ENERGY: WHY OUR CHOICES MATTER

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Carol Werner
Executive Director
• Founded in 1984 by a bipartisan Congressional caucus as an independent non-profit organization (but receives no Congressional funding)
• Source of non-partisan information on energy and environment policy development for Congress and other policymakers
• Our work focuses on win-win solutions to climate change in the energy, buildings, bioenergy, biofuels and transportation sectors
• **EESI Approach:**
  – Bi-partisan
  – Holistic & Interconnected
  – Solutions Oriented, Problem-Solving
  – Coalition & Consensus Building, Education

• **Benefits:**
  – Environment, Health, Economy, Development, Justice

• **Policy is Crucial**
The Problem: Climate Change

- Reliability
- Resilience
- Security
- Storage
- Distributed Generation
Climate Change Polling

Yes, Climate Change Is Happening

- Reuters/Ipsos: 38%
- AT&T: 68%
- Huffington Post: 33%
- Munich Re America: 60%
- CBS News/NYT: 31%
- Granite State Poll: 34%

- Caused by Human Activity
- Caused by Natural Causes

Climate Change Is a Threat to the United States

- Stanford University / New York Times / RFF: 34%
- CBS News / New York Times: 42%
- Pew / USA Today: 30%

- Very Serious Threat
- Somewhat Serious Threat
Global Agreement Needed
COP 21: Paris Climate Talks

• Intergovernmental Panel on Climate Change (IPCC)

• Intended Nationally-Determined Contributions (INDC)
  – 129 Countries ➔ 89.5% Global emissions covered by countries that submitted an INDC (Courtesy of WRI)

• Montreal Protocol
  – All 197 Countries agree to phase out HFCs - 0.5°
Intended Nationally Determined Contributions

89.5% of global emissions covered by INDCs.
China & the U.S.

• **United States Action:** reduce CO2 emissions from the power sector to 32% below 2005 levels by 2030

• **China Action:** lower carbon dioxide emissions per unit of GDP by 60% to 65% from the 2005 level by 2030 and increase the forest stock volume by around 4.5 billion cubic meters on the 2005 level by 2030
  — Cap and Trade

• **India Action:** Strong bilateral climate agreement, emphasis on clean energy
Business, Communities & Faith Groups

• American Business Act on Climate
  – 81 companies (employ 9 million people and generate more than $3 trillion in annual revenue)
  – Includes GM, Walmart, IKEA, Goldman Sachs
  – Support for a strong Paris outcome
  – Reduce their emissions, increase low carbon investments, deploy more clean energy

• Cities, National League of Cities (NLC)
  – Compact of Mayors, 83 American cities signed on committing to strong climate action

• Universities
  – 697 universities and colleges in all 50 states and the District of Colombia, representing a student population of over 5.6 million have committed to decrease GHG emissions and increase climate education

• Pope Francis: Environmental Encyclical, along with many faith groups
Clean Energy Investment

• Business Council for Sustainable Energy (BCSE)
  – Clean Air and Emissions Markets (RGGI), Emissions Reporting, Expanding Markets for Energy Efficiency, Expanding Market-Based Programs

• Global Renewable Energy Investment rose 17 percent to reach $270.2 billion in 2014
  – estimated 103 gigawatts of new renewable power capacity, excluding large hydro, was built around the world in 2014
  – Compares 86 GW in 2013 and 80.5 GW in 2011
Renewables Outpacing Fossil

- 60% of new U.S. generating capacity in first three-quarters of 2015 is from renewables
- Wind is largest source of new capacity
- New renewable capacity is 1,460 times greater than that from coal
- Non-hydro renewable capacity now exceeds conventional hydropower
Distributed Generation

Yesterday
Centralized Power

Tomorrow
Clean, local power

Transmission network

Distribution network

Factory

Commercial building

House

Local CHP plant

Storage

Solar PV power plant

House with domestic CHP

Wind power plant

Courtesy of Institute for Local Self Reliance
Biomass Energy: Thermal, Power, Fuels
“Wastes”:
- Crop Residue
- Organic wastes: food, manure, wastewater treatment
- Forestry waste

Purpose grown:
- Perennial grasses
- Fast growing woody crops
- Grasses
- Legumes
- Algae, cyanobacteria
Fuel Quality Matters for Health

45 million Americans live, go to school or work within 300 feet of a major roadway, airport or railway. -- U.S. EPA

- Gasoline contains 25% by volume gasoline aromatics
- Gasoline aromatics $\rightarrow$ benzene, toluene, ethylbenzene & xylene
- Increasing the volume of ethanol in gasoline lowers toxic gasoline additives
Key Policies

• The **Production Tax Credit (PTC)** – originally enacted in 1992
• The **Investment Tax Credit (ITC)** – both residential and commercial were originally enacted in 2005
• Environmental Protection Agency (EPA)
  • **Clean Power Plan** (finalized Oct 2015)
• **Net Energy Metering (NEM)**
• **Renewable Portfolio Standards (RPS)**
• **Renewable Fuel Standard (RFS)**
• State Policies
  • Third-party power purchase agreements, Loan programs for renewable energy, Carbon Trading Schemes (RGGI and California Cap-and-Trade), Tax Credits, PACE Financing, Grant programs for renewables
Renewable Portfolio Standard Policies

www.dsireusa.org / June 2015

29 States + Washington DC + 3 territories have a Renewable Portfolio Standard
(8 states and 1 territories have renewable portfolio goals)

Renewable portfolio standard
Renewable portfolio goal
Extra credit for solar or customer-sited renewables
† Includes non-renewable alternative resources
Energy Efficiency Resources Standards

Mandatory, Voluntary, Renewables Standard, Renewables Goal, Alternative Energy Standard

30 States + 3 territories have Renewable Portfolio Standards

Courtesy of C2ES
**On-Bill Financing (OBF)**

- Loans that are repaid on the monthly utility bill
- Utilities finance energy/water improvements to customers’ homes
- Common features:
  - No upfront costs to consumer
  - Bill neutrality (or better)
  - Alternative loan underwriting
    (i.e. good bill payment history in lieu of credit check)
- At least 60 utilities in 22 states offer OBF
- Loan money available through USDA RUS
On-Bill Financing Pilot
• 2011-2012
• 8 co-ops, 125 homes
• Main Purpose: test EE vs. building new generation
• RUS and G&T funding
• 34% energy savings

Working OBF Programs
• 2012- Present
• 5 co-ops, 375 homes (as of 10/10/15)
• Purpose: Member service
• Mix of co-op and RUS dollars for lending capital
Energy Independent Community
an evaluation for
Bloomfield
EST. 1855
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THANK YOU

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