Waxman-Markey Bill – May 18, 2009
The American Clean Energy and Security Act of 2009

May 2009

M.J. Bradley & Associates LLC
A Climate Change Capital Group Company

Agenda

Waxman-Markey Bill Substitute Amendment

Structure of the Bill

- Representative Waxman released the American Clean Energy and Security Act of 2009 on May 18, 2009 in the nature of a substitute amendment. The bill includes four sections:
  - The "**Clean Energy**" section promotes renewable sources of energy and carbon capture and sequestration (CCS) technologies, low-carbon transportation fuels, clean electric vehicles, and smart grid and electricity transmission planning.
  - The "**Energy Efficiency**" section increases energy efficiency for multiple sectors of the economy, including buildings, appliances, transportation, and industry.
  - The "**Global Warming**" section establishes an economy-wide cap-and-trade program to cover 85% of U.S. greenhouse gas emissions.
  - The "**Transitioning**" section establishes programs to protect U.S. consumers and industry and promotes green jobs during the transition to a clean energy economy.

The American Clean Energy and Security Act of 2009 (May 18, 2008 substitute amendment)

- ***Title I – Clean Energy***
  - Subtitle A: Renewable & EE Electricity Standard
  - Subtitle B: Carbon Capture & Sequestration
  - Subtitle C: Clean Transportation
  - Subtitle D: State EE Development Funds
  - Subtitle E: Smart Grid Advancement
  - Subtitle F: Transmission Planning
  - Subtitle G: Technical Corrections to Energy laws
  - Subtitle H: Clean Energy Innovation Centers
  - Subtitle I: Marine Spatial Planning
- ***Title II – Energy Efficiency***
  - Subtitle A: Building EE Programs
  - Subtitle B: Lighting& Appliance EE Programs
  - Subtitle C: Transportation Efficiency
  - Subtitle D: Industrial Energy Efficiency
  - Subtitle E: Improvements in Energy Savings
  - Subtitle F: Public Institutions
- ***Title III – Reducing Global Warming***
  - Amend Clean Air Act by adding *Title VII – Global Warming Pollution Reduction*
  - Amend Clean Air Act by adding *Title VIII – Additional Greenhouse Gas Standards*
- ***Title IV – Transition to a Clean Energy Economy***
  - Subtitle A: Ensuring Real Reductions
  - Subtitle B: Green Jobs and Worker Transition
  - Subtitle C: Consumer Assistance
  - Subtitle D: Exploring Clean Technology
  - Subtitle E: Adapting to Climate Change

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Renewable & Energy Efficiency Standards

- Combined Efficiency and Renewable Electricity Standard (CERES)
  - Requires retail suppliers that sell more than 4 million MWh of electricity annually to meet a combined efficiency and renewable electricity standard of 20 percent by 2020.
  - The CERES starts at 6 percent in 2012 and escalates by 3.5 percent every two years until 2020 and remaining at that level through 2040.
  - At least 75 percent of the CERES must be met through qualifying renewable energy projects; remaining 25 percent may be met by demonstrating energy efficiency savings
    - Governors may petition for 40 percent of the CERES in a state to be met through energy efficiency savings; as a result, the renewable energy requirement may be as low as 12 percent
  - Qualified renewable sources include wind, solar, geothermal, biomass (including biogas and biofuels from biomass), landfill gas, wastewater treatment gas, coal mine methane, certain waste-to-energy facilities, incremental hydropower (post Jan 1, 1992), and marine and hydrokinetic energy sources.
  - Hydropower (other than qualified incremental hydropower), new nuclear facilities and coal facilities utilizing CCS (based on the efficiency of carbon capture) are excluded from a retail suppliers baseline.

Renewable & Energy Efficiency Standards, cont.

- Summary of Changes from March 31 Discussion Draft
  - Combined previously separate electricity EERS and RES mandates into a single program – natural gas no longer subject to a resource requirement.
  - Lowered overall combined requirement to 20%; previously 40%.
  - Increased sales threshold that triggers compliance obligation to 4 million MWh/yr, from 1 million MWh/yr.
  - Expanded list of eligible resources to include wastewater treatment gas, coal mine methane, certain waste-to-energy facilities and extended cut-off date for incremental hydropower by 9 years.
  - Added new nuclear units coal w/CCS to the resources excluded from baseline calculation.
  - Lowered alternative compliance payment (ACP) to $25/MWh (previously $50/MWh), and ACP funds are paid directly back to state from which funds paid to be used for energy efficiency and renewable energy projects.
  - RES/EERS program administered by FERC (both previously DOE).

Cap-and-Trade: Program Basics

- Generally based on USCAP (US Climate Action Partnership) recommendations and Dingell-Boucher discussion draft.
- Includes approximately 7,000-8,000 sources in the cap covering about 85%of U.S. GHG emissions. Capped sources must submit 1 emission allowance for every ton of CO_2e emitted.
- Caps greenhouse gas (GHG) emissions from capped sources as follows:
  - 3% below 2005 levels by 2012
  - 17% below 2005 levels by 2020
  - 42% below 2005 levels by 2030
  - 83% below 2005 levels by 2050
- Points of regulation
  - Downstream: Coal and natural gas fired power plants and certain industrial sectors such cement, aluminum etc. (direct emissions)
  - Mid-stream: Natural gas local distribution companies (embedded emissions)
  - Mid-stream/Upstream: Transportation, certain industrial sectors such as producers and importers of nitrous oxide, PFCs, etc. (embedded emissions)
- Contains provisions to compensate capped entities holding allowances of state or regional programs such as RGGI for the cost of obtaining and holding such allowances.
- Includes several alternative compliance mechanisms for flexibility and cost control.

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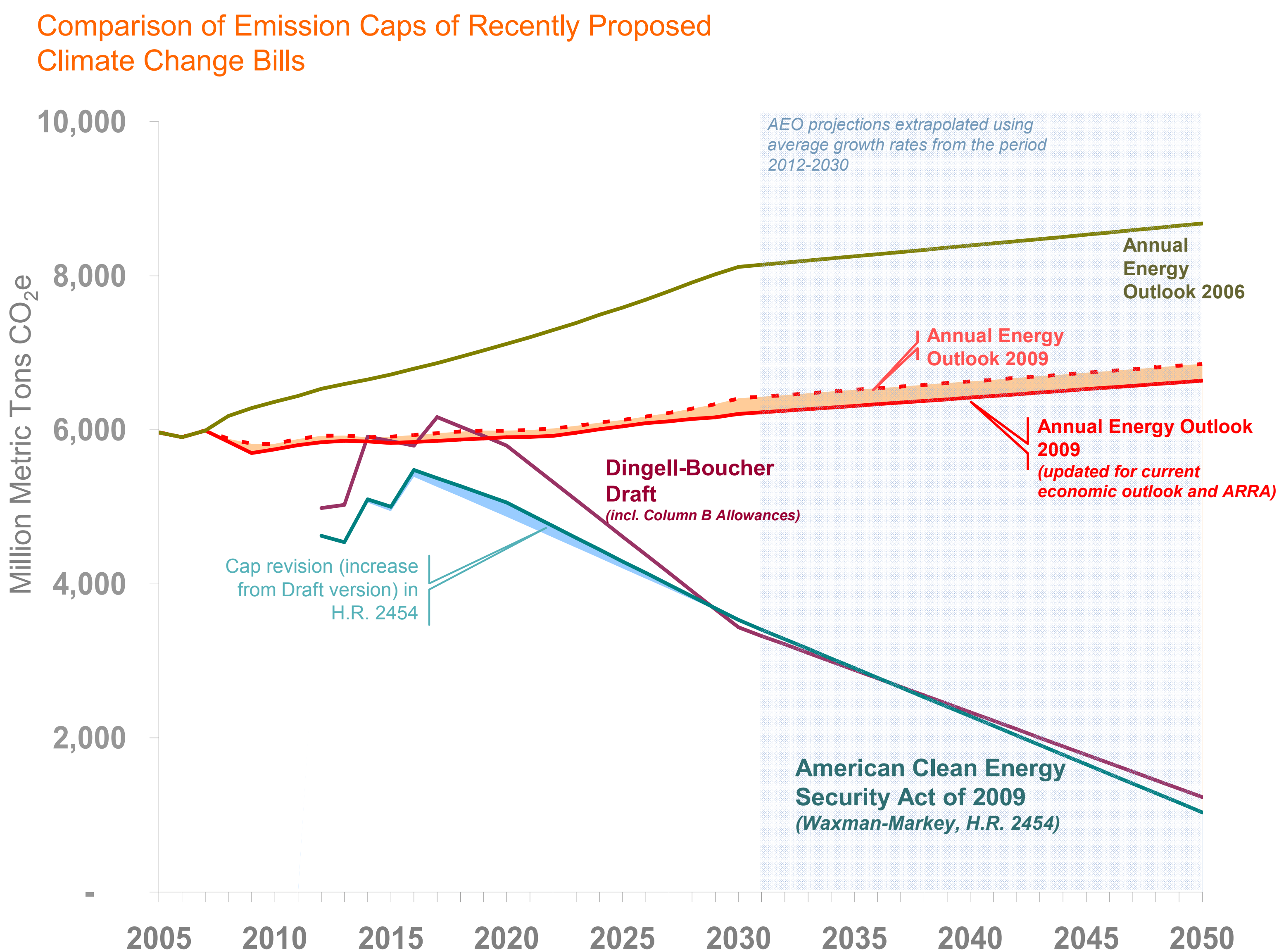
Cap-and-Trade Program: Comparison of Caps



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Cap-and-Trade Program: Point of Regulation






Year	Source Categories Required to Surrender Allowances		
2012	**Electric** Coal- and natural gas-fired power plants producing electricity for sale	**Fuel Producers** Producers and importers of petroleum-based or coal-based liquid fuel, petroleum coke, or natural gas liquid	**Industrial** Producers and importers of SF-6, CO_2, and other industrial gases
2014	**Industrial (partial listing)** Adipic acid, aluminum, ammonia, cement, petroleum refining, carbon black, food processing, glass production, iron and steel, lead, pulp and paper, zinc, any industrial fossil fuel combustion device. Sources must emit 25,000 tons of CO2e.		
2016	**Small Natural Gas Users** Natural gas local distribution companies that deliver 460,000,000 cubic feet or more of natural gas to customers that are not covered entities (i.e., residential, commercial, small industrial)		

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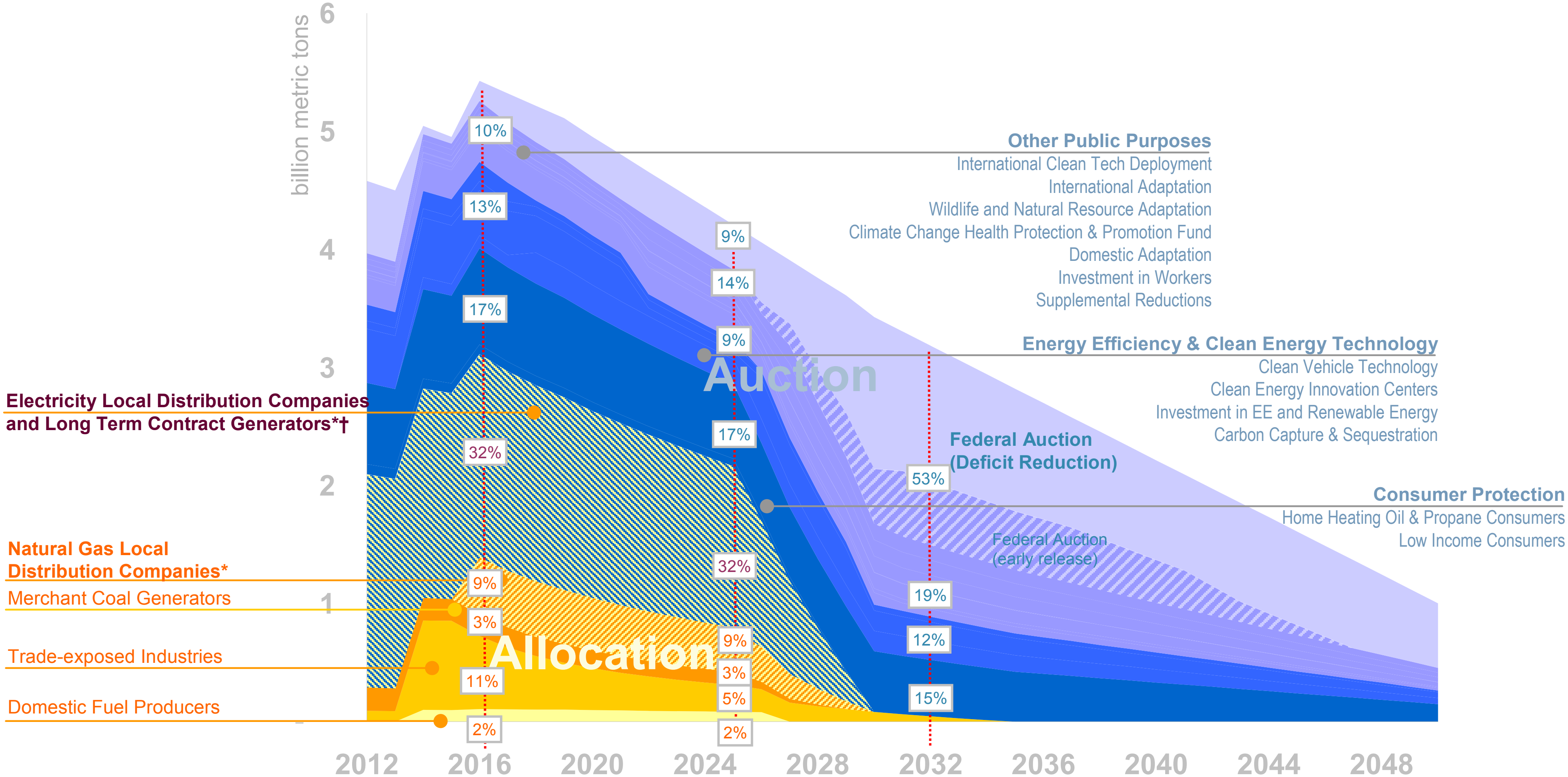
Cap-and-Trade Program: Allowance Allocation



* Allowances allocated to electric and natural gas LDCs are categorized under both "Auction" and "Allocation" as the bill requires both to use the allowances exclusively for the benefit of retail ratepayers and may not be used to support electricity or natural gas sales to entities or persons other than the retail ratepayers of such local distribution companies.

† This 32% includes allowances that would be allocated to electricity local distribution companies as well as holders of long-term power contracts (signed before January 1, 2007) that do not allow for recovery of the costs of compliance with the limitation on greenhouse gases.

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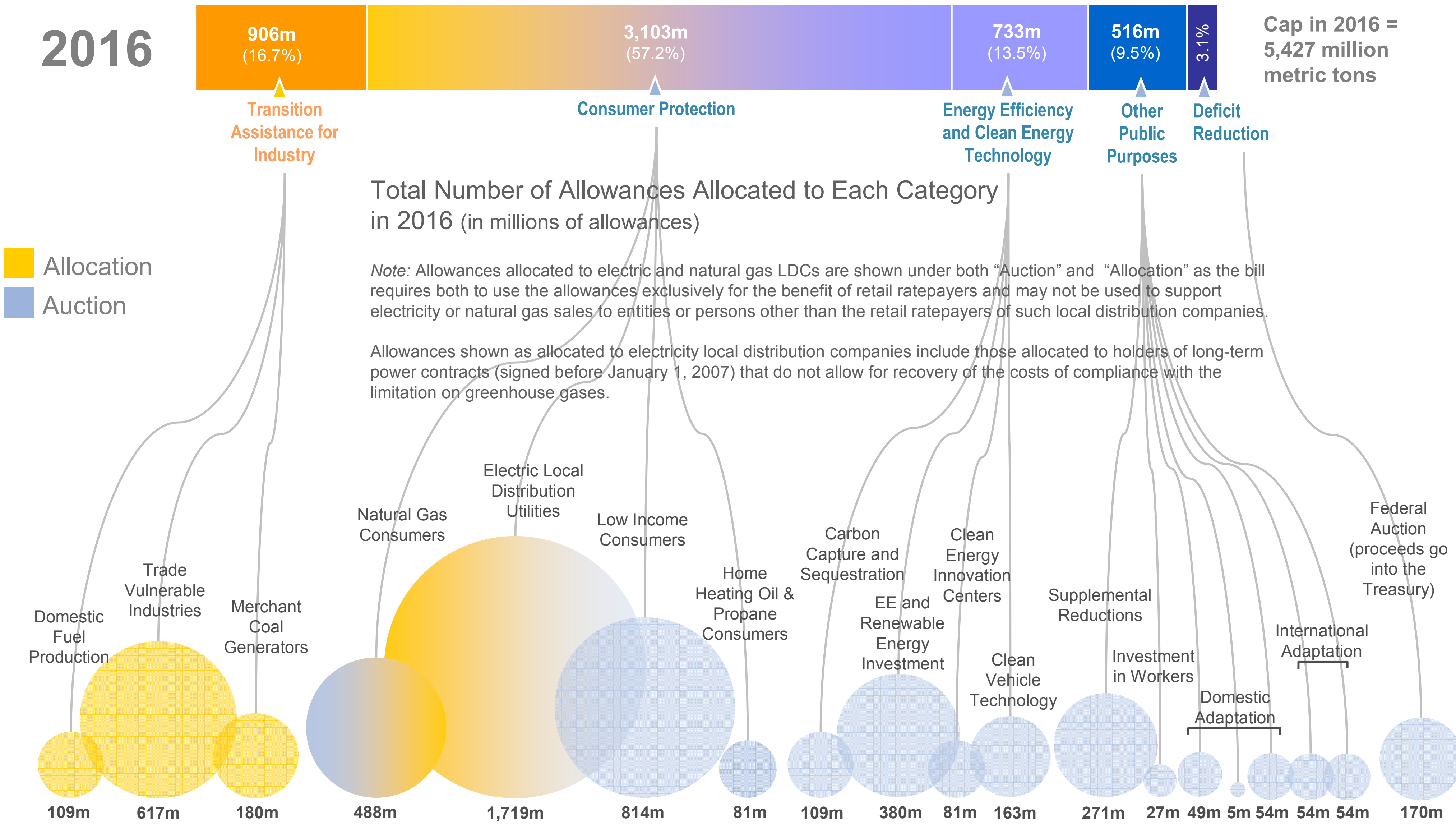
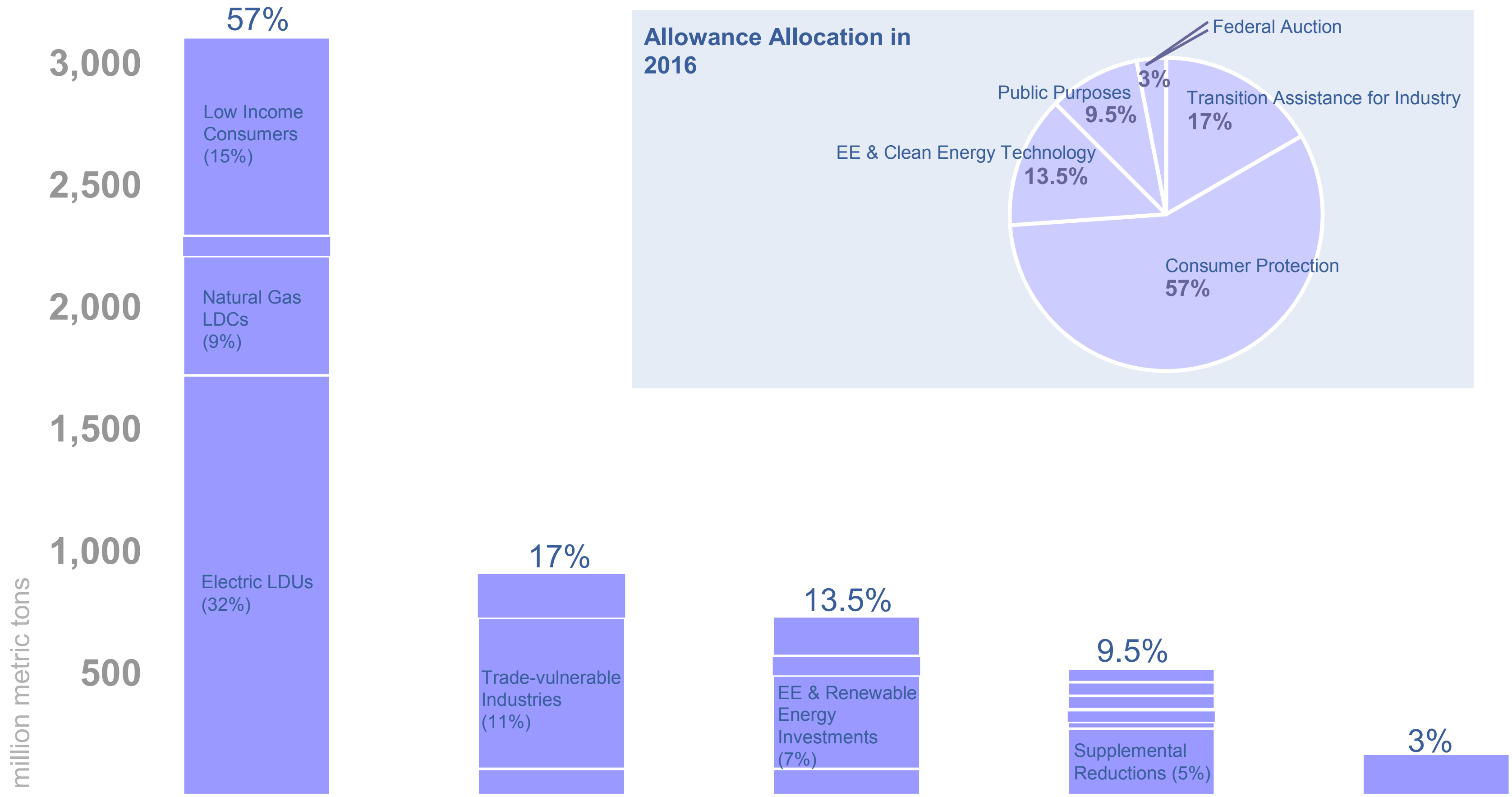
Cap-and-Trade Program: Allowance Allocation (in 2016)



Cap-and-Trade Program: Allowance Allocation (in 2016)

In 2016



Consumer Protection

Low Income Consumers
Home Heating Oil/Propane Consumers
Natural Gas Consumers
Electric Local Distribution Utilities

Transtion Assistance for Industry

Merchant Coal Generators
Trade-Vulnerable Industries
Domestic Fuel Production

EE and Clean Energy Technology

Clean Vehicles
Clean Energy Innovation-Centers
EE and Renewable Energy
CCS

Other Public Purposes

Int'l Clean Tech Deployment
Int'l Adaptation
Wildlife and Natural Resource
Climate Change Health-Protection and Promotion Fund
Domestic Adaptation
Investment in Workers
Supplemental Reductions

Federal Auction

Proceeds deposited into the Treasury

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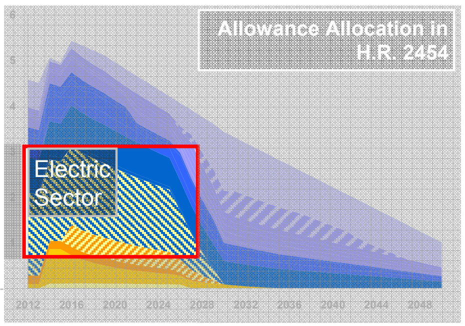
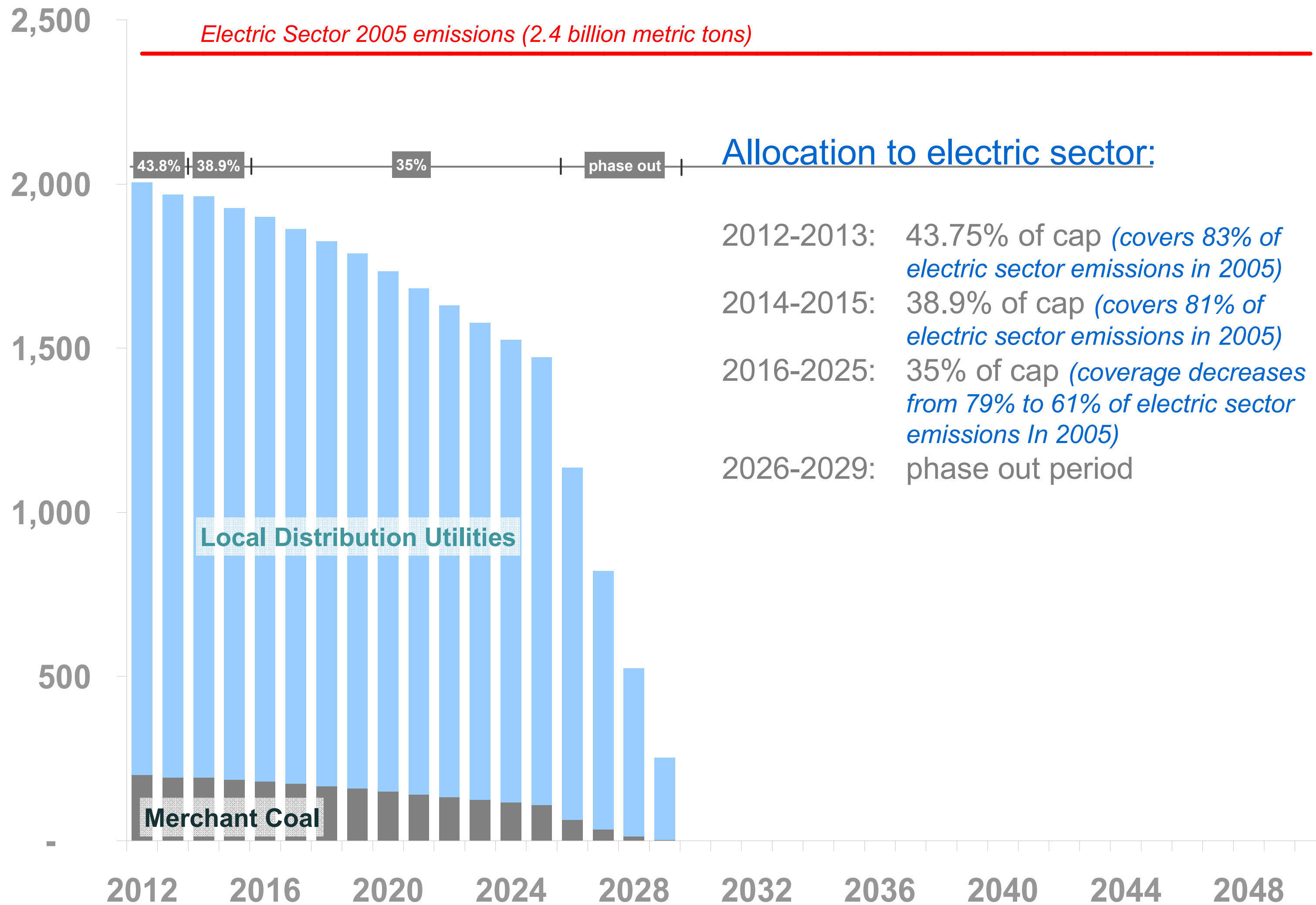
Cap-and-Trade: Allowance Allocation cont.





Allocation to electric sector:

2012-2013: 43.75% of cap *(covers 83% of electric sector emissions in 2005)*

2014-2015: 38.9% of cap *(covers 81% of electric sector emissions in 2005)*

2016-2025: 35% of cap *(coverage decreases from 79% to 61% of electric sector emissions In 2005)*

2026-2029: phase out period

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Cap-and-Trade Program: Cost Containment

- Allows unlimited banking and trading of allowances and effectively allows a 2-year compliance period through borrowing without interest

- Strategic Reserve
  - Establishes a strategic reserve that would auction allowances if prices reach $28/ton in 2012, or 60% of their 36-month historical rolling average price after 2014.
  - The strategic pool would be populated using 1% allowances from 2012-2019, 2% from 2020-2029, and 3% thereafter.
  - The number of allowances sold at the strategic reserve auction in 2012-2016 would be capped at 5% of the allowances established for that calendar year. This percentage increases to 10% in 2017 and thereafter
  - There are provisions to supplement the strategic reserve with international offsets.

- International Emission Allowances
  - EPA may designate qualifying international programs if the program is mandatory and at least as stringent as the Act.

Cap-and-Trade Program: Offsets

- **Quantitative Limits**
  - Up to 2 billion tons of emissions annually may be covered using offsets. Initially this is split equally between domestic and international credits.
  - If EPA determines for any year that the availability of domestic offsets at prices generally equal or less than allowance prices is likely to be less than 0.9 billion tons, it may increase the allowed quantity of international offsets that may be used by up to 0.5 billion tons. The quantity of allowable domestic credits must be decreased by the same amount.
  - Covered entities would be allowed to cover a portion of their emissions equal to the total percentage of offsets allowed in a given year. This limit begins at about 30 percent and increases to about 40 percent in 2035 and 60 percent in 2050.
- **Early Offset**
  - EPA would be required to issue offset credits for projects registered under government-recognized programs that were started after January 1, 2001.
  - Offset credits would be issued only for reductions, avoidance or sequestration of GHG emissions that occur after January 1, 2009 until the date that is 3 years after the date of enactment, or the date that offset program regulations take effect, whichever occurs sooner.
  - EPA must also issue credits for projects that meet standards that are as vigorous as those developed by such government-recognized programs.
- **International Offset Credits**
  - EPA may issue international offset credits for GHG reductions in developing countries with which the U.S. has a standing relevant bilateral or multilateral agreement.
  - International credits would be issued on a sectoral basis or in exchange for credits issued by the CDM or a subsequent mechanism.
  - EPA may also issue international credits for reduced deforestation in approved countries based on a declining national deforestation baseline.
  - Beginning in 2018, 5 international credits must be surrender for every 4 tons of emissions.

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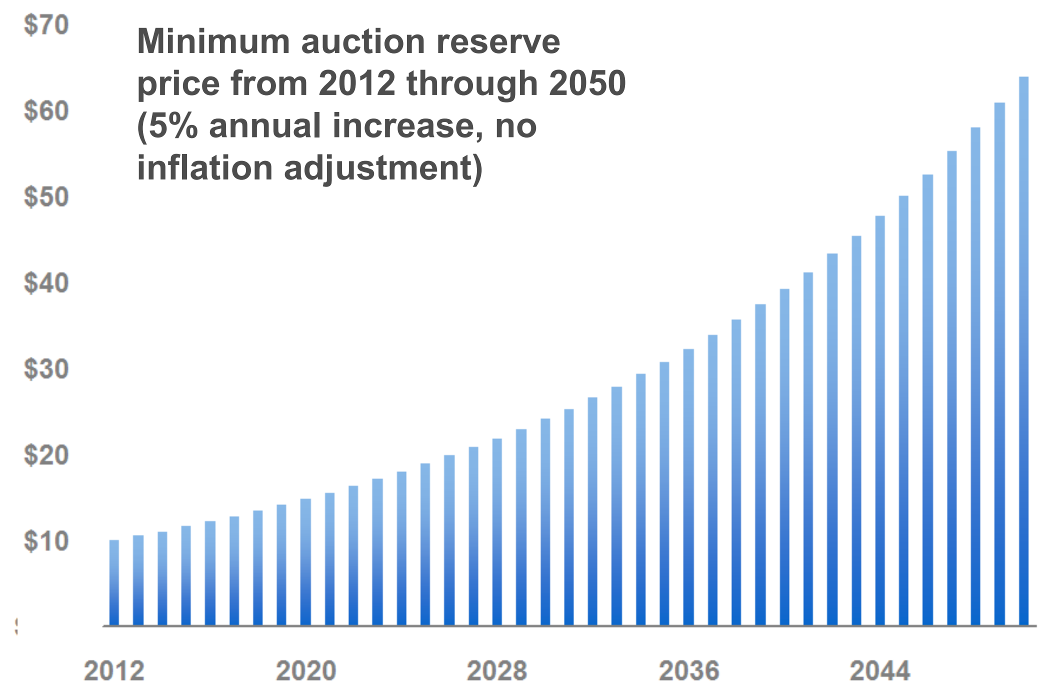
Cap-and-Trade Program: Auction Design

- Auction Design Features
  - Single-round, sealed-bid, uniform price format
  - The federal auction will be held on a quarterly basis
  - No participant can purchase more than 5% of allowances at any single auction
  - Minimum reserve price of $10 in 2012 (increased 5% plus inflation in subsequent years)
  - Consignment: Any entity holding emission allowances may request that EPA auction their allowances on consignment.



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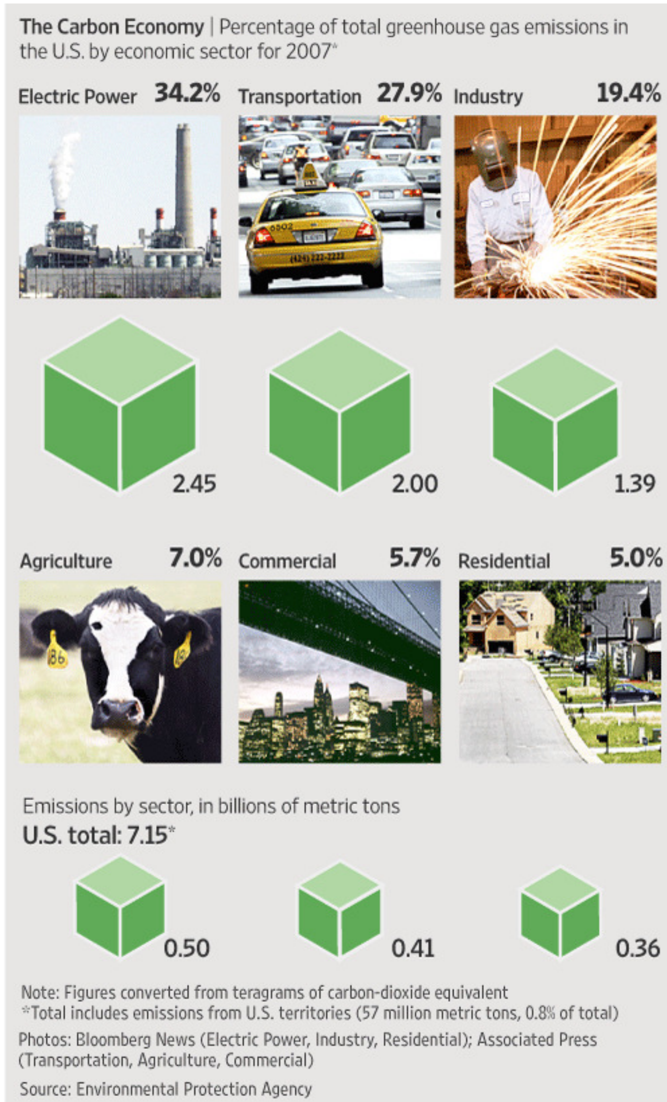
Cap-and-Trade: Clean Air Act and State Interactions

- Interactions with the Clean Air Act
  - CO_2 and other greenhouse gases would not be regulated under the existing Clean Air Act as criteria pollutants, hazardous air pollutants, or international air pollutants on the basis of their contribution to global warming
  - New source review would not apply to major emitting facilities that are permitted or modified after January 1, 2009 based on their greenhouse gas emissions.
  - EPA would be directed to adopt new source performance standards for uncapped sources

- Interactions with State and Regional Cap-and-Trade Programs
  - From 2012-2017, states would be prohibited from enforcing a cap-and-trade program that covers any federally capped sources. This preemption would not include a target or limit on GHG emissions.
  - Entities holding allowances from RGGI, California, or the Western Climate Initiative would be permitted to exchange them for federal allowances based on the average auction price of those State allowances compared to the value of a federal allowance (e.g., three $5 RGGI allowances could be exchanged for one $15 federal allowance).

U.S. Greenhouse Gas Emissions



The Wall Street Journal

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