



# Status and Evolution of U. S. Climate Policy

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#### **U.S. National Context**

- U.S. has been an active party to the UNFCCC since 1992
- The U.S. repudiated the Kyoto Protocol in 2000
- Since 2000 emphasis on voluntary GHG programs
- Growing interest in key role of technology development
- Many new national federal legislative proposals
- Rapidly evolving state and regional initiatives
- Recent dramatic changes in U.S. national politics
- Evolution of new climate stakeholder collaborations
- Complex electric sector regulatory environment



#### **Recent GHG Policy Trends in the U.S.**

- Increased U.S. federal legislative activity
  - Bingaman Specter (S. 1766 "Low-Carbon Economy Act")
  - Lieberman Warner (Sept. 2007 Discussion Draft)
  - Lieberman McCain (S. 280)
  - Others (e.g., Kerry-Snowe, Olver-Gilchrest, Sanders-Boxer)
  - Proposals by stakeholder collaborative groups (e.g., US CAP)
- Rapid evolution of regional and state-wide GHG policies
  - Northeast Regional GHG Initiative (RGGI)
  - California (AB-32)
  - Western Climate Initiative (WCI)
  - In 2007, several states (e.g., MN, HI, NJ, IL) adopted CO<sub>2</sub> emissions targets and related laws
- Increased GHG reporting activity
  - Multi-state regional GHG emissions inventory protocol



# **Key Issues in US Domestic Climate Policy**

#### Coverage

- Economy-wide v. sector-by-sector
- Upstream / downstream / "hybrid" point of regulation
- 6 GHGs versus CO<sub>2</sub> only
- Targets and timetables
- Allowance allocation
  - Free v. auctioning
  - Sectoral and stakeholder allocations
- Cost containment How to control unexpected costs & volatility?
- Technology How to stimulate key new technologies (e.g., CCS, IGCC)?
- Offsets
  - What is the potential role of GHG offsets?
  - What types / geographies / limitations / architecture?
- Federalism
  - How to integrate state & regional programs?
- Preemption or accommodation?



#### **Projected Emissions Paths under U.S. Proposals**



please see <a href="http://www.wri.org/usclimatetargets">http://www.wri.org/usclimatetargets</a>. WRI does not endorse any of these bills. This analysis is for comparative purposes only. Data post-2030 may be derived from extrapolation of EIA projections.

Source: World Resources Institute (WRI).



# Bingaman-Specter (S. 1766) "Low Carbon Economy Act of 2007"

- GHG targets
  - 2006 levels by 2020
  - 1990 levels by 2030
- Hybrid, economy-wide cap and trade program
  - Downstream for electric sector
  - Upstream for petroleum & natural gas
- Cost containment (i.e., a "safety-valve" price)
  - Starts at  $12/tCO_2$  in 2012 and grows 5% annually on a real basis
  - Allows inter-temporal banking
- Technology incentives
  - CCS "offsets" and "bonus allowances"
  - Technology, adaptation and low-income assistance funding
- International linkage and engagement
  - Five-year review of major trading partners
  - Potential sanctions to require GHG allowances for imports

#### **Bingaman-Specter Allowance Allocation**

- Mix of free allocation and auctioning
  - 24% auctioned each year 2012–2016
  - Increasing 2% annually starting 2017, growing to 53% by 2030
  - 53% free to industry at start (incl. 29% for electric generation)
- Allocation for specific offsets
  - 5% agricultural sequestration
  - 8% geologic sequestration (CCS)
- Other allocations
  - 9% set-aside to states
  - 1% for early reductions



Source: World Resources Institute (WRI).



# Lieberman-Warner (Summer 2007 Discussion Draft)

- **GHG** reductions
  - 2005 level by 2012
  - 2005-10% by 2020 (2005-70% by 2050)
- Scope (covers ~80% of U.S. GHG emissions)
  - Electric power generators
  - Transportation fuels (upstream)
  - Industry emitting > 10,000 MMTCO<sub>2</sub>e
- Allowance allocation
  - Increasing auction (starts 24%)
  - Industry (20%)
  - Electric power and LSEs (30%) Transportation (2.5%)
  - Biological sequestration (7.5%) Early Action (8%)

- States (4%)
- Coal mining (4%)

#### Lieberman-Warner Cont.

- Allows offsets to equal up to 15% GHG emissions
- "Carbon Market Efficiency Board"
  - Cost containment mechanism
  - "Federal Reserve" for CO<sub>2</sub> emissions
  - Can expand borrowing, offsets & allowance pool
  - Maintain integrity of overall GHG reduction targets & caps



# **US Climate Action Partnership (US CAP)**

- Diverse membership (100+)
  - Electric (e.g., Duke, Exelon, FPL, NRG, PG&E, PNM Resources)
  - Environmental NGOs (e.g., EnvDef, NatCon, NWF, NRDC, WRI)
  - Industrials (e.g., Alcoa, Caterpillar, Dow, Ford, GE, GM, Rio Tinto)
  - Oil & Gas (e.g., BP, Conoco-Phillips, Shell)
  - Others (Marsh, PepsiCo, Pew Center, Xerox)
- Climate policy proposal
  - Supports mandatory GHG cap-and-trade system to be phased in over several decades
  - Endorses use of GHG emissions offsets to reduce costs and add flexibility
  - 100–105% of today's levels (2007) within
     5 years of "rapid enactment"
  - 90–100% of today's levels within 10 years...
  - 70–90% of today's levels within 15years...





#### **17 States Have Adopted GHG Emissions Targets**



Source: Pew Center on Global Climate Change website. http://www.pewclimate.org/what\_s\_being\_done/in\_the\_states/emissionstargets\_map.cfm .

- Arizona
- California
- Connecticut
- Florida
- Hawaii
- Illinois
- Massachusetts
- Maine
- Minnesota
- New Hampshire
- New Jersey
- New Mexico
- New York
- Oregon
- Rhode Island
- Vermont
- Washington



#### **Regional GHG Initiatives 2007**



Source: Pew Center on Global Climate Change website. http://www.pewclimate.org/what\_s\_being\_done/in\_the\_states/regional\_initiatives.cfm

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#### Selected U.S. State and Regional GHG Emission Targets and Timetables

| Region   | Baseline                      | GHG Goal  | Period                                  |
|--|-------------------------------|---|---|
| <b>Arizona</b> <sup>1</sup><br>(E.O. 2006-13)  | 1.2000                        | 1. Maintain 2000 level<br>2. Reduce 50% absolute  | 1. 2020<br>2. 2040                      |
| <b>California</b> <sup>2</sup> (AB-32)         | 1. 1990                       | 1. Maintain 1990 level  | 1. 2020                                 |
| <b>New Mexico</b> <sup>3</sup> (E.O. 2005-033) | 1. 2000<br>2. 2000<br>3. 2000 | <ol> <li>Maintain 2000 level</li> <li>Reduce 10% absolute</li> <li>Reduce 75% absolute</li> </ol> | 1. 2012<br>2. 2013-2020<br>3. 2021-2050 |
| RGGI <sup>4</sup>                              | 1. 2005<br>2. 2005            | <ol> <li>Maintain 2005 level</li> <li>Reduce 10% absolute</li> </ol>                              | 1. 2009-2015<br>2. 2016-2019            |

Notes: 1. Signed September 8, 2006.

2. Passed by the CA legislature August 31, 2006; expected to be signed by Governor.

3. Signed June 9, 2006.

4. MOU signed December 2005; "Model" rule issued August 2006.

#### States with GHG Reporting & Registries Increased 2006 to 2007



Source: Pew Center on Global Climate Change website. http://www.pewclimate.org/what\_s\_being\_done/in\_the\_states/regional\_initiatives.cfm



## **Northeast Regional GHG Initiative (RGGI)**

#### 10 NE and Mid-Atlantic states

- CT, DE, MA, MD, ME, NH, NJ, NY, RI, VT
- Final "model rule" 8/15/06
- Start date 1/1/09
- CO<sub>2</sub> targets
  - 1. 2005 levels by 2009
  - 2. Maintain 2005 level to 2015
  - 3. 2005–10% by 2019

#### • Multi-regional Cap and Trade

- Electric-sector only (>25 MW)
- Requires  $\geq$  25% allowance auction
- Limited use of GHG offsets
- 3-year compliance period
- Inter-temporal banking





#### **CA – The First Mandatory State GHG Cap**

- The Global Warming Solutions Act of 2006
  - AB-32 passed August 2006
  - Regulatory development 2007-2011
- Target: 1990 CO<sub>2</sub> emissions by 2020
- Main elements:
  - All 6 GHGs
  - All industrial GHG emissions
  - Allows GHG offsets
  - Caps GHG emissions and <u>may allow</u> trade after regulatory development
  - Encourages linking of regional, national and international GHG emissions mitigation programs





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