

Federal Action on Climate:  
*Implications for Energy Efficiency*

2008 Midwest Energy  
Solutions Conference  
January 9, 2008

The Business Council for  
Sustainable Energy



# Initial Observations

- The move toward federal regulation is accelerating
- States/regions are continuing development and implementation of their programs
- Details of Federal regulation continue to be hammered out
- 2007 vs. Previous Bills
  - Federal bills are more aggressive
  - Rely more heavily on auctions
- Energy efficiency is recognized a key solution
- Integrating energy efficiency into cap-and-trade presents challenges
- Energy efficiency industry is needed at the table



# About the BCSE

- Broad-based coalition of energy efficiency, natural gas and renewable energy industries
- The Council's coalition includes power developers, equipment manufacturers, independent generators, green power marketers, large energy users, and gas and electric utilities as well as several of the primary trade associations in these sectors



# Sample of Council Members

- **Energy Efficient Products**
  - Insulation – NAIMA and PIMA
  - HVAC – Trane, York International
  - CHP – Solar Turbines/Caterpillar
- **Retailers & Energy Users**
  - Wal-Mart
- **Developers, Equipment & Service Providers**
  - GE Wind, Sun Edison LLC, PPM Energy, Recycled Energy Development, Environmental Power
- **Gas & Electric Utilities, Generators**
  - Sempra Energy, NiSource, SMUD, PSEG, PG&E, Calpine
- **Industry Organizations**
  - Alliance to Save Energy, American Wind Energy Association, American Gas Association, Solar Energy Industries Association, Interstate Natural Gas Association of America, National Hydropower Association
- **Renewable Energy & Carbon Offset Developers & Providers**
  - Econergy, EcoSecurities, *NativeEnergy*, 3 Degrees, 3C Company

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# Our Mission

- Expand markets for clean energy generation, distribution and use
  - Energy Efficiency
  - Renewable Energy
  - Natural Gas
- Quantify the environmental attributes of clean energy technologies
- Promote market-based programs that recognize and reward clean energy technologies



# Our Value – Composition and Focus

- Broad-based industry coalition
  - Enhanced credibility
  - Larger political base
- Focus on strategic issues and emerging markets for clean energy industries
  - Climate change and clean air policy
  - State/regional, federal and international levels
- Expertise on designing market-based programs that recognize and reward clean energy and energy efficiency

BCSE serves as a *resource* and *platform* for clean technology industries

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# Clean Tech Role in Carbon Markets

- Offers existing technology to cost-effectively reduce greenhouse gas emissions – with co-benefits
  - Create jobs and expand economic growth
  - Enhance energy reliability and security
  - Improve local air quality

*Energy Efficiency Is Key  
Climate Change Solution*

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# Orientation on Climate Change Policy

- Urge integration of energy and environmental policy decisions
- Urge holistic view of development of climate change policy
  - Design elements are inter-related
  - Need to send short-term and longer-term deployment signals
- *Benchmark*: Is policy strong deployment vehicle for existing clean energy technologies



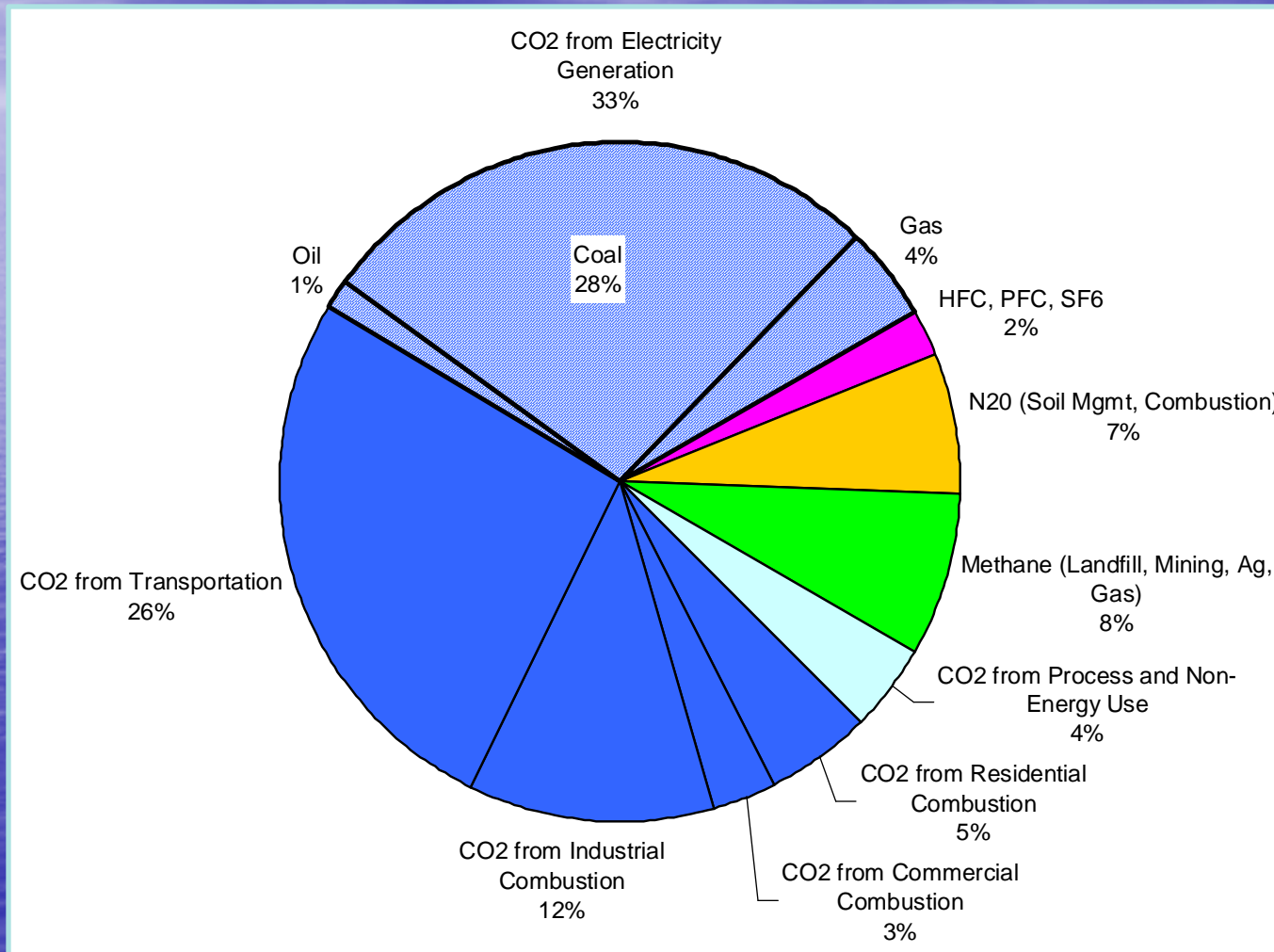
# *Energy Efficiency and Climate Change*

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# U.S. GHG Emissions – 2005

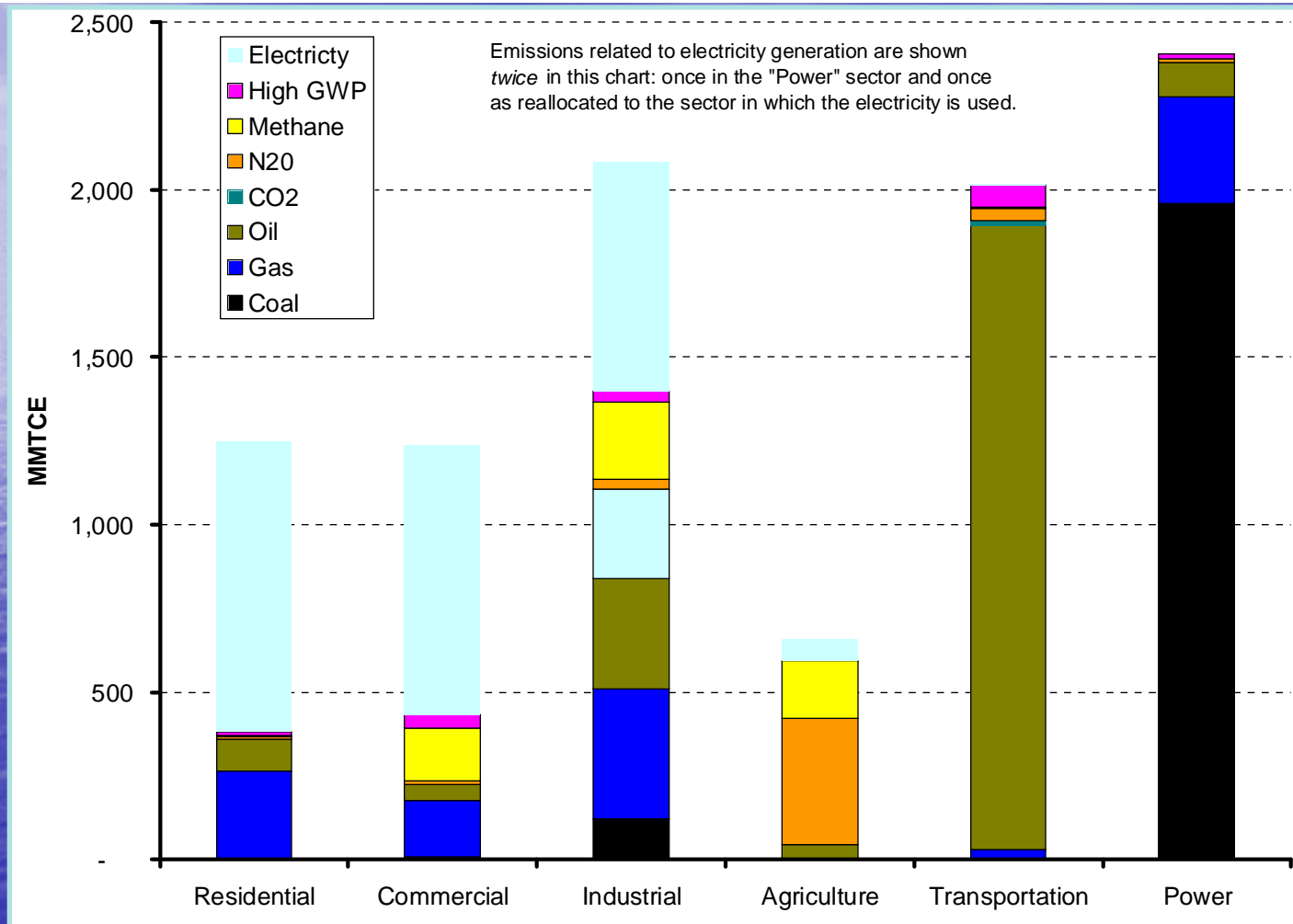
Total = 7,260 MMTonnes



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# U.S. GHG Emissions by Fuel and Sector - 2005



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# Energy Efficiency and Climate Change

- Lowest cost and easiest option to reduce emissions
- Supply- and demand-side efficiency options abound
- Challenging to incorporate into market-based climate change programs
  - Cap-and-trade programs do not always reward energy efficiency
    - Program design is important
    - Allocation policy; set-asides and offsets
  - Importance of complementary energy policies



# Implications of Climate Change Programs on Energy Efficiency

- Climate change programs will make energy efficiency investments more attractive
  - Raise public awareness
  - Lower cost
  - Create new financing vehicles – Energy Efficiency Credits
- Climate change programs can drive higher building code standards and appliance standards
- Expand consumer rebates



# Incorporating Energy Efficiency into Market-Based Programs

- Demand-side management projects more challenging
- May receive set-aside allowances, auction revenue or be able to generate emissions offsets
  - Need Aggregation: Quantify the emissions benefits to provide alternative revenue streams to purchase energy efficient products and services
  - Standardized measurement, monitoring and verification criteria needed
  - For offsets, must demonstrate that they are outside the "cap" and that they are beyond business as usual (prove "additionalty")



# Energy Efficiency Policy Priorities

- Press for *allowance value* under cap-and-trade program to be directed to energy efficiency investments
  - Allocations, set-asides and offsets
- ***Complementary Policies*** - Establish energy efficiency provisions within climate change legislation



# *Energy Efficiency and Federal Climate Legislation*

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# Lieberman/Warner Climate Security Act – S. 2191

- Currently leading contender for Congressional approval
  - Economy-wide cap – 70% reduction by 2050 based on 2005 levels
  - Oil and natural gas regulated at processing step (midstream); coal at point of combustion
  - Six gases covered, but separate trading program for HFCs
  - Most allowances auctioned, transitioning to full auction
    - Auction funds used to promote efficiency, renewables, new technology
  - Domestic offsets limited to 15%
  - Limit on international offsets (15%), no CDM credits allowed
    - US EPA to decide what international offsets are allowed
  - Includes complementary policies -- energy efficiency appliance and building standards



# Status of S. 2191

- Full committee mark up on December 5, 2007
  - Passed out of Senate Environment & Public Works (EPW) 11-8
    - Senator Warner (R-VA) was swing vote
  - Many amendments, no major amendments passed
- Possible floor vote in Senate in 2008
- House action less certain



# Energy Efficiency Provisions of S. 2191

- Allowance Allocation Policy
  - State decoupling and energy efficiency programs (all or part of 5 percent allocation)
  - State Building Codes Compliance (1 percent)
  - States with targets that exceed S. 2191 targets (1 percent)
  - Electricity Consumers (LSEs) for consumer energy efficiency programs
    - 9 percent of allowances from 2011 - 2049



# Energy Efficiency Provisions of S. 2191

- Auction Proceeds
  - Low- and Zero-Carbon Technology Deployment
    - 32 percent of auction proceeds
    - Financial incentives for energy efficient power generation and domestic manufacturing of high efficiency products
      - Production incentives and lump sum payments



# Energy Efficiency Provisions of S. 2191

- Complementary Policies

- New efficiency standards for residential boilers starting in 2012
- Allows the Secretary of Energy to create new regional standards for space heating and air conditioning products
  - Study directed on economic justifiability
- Directs the updating of national building energy codes every 3 years from bill enactment
  - Commercial buildings are to be at least 30% more efficient by 2010 - 2019; 50% for code updates after 2020
    - Based on IECC for residential
    - Based on ASHRAE Standard 90.1 for commercial
  - Two years after enactment states must certify that they have updated the provisions of the residential and commercial building codes of the State
  - Technical assistance and incentives may be provided

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# Energy Efficiency and H.R. 6

- Energy Policy: Can be down payment on greenhouse gas reduction
  - Example: buildings represent about 40 percent of the total energy and 39 percent of US greenhouse gas emissions
- Many important policies left out of final deal
- More urgency for Clean Energy Deployment Title in climate change legislation
- Status of federal energy legislation in 2008
  - Technical changes to H.R. 6
  - Tax bill



***Please contact Lisa Jacobson,  
BCSE Executive Director,  
for more information***

1620 Eye Street, NW  
Suite 501  
Washington, DC 20006 USA  
Phone: 202.785.0507  
Fax: 202.785.0514

**[www.bcse.org](http://www.bcse.org)**

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# Leading Current Federal GHG Proposals

	Boxer	Waxman	Warner	McCain	Bingaman
Level	80% below 1990 in 2050	80% below 1990 in 2050	70% below 2005 in 2050	67% below 2000 in 2050	1990 levels by 2030, possible 60% reduct'n in 2050
Coverage/ Point of Regulation	Performance standards for power plants and cars	Cap and trade on largest sources. Performance standards for cars	Upstream cap on oil and natural gas, downstream for coal	Cap on direct emissions from large emitters, indirect from refineries	Cap on indirect emissions at refineries, gas processors, importers and direct from large coal facilities
Starting	2010	2011	2012	2012	2012
Allocation	Trading optional	Mostly Auction	Mostly Auction	TBD	Mostly Auction
R&D Funding and Incentives	Yes	Yes	Yes	Yes	Yes
Safety Valve	None	None	None	None?	\$12/tonne

