Federal Climate Change Policy Update: A Focus on SF_6

SF_6 Partner Meeting
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The Political Landscape

Obama: climate/energy top priority

- Understand urgency of science/time to act now; science to drive decisions
- Supported billions in stimulus package for renewable and low-carbon energy infrastructure and R&D
- Strong proponent of cap and trade
- Reframed issue as clean energy/green jobs
- Forged agreement between U.S. EPA, U.S. DOT, State of California, and automakers on vehicle standards for GHG emissions and fuel economy

Some of Obama's Climate Team

Carol Browner Assistant to the President for Energy and Climate Change	**Nancy Sutley** Chair, White House Council on Environmental Quality	**John Holdren** Director, White House Office of Science and Technology Policy
Hillary Clinton Secretary of State		**Todd Stern** Special Envoy on Climate Change
Steven Chu Secretary of Energy	**Lisa Jackson** EPA Administrator	**Jane Lubchenco** NOAA Administrator

U.S. Congress

SENATE

59-40 D Senate majority

(1 still undecided)

Majority Leader Reid

EPW Chairman Boxer

Need 60 votes for a bill

Need 67 votes for treaty

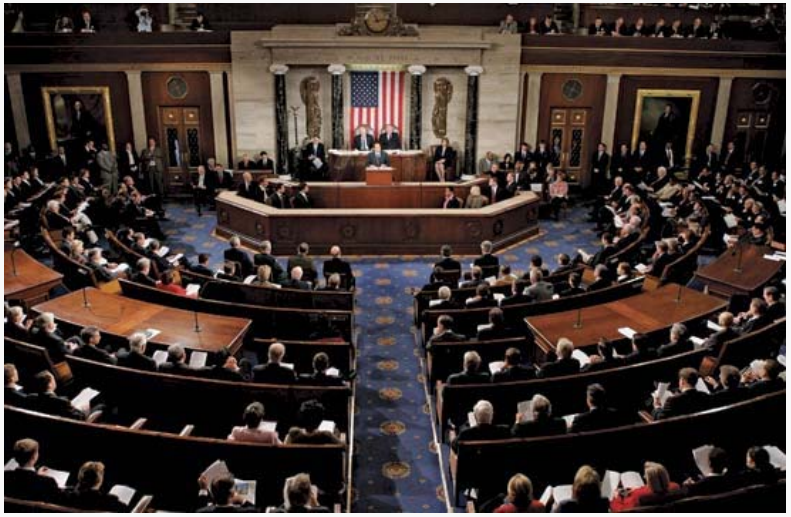
HOUSE OF REPRESENTATIVES

256-178 D House majority

Speaker Pelosi

E&C Chairman Waxman

Need 218 votes for a bill



Legislative Process

- House Energy and Commerce Committee reported bill (May 22)
- Other House Committees have referrals (Agriculture, Natural Resources, Science, Ways and Means)
- Full House vote (possibly Summer 2009)
- Senate committee action (possibly in 2009)
- Full Senate vote (2009 or 2010)
- House-Senate Conference (2009 or 2010)
- President's signature (2009 or 2010)

House Committee on Energy and Commerce

- Chairman Waxman (D-CA)
- Subcommittee Chairman Markey (D-MA)
- 59 members
- After roughly 37 hours and 94 amendments, the panel approved the bill, 33-25.
- Bono Mack only Republican to vote Yes

House Committee on Energy and Commerce

YES VOTES:

Waxman (D-CA), Dingell (D-MI), Markey (D-MA), Boucher (D-VA), Pallone (D-NJ), Gordon (D-TN), Rush (D-IL), Eshoo (D-CA), Stupak (D-MI), Engel (D-NY), Green (D-TX), DeGette (D-CO), Capps (D-CA), Doyle (D-PA), Harman (D-CA), Schakowsky (D-IL), Gonzalez (D-TX), Inslee (D-WA), Baldwin (D-WI), Weiner (D-NY), Butterfield (D-NC), Hill (D-IN), Matsui (D-CA), Christensen (D-VI), Castor (D-FL), Sarbanes (D-MD), Murphy (D-CT), Space (D-OH), McNerney (D-CA), Sutton (D-OH), Braley (D-IA), Welch (D-VT), Bono Mack (R-CA)

NO VOTES:

Barton (R-TX), Upton (R-MI), Hall (R-TX), Stearns (R-FL), [Deal (R-GA)], Whitfield (R-KY), Shimkus (R-IL), Shadegg (R-AZ), Blunt (R-MO), Buyer (R-IN), Radanovich (R-CA), Pitts (R-PA) Walden (R-OR), Terry (R-NE), Rogers (R-MI), Myrick (R-NC), Sullivan (R-OK), Murphy (R-PA), Burgess (R-TX), Blackburn (R-TN), Gingrey (R-GA), Scalise (R-LA), Ross (D-AR), Matheson (D-UT), Melancon (D-LA), Barrow (D-GA)

Waxman-Markey Bill Highlights

- Coverage: 85% of U.S. emissions through cap-and-trade
- Cap: 3% 2005 levels by 2012; 17% below 2005 levels by 2020; 83% below by 2050
- Threshold: Cover entities >25K tons CO_2e; EPA may lower to 10K after 2020
- Pollutants: Lists specific GHGs including SF6, PFCs and NF3.
- Offsets: 2 billion tons domestic & int'l
- Cost containment: Strategic reserve of allowances available if allowances prices rise above trigger price

W-M Highlights cont.

- Clean Air Act limitation: GHGs not regulated as criteria pollutants or hazardous air pollutants under CAA
- State role: GHG cap-and-trade programs on hold for 5 years; other state programs unaffected
- Allowance distribution: Used for consumer protection, industry and worker transition assistance, technology innovation, and adaptation (initially 85% free allocation/15% auction; shift to auction over time)
- Extensive carbon market oversight provisions

W-M Highlights

- Both a clean energy and climate bill

Clean Energy	Climate
Renewable Energy Standrds	Cap and trade
SEED Accounts	Adaptation
Smart Grid requirements	Black carbon
Building codes	HFC limits
Appliance efficiency	
CCS RD&D	

Coverage

- Covers 7 GHGs: Carbon dioxide (CO_2), Methane (CH_4), Nitrous oxide (N_2O), Sulfur hexaflouride (SF_6), hydrofluorocarbons (HFCs) emitted as a byproduct, perfluorocarbons (PFC), nitrogen trifluoride (NF_3), and any other anthropogenic gas EPA finds has GWP equal to or greater than CO_2.
- Coverage is phased
  - 2012: Electricity and transportation
  - 2014: Industrial processes and combustors
  - 2016: Residential/commercial/small industrial natural gas consumption at LDC
- Separate cap and trade program for HFCs

Separate HFC Cap

- Included in basket of 6 Kyoto gases
  - -- Why move out of basket?
- Preference for Title VI treatment
- Willingness to take on phase-down timetable/complementary regulations
- Strong support from industry/NGOs
- Possible carryover to Montreal Protocol

HFC Provisions

- Shift regulation to Title VI of CAA
- Divide allowances into 2 pools:
  - --80% to producers/importers: phase-in auction
  - -- 20% users: sold for set price
- Auction and sales revenue goes to fund to support recycling, retooling, high efficiency products
- Subject to labeling, recycling, nonessential use ban regulations

W-M Bill: Electricity Sector

- Required to reduce emissions beginning in 2012
- 43.75% of allowances in 2012 allocated to benefit electricity consumers
- LDCs are primary vehicle for distributing allowance value
  - -- Goal: to minimize impact on consumers
- Small charge to support early introduction of CCS
- Performance standards for new coal fired powerplants in 2020 (assuming CCS viable)

USCAP Partnership

Role of Voluntary Programs

- Valuable experience in developing reporting protocols and inventorying emissions
- Technical support and cooperation in “best practices” for emission reduction strategies
- Facilitates corporate “learning”
- Better positioned to take on obligations

For More Information

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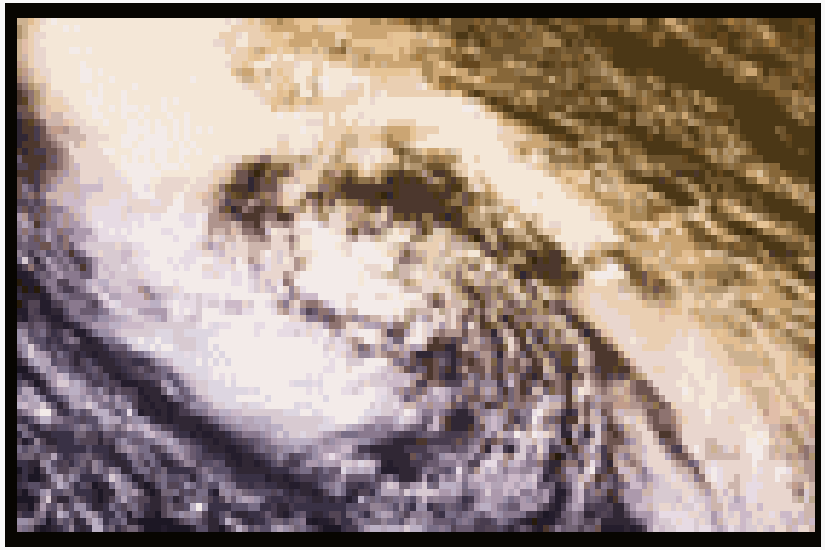

Waxman- Markey Complementary Policies

- Efficiency and Renewable Portfolio Standard (20% by 2020)
- Coal measures (CCS deployment strategy and funding, performance standards for new plants, etc.)
- Energy efficiency measures: building efficiency codes, energy efficiency resource standard, etc.
- Transportation: PHEV planning and incentives, states and MPOs to develop GHG reduction plans
- GHG performance standards
- Transmission planning, smart grid advancement, green jobs and worker transition, etc.

Allowance Allocation to States

- Renewables and energy efficiency: starts at 9.5%; 4.5% after 2021)
- Home heating oil and propane users: starts at 1.875%, declining to 0.3% in 2029.
- Other purposes if eligibility requirements met:
  - Building efficiency codes: 0.5% initially
  - Adaptation: Starts at 0.9% for domestic adaptation; 0.385% for natural resources adaptation; increases over time.
- Holders of allowances issued by California, RGGI or WCI before 12/31/11 may exchange these for federal allowances.
- Other funds for states: Funds raised through the federal ERES are given directly to states for use in renewable energy and energy efficiency programs.
- States can set up State Energy & Environment Development (SEED) Funds to combine federal clean energy/climate assistance

Cost Containment

- Full trading and banking of allowances; unlimited next-year borrowing; limited borrowing for 2-5 years in the future w/8% interest.
- Domestic & international offsets are permitted; 2 billion tpy system-wide
  - Up to 1bn dom/1bn int'l; if < 1bn dom; EPA can increase int'l up to 1.5 billion
  - Domestic can be used 1:1 for compliance; international can be used 1:1 until 2018 and then discounted 20%
  - Firm-level limits set by formula; % compliance w/ offsets increases over time.
  - President may recommend Congress alter total # of offsets up or down.
  - EPA will list w/in 1 yr accepted project types based on recommendations from Offset Integrity Advisory Board
  - Methane emissions (other than from agriculture) may be covered by performance standards and thus ineligible as offsets unless below standard. EPA must assess impact on offset supply.
  - International emission allowances from countries with absolute caps, subject to approval from the EPA, are permitted without limit.

Cost Containment (cont'd)

- Strategic allowance reserve created from future year allowances:
  - 1% each year from 2012-2019; 2% from 2020-2029 ; 3% from 2030-2050.
- EPA conducts quarterly strategic reserve auctions (SRAs) open only to covered entities.
- Minimum SRA price:
  - 2012: $28/ton; 2013-2014: the previous year's auction price increased by inflation plus 5%; after 2014: 60% above 36-month rolling average.
- Maximum number of SRA allowances:
  - 2012-2016, no more than a quantity equal to 5% of annual allowances issued for a given year ; 2017 onwards: 10%
- No entity may purchase from SRA more than 20% of its obligation.
- Forest carbon tons sold on consignment by private entities if SRA tons exhausted and 80% of allowed system offsets to be utilized that year.
- SRA proceeds used to purchase international forest carbon tons to replenish the reserve at a 20% discount

Competitiveness

- Output-based allowance distribution approach is primary mechanism to deal with competitiveness, w/ International Reserve Allowance program—requiring allowances for imported goods' embodied GHG emissions – as a backstop.
- Distributes emission allowances to energy-intensive, trade-exposed industries. Sets criteria which would make sectors and subsectors presumptively eligible, and allows the EPA to designate more.
- Allowances compensate for direct and indirect carbon costs; firms do not have to be covered to qualify.
- Distribution would begin phasing out by 10% each year starting in 2026 (pending Presidential review).
- In 2022, President is required to make a finding that could trigger International Reserve Allowance program for particular sector or subsectors (this program would begin no earlier than 2025).

Complementary Measures for Coal

- Federal agencies to develop national strategy for CCS deployment
- EPA Administrator ordered to develop regulations for geologic sequestration sites
- Boucher CCS trust fund for early stage deployment
- Performance standard for new coal power plants and financial incentives for CCS deployment
  - Similar but not identical to USCAP*BLA*
  - New facilities permitted in 2020 must reduce annual CO_2 emissions by 65% compared to operation without CCS. Plants permitted between 2009 and 2019 subject to 50% reduction
  - Plants permitted 2009-2019 must comply by the earlier of January 1, 2025 or 4 years after deployment of at least 4 GW of CCS in the U.S.
  - Authorizes rebate for early large scale deployment (and specifies rebate values for first 6 GW of CCS capacity)
  - After initial 6 GW of CCS, bonus allowances to be awarded via reverse auction or via first-come, first-served program, if the Administrator deems the latter to be more effective.

Adaptation

- Establishes National Climate Change Adaptation Program within USGCRP.
- Requires President to develop and implement Natural Resources Climate Change Adaptation Strategy.
- Requires states and federal agencies to develop natural resource adaptation plans.
- Establishes Natural Resources Climate Change Adaptation Fund in the Treasury. States could apply for these funds if they have prepared a natural resources adaptation plan.
- Provides 2% of allowance value increasing over time for domestic adaptation (much of that goes to states)
- Provides 1% of allowance value increasing over time for international adaptation.

Renewable Energy and Efficiency

- Combined Efficiency and Renewable Electricity Standard
  - Standard starts at 6% of sales in 2012 and rises to 20% in 2020
  - Up to one quarter of the requirement can be automatically met with electricity savings. Upon petition by a state's governor, FERC can allow a state's utilities to use electricity savings to meet up to two fifths of the standard
  - New nuclear and CCS generation do not increase requirements for efficiency and renewables
- Promotes energy efficiency in new and retrofitted buildings
  - Establishes national building energy efficiency codes
  - Establishes a building retrofits program
  - Establishes a program to upgrade inefficient manufactured homes
  - Establishes a model building energy performance labeling program
- New efficiency standards for lighting and other appliances, including financial incentives to retailers who sell high volumes of "Best-in-Class" appliances.

Some other provisions

Targets beyond cap and trade: same as cap and trade except 20% below 2005 levels in 2020

Allowance distribution:

- Consumers: To LDCs for electric and gas, to states for heating oil and propane; federal rebates for low and moderate income families
- Supplemental reductions: 10% (720 mtCO_2e) below 2005 levels by 2020 (cumulatively 6 btCO_2e by 2025) thru sale of 5% of allowances to fund REDD.
- Competitiveness, workers, EERE investment, adaptation, international programs
- Provides 1% of allowance value increasing over time for International Clean Technology Fund in Treasury

USCAP

Why would businesses want urgent enactment of climate legislation?

- Cost of regulatory uncertainty
- Supreme Court has effectively ordered EPA to regulate GHGs
- State action: 24 states developing GHG cap (1/2 population)
- GHG regulation in place in Europe
- Want US to influence post-2012 international climate negotiations
- Convinced by climate science, concerned by increasing risk from climate impacts

Coverage in 2012

- All electricity sources
- Producers and importers of liquid fuels whose combustion will emit more than 25,000 tons of CO_2e
- Producers and importers of fluorinated gases (except HFCs)
- Geological sequestration sites
- Electricity sources not required to submit allowances for emissions resulting from the use of petroleum-based or coal-based liquid fuel; biomass; petroleum coke; or HFCs, PFCs, SF_6, NF_3, or any other fluorinated gas that is a GHG.

Coverage in 2014 (Industry)

- Producers and manufacturers of: adipic acid; primary aluminum; ammonia; cement, excluding grinding-only operations; HCFCs; lime; nitric acid; petroleum refining; phosphoric acid; silicon carbide; soda ash; titanium dioxide; coal-based liquid or gaseous fuel production
- Manufacturers of acrylonitrile, carbon black, ethylene, ethylene dichloride, ethylene oxide, or methanol; or manufacturers of a petrochemical product not manufactured as of the date of enactment, if EPA determined that manufacturing that product results in annual process emissions of 25,000 or more tons of CO_2e in 2008 or after.
- Producers and manufacturers of ethanol, ferroalloy, glass, hydrogen, iron and steel, lead, kraft pulp and paper, zinc, and food processors that have emitted 25,000 or more tons of CO_2e in 2008 or any subsequent year.
- Any fossil fuel-fired combustion device or grouping of such devices that is all or part of an industrial source not specified above; and has emitted 25,000 or more tons of CO_2e in 2008 or any subsequent year.

Coverage – More detail (cont'd)

- In 2016: Emissions from the combustion of natural gas for residential, commercial and small industrial use would also be covered at local distribution companies (LDCs) which deliver 460,000,000 cubic feet or more of natural gas annually.

- In 2012. HFCs covered by separate cap-and-trade program and a tax. The draft would set an emissions baseline derived from the average annual importation and production of HFCs from 2004-2006, and a target range of reducing HFC emissions to 85% below the baseline by 2032.

- EPA to promulgate regs to reduce domestic black carbon emissions

USCAP Recommendations

- Targets
  - 100-105% of today's levels within five years
  - 90-100% of today's levels within 10 years
  - 70-90% of today's levels within 15 years
  - Goal of 60-80% reduction by 2050 (~450-550 ppm)
- Economy-wide cap-and-trade system is essential to create market price signal for GHGs
- Additional policies/measures where price signal alone is not sufficient
  - Transportation
  - Power generation
  - Energy efficiency
- Technology research, development, demonstration, and deployment
- Need for renewed U.S. leadership in international efforts