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 CO₂ 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 CO₂ 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

Comparison of Legislative Climate Change Targets in the 110th Congress, 1990-2050
September 17, 2007

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 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/tCO₂ 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 MMTCO₂e

- Allowance allocation
  - Increasing auction (starts 24%)
  - Industry (20%)
  - Electric power and LSEs (30%)
  - Biological sequestration (7.5%)
  - States (4%)
  - Coal mining (4%)
  - Transportation (2.5%)
  - Early Action (8%)
Lieberman-Warner Cont.

- Allows offsets to equal up to 15% GHG emissions
- “Carbon Market Efficiency Board”
  - Cost containment mechanism
  - “Federal Reserve” for CO₂ emissions
  - Can expand borrowing, offsets & allowance pool
  - Maintain integrity of overall GHG reduction targets & caps

Cumulative emissions reduction equal for all potential paths

Path 1: price relief not triggered
Path 2: extended price relief triggered
Path 3: moderate price relief triggered

Source: World Resources Institute (WRI).
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 15 years…
17 States Have Adopted GHG Emissions Targets

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

Source: Pew Center on Global Climate Change website.
http://www.pewclimate.org/what_s_being_done/in_the_states/emissionstargets_map.cfm
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

<table>
<thead>
<tr>
<th>Region</th>
<th>Baseline</th>
<th>GHG Goal</th>
<th>Period</th>
</tr>
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<tbody>
<tr>
<td>California&lt;sup&gt;2&lt;/sup&gt; (AB-32)</td>
<td>1. 1990</td>
<td>1. Maintain 1990 level</td>
<td>1. 2020</td>
</tr>
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**Notes:**
2. Passed by the CA legislature August 31, 2006; expected to be signed by Governor.
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

- CO₂ 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 ≥ 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 CO₂ emissions by 2020
• Main elements:
  – All 6 GHGs
  – All industrial GHG emissions
  – Allows GHG offsets
  – Caps GHG emissions and may allow trade after regulatory development
  – Encourages linking of regional, national and international GHG emissions mitigation programs
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