



*Concurrent
Technologies
Corporation*

Greenhouse Gas Regulatory Outlook





International Activity

- UN Framework Convention on Climate Change (Mar. '94)
 - Overall framework for intergovernmental climate change efforts
 - Convention *encouraged* industrialized countries to stabilize GHG emissions
 - Ratified by U.S.
- Kyoto Protocol (Feb. '05)
 - Set binding targets for developed countries to reduce GHG emissions on average 5.2% below 1990 levels (2008-2012 commitment period)
 - U.S. signed Protocol, but Congress did not ratify
- U.S. likely to become party to second phase of Protocol beginning in 2012
 - Expected to seriously reenter Kyoto Protocol negotiations in 2009



International Activity

- Parties to Convention continue significant work on climate change (w/ U.S. presence)
- Following “Bali Road Map” – est’d Dec. 2007
 - Objective: by self-imposed deadline of Dec. 2009 in Copenhagen, reach consensus on next climate agreement (post-2102 plan for long-term emissions)
 - Includes “Bali Action Plan” and is similar to position held by major U.S. industry coalition (USCAP)
 - Next Convention meeting in December in Poznan, Poland
- Any U.S. GHG legislation likely to be modeled on international efforts



Executive Orders

- EO 13423 – January 2007
 - Federal agencies must reduce energy intensity
 - 3% annually through end of FY15
 - or 30% by end of FY15
 - Reduction in GHG emissions expected to coincide with reduction in energy intensity
 - No specific goal for GHG emissions reduction
- EO 13432 – May 2007
 - Directs EPA, DOE, DOT, and DOA to cooperate should they begin developing regulations that would cut gasoline consumption and GHG emissions from motor vehicles and other engines
 - Administration response to *Massachusetts v. EPA* (April 2, 2007)



EPA's GHG ANPR

- Advanced Notice of Proposed Rulemaking (ANPR) published July 30, 2008 (announced July 11)
- Response to *Massachusetts v. EPA* (April 2, 2007)
 - GHGs are air pollutants under Clean Air Act (CAA)
- No endangerment finding – trigger for GHG regulation
- Administrator Preamble: CAA “ill-suited” to regulate GHGs
- July 31, 2008 – Lawsuit announced by CA, other states & environmental groups
 - will sue U.S. EPA for ignoring duty to regulate GHG emissions from ships, aircraft, and construction and agricultural equipment
 - 180-day waiting period mandated by CAA



EPA's Mandatory Reporting Rule

- FY2008 Consolidated Appropriations Act requirement
 - EPA must establish mandatory reporting for GHG emissions "above appropriate thresholds in all sectors of the economy."
- EPA working on:
 - Emissions thresholds above which reporting would be required
 - Reporting frequency
 - GHGs to be covered
 - Specific sources to be covered
- Reporting program to rely on established Federal, State, regional, and industry reporting programs & protocols
- Proposal due September 2008; Final Rule by June 2009



State Activity

- California - Global Warming Solutions Act (AB 32)
 - CA's carbon emissions be reduced to 1990 levels by 2020 (25% reduction) and to 80% below 1990 levels by 2050.
 - Enforceable statewide cap on GHG emissions phased-in starting in 2012.
- Statewide GHG Caps
 - New Jersey, Hawaii, Washington, Oregon, Connecticut, Florida
- Statewide GHG Targets
 - 19 States
- Mandatory Statewide Reporting
 - Dozen states (including CA, FL, WA, ME, MA, NC, CT, NJ)
 - Facility size and covered sectors vary



Regional Activity

- The Regional Greenhouse Gas Initiative (RGGI)
 - Ten Northeastern and Mid-Atlantic states
 - Cap, then reduce CO₂ emissions from power plants 10% by 2018
 - Emission allowances auctioned off (1st auction – Sept. 25, 2008)
 - After power sector cap-and-trade program, states may expand program to other sources
- Western Climate Initiative (WCI)
 - Seven Western states & four Canadian provinces
 - Reduce GHG emissions to 15% below 2005 levels by 2020
 - Design recommendations for multi-sector cap-and-trade program released Sept. 23, 2008
 - Two Phases – Power generation & large industry in 2012, transportation & residential, commercial, industrial fuel use in 2015.



Regional Activity

- **Midwestern Regional Greenhouse Gas Accord**
 - Six states, one Canadian province
 - Long-term GHG emission reduction target of 60-80% below current levels
 - Multi-sector cap-and-trade system
 - Emissions reductions tracking system
- **Other Programs**
 - Energy Security and Climate Stewardship Platform for the Midwest
 - Western Governors' Association (WGA): Clean and Diversified Energy Initiative
 - West Coast Governors' Global Warming Initiative
 - New England Governors: Climate Change Action Plan (NEG-ECP)
 - Southwest Climate Change Initiative

Regulatory Confusion, Industry Response



- Patchwork of different state & regional requirements
- Regulatory confusion is bad for business – nationally & internationally
- Increases pressure on industry to support Federal standards for consistency and predictability
- Major U.S. companies taking independent action on climate change – hundreds voluntarily measure and report emissions of GHGs
- Many others voluntarily reducing GHG emissions



Industry Activity

- U.S. Climate Action Partnership (USCAP) – national coalition of business and environmental groups – pushing Congress for legislative action on climate change
- Includes 26 major corporations & six non-governmental organizations (e.g., Alcoa, GE, GM, DuPont, Shell)



Source: www.us-cap.org



Industry Activity

- USCAP wants Congress to pass Federal legislation that includes:
 - Framework for mandatory GHG emissions reductions from major sectors, including large stationary sources and transportation, and energy use in commercial and residential buildings
 - Cap-and-trade program and associated policies across economy
 - Short- and mid-term emission reduction targets
 - National program to accelerate technology research, development and deployment
 - Approaches to encourage action by other countries, including developing world

Source: www.us-cap.org



Industry Activity

- July 2008 - USCAP issued nine principles to influence Congress, next presidential administration and international climate change treaty negotiations, including:
 - connect domestic cap-and-trade system with similar, existing international climate programs (e.g., Europe)
 - greater incentives & adaptation measures for developing countries
 - creation of "rational and consistent tax and accounting standard" for GHG emission credits
 - US should use UN Framework Convention on Climate Change as primary forum for building international climate framework

Source: www.us-cap.org



Federal Legislation

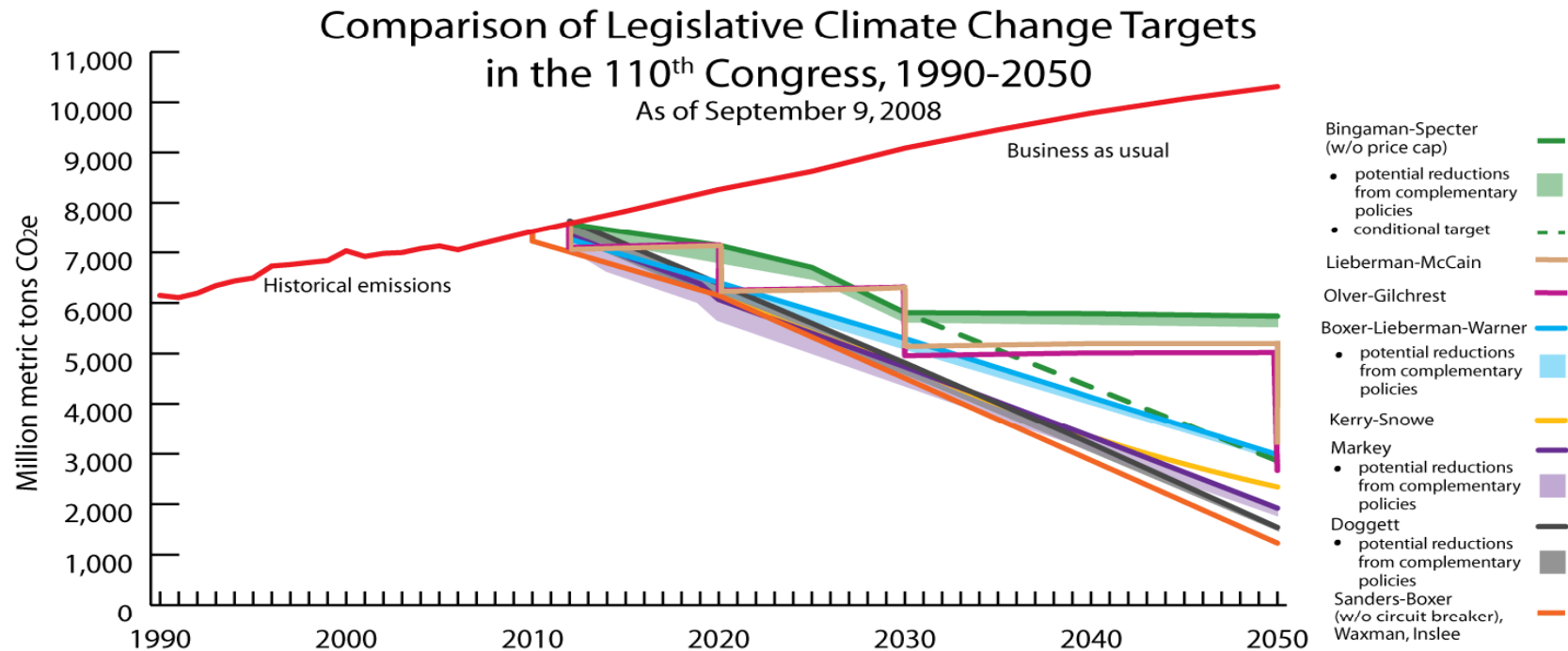
- Currently no Federal laws specifically targeting GHG emissions
- Energy Policy Acts of 1992 and 2005, Energy Independence and Security Act of 2007 indirectly impact GHG emissions through energy reduction and alternative fuel requirements
- Several bills specifically aimed at reducing GHG emissions introduced in Congress in 2007
 - Favor “cap-and-trade” program for reducing CO₂ pollution (similar to 1990s acid rain program)
 - Little progress – only one has made it out of committee



Upcoming Federal Legislation

- Legislation currently before 110th Congress:
- Boxer-Lieberman-Warner (S. 2191)
- Bingaman-Specter (S. 1766)
- McCain-Lieberman (S. 280)
- Sanders-Boxer (S. 309)
- Kerry-Snowe (S. 485)
- Olver-Gilchrest (H.R. 620)
- Waxman (H.R. 1590)

Federal Legislation



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For a full discussion of underlying methodology, assumptions and references, please see <http://www.wri.org/usclimatetargets>. WRI does not endorse any of these bills. This analysis is intended to fairly and accurately compare explicit carbon caps in Congressional climate proposals and uses underlying data that may differ from other analyses. Price caps, circuit breakers and other cost-containment mechanisms contained in some bills may allow emissions to deviate from the pathways depicted in this analysis.

Source: www.wri.org



Upcoming Federal Legislation

- Lieberman-Warner Climate Security Act of 2008 (S. 2191)
 - 1st GHG cap-and-trade bill to be voted out of a full Congressional committee (debated on Senate floor in June 2008)
 - Covered sectors represent over 87% of total U.S. emissions (transportation, electric power, industrial & commercial sectors)
 - Coal-using facilities (power plants and industries using over 5,000 tons of coal per year)
 - Producers and importers of natural gas, petroleum, or coal-based liquid or gas fuels
 - Other GHG manufacturers or importers of >10,000 tons/year of CO₂e
 - Emissions from agriculture, landfills, some industrial processes not covered

Source: www.pewclimate.org



Lieberman-Warner Climate Bill

- Covers all six GHGs
 - carbon dioxide, methane, nitrous oxide, hydroflourocarbons, perflourocarbons, and sulfur hexafluoride
- Emissions caps require reductions across covered sectors below 2005 levels as follows:
 - 2012: 4%
 - 2020: 19%
 - 2050: 71%
- Total reductions in U.S. emissions would depend on growth in uncovered sectors, use of offsets, etc.

Source: www.pewclimate.org



Lieberman-Warner Climate Bill

- Trading –Anyone can buy, hold, sell, and retire emission allowances
- Banking –Unlimited banking of allowances
- Borrowing –15% of annual compliance obligation can be borrowed from future years (10% interest rate)
- Offsets –15% of annual compliance obligation can come from reductions from domestic sources outside the cap
- International Emission Allowances –15% of annual compliance obligation can be met by credits from foreign trading programs of “comparable integrity and stringency”

Source: www.pewclimate.org



Lieberman-Warner Climate Bill

- Creates federal Climate Change Credit Corp. to auction pollution credits among electric utilities, transportation, & other industries
- Initial allocation in 2012
- Total available allowances decline in each year
 - 2012: 5,775 MtCO₂e
 - 2020: 4,924 MtCO₂e
 - 2030: 3,860 MtCO₂e
 - 2050: 1,732 MtCO₂e

Source: www.pewclimate.org



Lieberman-Warner Climate Bill

- Reward for early action on GHGs: 5% of allowances reserved for early actors starting in 2012
- HFC Consumption Limits
 - Separate declining cap on consumption and importation of HFCs
 - Starts in 2010 and declines 70% by 2050
 - May not be traded with larger cap-and-trade program

Source: www.pewclimate.org



Lieberman-Warner Climate Bill

- Amendments to Clean Air Act
- Low carbon fuel standard
 - 5% reduction in lifecycle GHG emissions by 2010
 - 10% reduction by 2020
- Recycling and emission reduction program
- Servicing of motor vehicle air conditioners

Source: www.pewclimate.org



New Executive Order?

- New Executive Order on GHGs expected shortly after inauguration in January 2009
- Will require Federal agencies to measure and reduce GHG emissions
 - Reduction requirements likely to be aggressive
 - Base year expected to be 2003
- Will be issued regardless of who wins election
- Current assumption - both candidates already have completed version of GHG EO

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