition of High-Performance Building (Title IV, Sec. 401)

“...building that integrates and optimizes on a lifecycle basis all major high performance attributes, including energy conservation, environment, safety, security, durability, accessibility, cost-benefit, productivity, sustainability, functionality, and operational considerations.”

Buildings

- Directs HUD to update energy efficiency standards for all public and assisted housing
- \$10 million to support four high-performance building demonstration projects at different universities
- EPA competitive grants to local governments for green building demonstration projects
- Grants and loans to support energy sustainability projects at public institutions

Energy Savings Through Improved Standards for Appliances and Lighting

Appliance Energy Efficiency Standards include:

- External power supply efficiency standards
- Residential boilers
- Regional standards for furnaces, central air conditioners, and heat pumps
- Battery chargers
- Standby mode
- Energy standards for home appliances
- Walk-in coolers and walk-in freezers
- Electric motor efficiency standards
- Improved energy efficiency for appliances and buildings in cold climates

Lighting Energy Efficiency Standards include:

- Efficient light bulbs
- Incandescent reflector lamp efficiency standards
- Public building energy efficient and renewable energy systems
- Metal halide lamp fixtures
- Energy efficiency labeling for consumer electronic products

Energy Efficiency Block Grants

Title V, Subtitle E directs DOE to establish an **Energy Efficiency and Conservation Block Grant program** “to help reduce energy use and emissions at the local and regional level.”

- Grants to develop energy efficiency strategies, conduct building energy audits, develop building codes and inspection services to improve building energy efficiency, and other activities
- Authorizes \$10 billion (\$2 billion per year for 5 years)
- Priority for U.S. Conference of Mayors
- ADMINISTRATION BUDGET PROVIDES NO FUNDING

Green Jobs

\$125 million authorized for Department of Labor to establish national and state job training programs for development of energy efficient buildings and vehicles, renewable power, and biofuels

NOTE:

Department of Labor Employment and Training Administration Grant Solicitation - \$10 million to “address shortage of skilled trade workers needed to maintain and expand the energy industry infrastructure (awards ~ \$500k - \$1m)

- Must be “developed and implemented by a strategic regional partnership and focus on regional talent development and training.”
- www.doleta.gov/BRG/JobTrainInitiative

Other Provisions

- Electric and gas utilities required to make ENERGY EFFICIENCY A PRIORITY RESOURCE
- Utilities directed to modify their rates to align their incentives with EE and promote EE investments
- National goal to use renewable energy resources from agricultural, forest, and working lands for 25% nation's energy use by 2025

Senate Climate Bill, S. 2191 (Lieberman-Warner)

- “Cap and Trade” program does not fully address transportation sector
- Special nature of transportation suggests need for complementary policies and funding

Suggestions:

- **Build capacity** for regional councils to track and reduce VMT/GHG
 - Invest in data systems and decision tools to address climate impacts
- **Direct funding** to regions taking action to curb VMT and to poor-performing areas that need assistance.

House Action on Climate Change

- House Committee on Energy and Commerce and its Subcommittee on Energy and Air Quality are issuing a series of Climate Change Legislation Design White Papers as the next step toward enactment of a mandatory, economy-wide climate change program.
- Papers describe basic design and key principles of a regulatory program and identify issues for discussion.
- Memorandum from the Committee and Subcommittee Chairs states their intention of producing a bill that will be presented to the President for signature before the Congress adjourns this year.
- **Competitiveness Concerns/Engaging Developing Countries (Jan. 31, 2008)**
 - Discusses potential domestic legislative provisions that could encourage developing countries to curb emissions of greenhouse gases.
- **Scope of a Cap-and-Trade Program (Oct. 3, 2007)**
 - Identifies economic sectors and activities that are directly emitting greenhouse gases and how those emissions could be included in a cap-and-trade program.

Climate Bills & Upcoming Transportation Bill Need to Work TOGETHER

- Transportation bill is a climate bill for better or for worse.
- Perverse incentives, more driving, more fuel = more funding
- Transit competes on non-level playing field under SAFETEA-LU
- Funding Crisis:
Highway Trust Fund to run negative balance in FY 2009

Sustainable Communities

- Role of Planners
- APA/EESI Project
- New Partners for Smart Growth Conference
 - APA/EESI Project Update and Dialogue, Thursday, February 7th, 4:30 – 5:30 pm, Marriott-Wardman Park Hotel

THANK YOU!