

# U.S. Climate Change Legislation: Overview and Outlook

Big Sky Carbon Sequestration Partnership  
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- American Climate & Energy Security Act of 2009
  - 'Waxman-Markey'
  - Passed by House (219-212) on June 26, 2009
  - Establishes economy-wide cap-and-trade system over approximately 85% of U.S. GHG emissions
  - Includes financial incentives for various 'clean' energy technologies, including CCS and renewables.
  - Now in Senate – need 60 votes to break filibuster.
    - Senate Environment and Public Works Committee expected to release their bill by next week, vote by mid-October.

- Caveat: This is all likely to change in Senate
- Important Note: Many of the details left to agency rulemakings
- Overview:
  - Seeks to expand renewable energy and carbon capture and sequestration (CCS)
  - Seeks to increase energy efficiency
  - Establishes cap-and-trade system over approximately 85% of U.S. GHG emissions

→ Overview (*continued*):

- Protects energy-intensive U.S. manufacturing from “carbon leakage”
- Enables limited linkage with international emission trading systems
- Includes supplemental international forestry and adaptation programs
- Provides only limited preemption of other federal and state regulatory programs

## → Federal Renewable Electricity Standard

- Electricity suppliers required to generate 20% of electricity from renewable sources by 2020 (6% in 2012).
  - One quarter can be satisfied with energy efficiency improvements.
  - 26 States already have similar requirements, but definitions of 'renewable energy' vary.
- The bill creates a system of tradable Renewable Electricity Certificates (RECs) to implement this requirement.

- Legislation includes multiple sources of funding for commercial-scale CCS.
  - Distributes allowances to eligible CCS projects (\$75-100 billion?).
  - Creates industry-run corporation to fund other CCS projects (\$1 billion/yr for 10 years).
  - Also establishes performance standards for new coal-fired power plants.
    - 50% reduction for new plants started after 2008, but depends on availability of CCS.
    - 65% reduction for new plants started after 2020.

- Promotes and expands use of plug-in electric drive vehicles and related support infrastructure, including Smart Grid systems.
- Requires development of green building codes, energy efficient homes programs, building energy performance labeling programs, transportation planning programs, and end-use consumer efficiency programs.
  - New buildings to reduce energy use by 30% in 2012 and 50% by 2014 (2015 for new commercial buildings)
- Authorizes funding for clean energy technologies (including nuclear).
- Sets emission standards for heavy-duty vehicles.

- Cap-and-trade system covers ~85% of domestic GHG emissions and seeks reductions of:
  - 3% below 2005 levels by 2012.
  - 17% below 2005 levels by 2020.
  - 42% below 2005 levels by 2030.
  - 83% below 2005 levels by 2050.
- Covers all six Kyoto gases (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF<sub>6</sub>)). Also covers nitrogen trifluoride (NF<sub>3</sub>)
  - HFC consumption/imports regulated separately.
  - EPA required to add other gases with GWP of 1 or greater (unless already regulated as an ozone depleting substance).

- Covered entities encompass a broad variety of sources, covering both producers/importers and emitters including:
  - Any electricity source or fuel producer
  - Stationary sources in various sectors – regardless of actual emissions – including adipic acid production, cement production, lime manufacturing, nitric acid production, phosphoric acid production, soda ash production, and others
  - Stationary sources with emissions of at least 25,000 CO<sub>2</sub>e tons per year in other sectors, including ethanol production, ferroalloy production, food processing, glass production, lead production, and others

→ Covered entities (*continued*):

- Stationary sources that produce at least 25,000 CO<sub>2</sub>e tons per year of acrylonitrile, carbon black, ethylene, ethylene dichloride, ethylene oxide, or methanol
- Other covered sources include geologic sequestration sites and fluorinated gas producers

- **Allowance Allocations:**
- Energy “consumers” are allocated 35% of total annual allowances beginning in 2012 through 2025.
  - From 2026 through 2030, the amount is reduced 20% annually. Full 100% auction begins in 2030.
  - Restrictions imposed on recipients of allowances, limiting use solely for “benefit of ratepayers.”
  - 9% to local natural gas distribution companies, with similar restrictions.
- States get 10% for renewable/efficiency investment (declining to 5% by 2018) and 1.5% to help users of home heating oil/propane.
- Energy-intensive industries get 15% (as part of emission allowance rebates).
- Oil refiners get 2% from 2014-2016.

- Allowance Allocations (*continued*):
- State-issued allowances -- from California, the Northeastern Regional Greenhouse Gas Initiative, and Western Climate Initiative -- can be exchanged for federal allowances so long as they were issued before Dec. 31, 2011.
- Deforestation prevention efforts get 5% of allowances.
- Adaptation gets 2% for domestic programs (increasing to 8% by 2027) and 2% for international programs and technology transfer (increasing to 8% by 2027).
- Eligible early action efforts get 1%.

- Auctioning begins with 15 percent of the allowances around 2011.
  - Proceeds directed toward low- and moderate-income families, with funds distributed via tax credits, direct payments and electronic benefit payments.
  - Price floor established at \$10/ton.

- On April 1, 2013, and every year thereafter, covered entities must hold an emission allowance or an offset credit for each CO<sub>2</sub>e ton of emissions in the previous year ... with a few exceptions:
  - Certain non-emissive feedstock uses of fossil fuels and fluorinated gases will be eligible for “compensatory allowances.”
  - Other downstream uses of already-covered fuels by covered entities exempted.
  - Unlimited (for now) banking; unlimited borrowing for 1 year; limited borrowing (with interest) for up to 5 years.

- EPA authorized to allow emission allowances from foreign programs (e.g., EU ETS).
  - Foreign ETS must have an absolute tonnage limit and be at least as stringent as US ETS.
  - No specific limit on use of foreign allowances imposed in bill, but EPA authorized to set limits as desired.

- Offset is different than an allowance
- Up to 2 billion offset credits per year may be used for compliance.
  - Each covered entity can use offset credits to meet a fixed percentage (~30%) of its compliance obligation, based on a formula. Of this percentage, up to half can be domestic offset credits and up to half can be international offset credits.
  - EPA can allow an additional 25% of international offset credits (for a total of 75% of an individual entity's use) upon determining that the supply of domestic offset credits is below 0.9 billion at emission allowance prices.
- Domestic offset credits are not discounted. International offset credits are discounted on a 5:4 ratio (beginning in 2018).
- EPA/USDA has authority to change any part of offsets program.

## American Climate & Energy Security Act of 2009 Domestic Agriculture and Forestry Offsets

- Dept. of Agriculture will administer domestic offsets program for agricultural and forestry projects.
- USDA likely to allow broad range of projects involving changes in carbon stock attributed to land use change and forestry activities.
  - Forestry-related projects could include: afforestation, reforestation, forest management, urban tree-planting, agroforestry, reduced deforestation, and avoided forest conversion.
  - Up to 20 year crediting periods for forestry sequestration practices, with possibility of 'reenrollment,' subject to USDA discretion.
- USDA can issue 'term offset credits' as a way to guard against project reversal (and as an alternative to offsets reserve or insurance).
  - Term offset credits last for up to 5 years and then must be replaced.

- Host country must be a developing country that is party to a bi- or multilateral “agreement or arrangement” with the U.S. that ensures offset program requirements will apply to projects in that country.
  - Vaguely worded, but if strictly construed could block international offset credits in US system until a post-2012 climate agreement is signed and ratified by US and most developing countries.
- CERs (or any other type of offset instrument created under an international climate body) must meet same requirement.
- Reduced deforestation projects eligible, but quantity of credits issued determined by emission reductions relative to a national or subnational baseline.
  - Key forest countries must take a national deforestation baseline that seeks to result in net-zero loss in 20 years.
  - Use of sub-national are allowed only for a five year crediting period.
  - For low-emitting and/or least developed countries, project/program baselines allowed for five years and can be extended for an additional eight years.
- Sectoral offset projects also permitted, subject to various requirements.

- Supplemental program outside of cap seeks to reduce emissions by 720 million tons of CO<sub>2</sub>e by 2020 and 6 billion tons of CO<sub>2</sub>e by 2025.
  - Would add 10% to US totals by 2020 (i.e., 17% becomes 27%).
- Seeks to build capacity to reduce deforestation in developing countries, including preparing developing countries to host offset projects and participate in carbon markets.
- Oversight from USAID as well as EPA.
- For funding, supplemental programs to receive 5% of allowances from 2012-2025, 3% from 2026-2030; and 2% from 2031-2050.

- The bill establishes a complex regulatory system to oversee both physical and derivative allowance and offset transactions.
  - Driven by significant concern over market manipulation and fraud.
  - New regulations expand regulatory authority of FERC/CFTC beyond allowance/offset market into all forms of energy-related transactions.
    - Would eliminate OTC/bespoke transactions and grant unprecedented “cease and desist” authority to regulators.

- The bill creates a separate cap and phase down of consumption and imports of HFCs.
  - 10% reduction of baseline in 2012, declining to 85% reduction by 2033.
  - Baseline is average annual HFC consumption/imports in 2004-2006, with range of 280-370 mmtCO<sub>2</sub>e.
- Main objective was to ensure price stability over a gradual phase down.
  - Inclusion in big basket seen as risking price spikes for end-use consumers.
  - Numerous provisions designed to harmonize domestic program with international agreement.
- CFC destruction to count as source of offsets.
  - EPA authorized to add other ozone depleting substances and to allow destruction offsets to count in main cap-and-trade system as well.

- Performance standards for significant uncapped GHG sources.
- EPA authorized to develop regulatory program for black carbon.
- Strategic reserve program to provide some price stability.
- Limited preemption of state programs and other federal statutes.
  - Clean Air Act preemption does not provide full protection
  - State preemption limited to cap-and-trade programs and only for a limited period of time

- The bill requires EPA to report to Congress each year regarding whether China and India have adopted greenhouse gas emissions standards at least as strict as those standards required under the bill.
- EPA required to consult with the Department of State and the United States Trade Representative in preparing report.



- The bill provides for the distribution of emission allowances to eligible “energy-intensive” industries.
  - Intended to “level the playing field,” protect U.S. businesses, and prevent leakage.
  - Amount of allowances distributed depends in part on actions taken by developing countries to reduce emissions.
  - President given substantial discretion in implementing this program, creating uncertainty for U.S. businesses.
  - Limited number of allowances available.

- The bill establishes a program requiring importers to hold allowances to cover associated GHG emissions.
  - Intended to spur action in developing countries as well as provide added protection for U.S. manufacturers.
  - Does not take effect until 2020, pending Presidential determination.
  - Tied into emission allowance rebate program.
  - Mainly targeted at China, India (exempts LDCs and other small emitters/trading partners).

- Senate Environment and Public Works Committee expected to release their version of the bill next week.
  - Committee vote expected by mid-October.
  - Other committees also may report out components of the bill.
- Key barriers to passage are concerns over economy and costs of program; lack of commitments by China/India; interference from health care.
  - Key driver is threat of regulatory action under existing Clean Air Act by EPA.

# Questions?

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