



Dingell Boucher Climate Change Discussion Draft- Outline

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Emission reduction targets

- Slow- stop- reverse
 - 6% below 2005 levels by 2020
 - 44% below 2005 levels by 2030
 - 80% below 2005 levels by 2050



Point of regulation- 1 of 2

- Electricity generators- **downstream**
- Petroleum or coal based liquids- **upstream**
- Producers/importers of fossil based CO₂, N₂O, PFCs, SF₆, NF₃ or other F gas >25KTe/yr- **downstream**
- Producers of adipic acid, ammonia, HCFCs, lime, nitric acid, phosphoric acid, silicon carbide, soda ash, titanium dioxide, petroleum refining, primary aluminum, cement >25KTe/yr- **downstream**
- Manufacturers of acrylonitrile, carbon black, ethylene, ethylene dichloride, ethylene oxide, methanol >25KTe/yr- **downstream**



Point of regulation- 1 of 2

- Manufacturers of chemicals not yet produced resulting in process emissions of $>25\text{KTeCO}_2\text{e/yr}$ - **downstream**
- Products or sectors- ethanol, ferroalloy, food processing, glass, hydrogen, iron & steel, lead, Kraft pulp & paper, zinc $>25\text{KTe/yr}$ - **downstream**
- Any fossil fuel fired combustion device(s) with $>25\text{KTe/yr CO}_2$ - **downstream**
- Local natural gas distribution companies delivering $\geq 460,000$ cf to commercial/residentials- **midstream**
- Geologic sequestration sites- **at the point of emission**



Covered facilities required to submit allowances

- All EGUs
- All geologic sequestration sites
- Above producers/importers
- Above sources/sectors
- Any combustion device or group of devices emitting $\geq 25\text{KTe/yrCO}_2\text{e}$
 - Sources only under this provision submit allowances for combustion emissions only



Utility unit definition

- Excludes cogeneration units per Acid Rain Program definition
 - $>1/3$ potential electric output capacity and
 - >25 MW electrical output for sale



Compliance years vary

- EGUs- 2012
- Producers/importers- 2012
- Covered industrials- 2014
- Covered natural gas LDCs- 2017 (delayed to 2021 if national average residential/commercial use of gas is ≤ 99 MMBtu/yr)
- Geologic sequestration site- 2012



Compliance obligation

- Submit one allowance for each covered TeCO₂e emitted
 - Alternatively- satisfy percentage with offset credit (OC); international offset credit (IOC); international emission allowance (IEA); destruction allowance (DA)
 - 2013-2017 5% with OC or IOC (IEA & DA not limited)
 - 2018-2020 15% with OC or IOC (IEA & DA not limited)
 - 2021-2024 15% with OC; 15% with IOC (IEA & DA not limited)
 - 2025 & thereafter 20% with OC; 15% with IOC (IEA & DA not limited)



Offsets

- Domestic
 - Specified agriculture and forestry programs
 - Petition process for other projects
 - EPA develop regulations
- International
 - Qualifying international program
 - EPA develop regulations



Penalty to not submit allowances

- 50% of fair market value of allowances not submitted
- In addition to fulfilling original allowance obligation



Feedstock credit

- Downstream users of
 - Petroleum and coal based feedstocks and
 - PFCs used in semiconductor researchwould receive an allowance for each T_e CO₂e avoided



International reserve allowances

- Border control measure
- Reserve allowances offered to US importers of covered goods from countries not meeting comparable action standard
- Proceeds to mitigate negative impact on disadvantaged communities in foreign countries
- Stiff penalties if do not comply



Allowance allocation (4 options)

Auctioned allowances:

Option A:	<u>2012-2013</u> 50.5%	<u>2014-2016</u> 43.25%	<u>2017-2025</u> 56.75%	
Option B:	<u>2012-2013</u> 50.5%	<u>2014-2016</u> 50.25%	<u>2017-2020</u> 57.75%	<u>2021-2025</u> 65.5%
Option C:	<u>2012-2013</u> 51.75%	<u>2014-2016</u> 57.75%	<u>2017-2020</u> 66.25%	<u>2021-2025</u> 78%
Option D:	<u>2012-2013</u> 100%	<u>2014-2016</u> 100%	<u>2017-2025</u> 100%	

Proceeds to: energy efficiency programs; clean technology deployment; early action recognition; low income consumers; other consumers; deficit reduction fund; green jobs; supplemental GHG reductions; national adaptation program; international obligations; management fund



Free allowance allocations

Option A:	<u>2012-2013</u>	<u>2014-2016</u>	<u>2017-2025</u>
Industrials	0.5%	14.75%	14.75%
EGUs (at the local distribution level)	44.25%	38%	38%
Independent Coal Generators	4.75%	4%	4%
Total:	49.5%	56.75%	56.75%

Option B:	<u>2012-2013</u>	<u>2014-2016</u>	<u>2017-2020</u>	<u>2021-2025</u>
Industrials	0.5%	26.75%	26.75%	26.75%
EGUs (at the local distribution level)	44.25%	21%	14%	7%
Independent Coal Generators	4.75%	2%	1.5%	0.75%
Total:	49.5%	49.75%	42.25%	34.5%

Option C:	<u>2012-2013</u>	<u>2014-2016</u>	<u>2017-2020</u>	<u>2021-2025</u>
Industrials	0.5%	22.5%	18.5%	16.5%
EGUs (at the local distribution level)	43%	18%	14%	5%
Independent Coal Generators	4.75%	1.75%	1.25%	0.5%
Total:	48.25%	42.25%	33.75%	22%

Option D:	<u>2012-2013</u>	<u>2014-2016</u>	<u>2017-2025</u>
Industrials	0%	0%	0%
EGUs (at the local distribution level)	0%	0%	0%
Independent Coal Generators	0%	0%	0%
Total:	0%	0%	0%



Allowance purchasing, borrowing, trading

- Anyone can buy, hold, sell, trade, retire
- Unlimited borrowing with 8%/yr interest of following year's allowances
- Satisfy up to 15% of compliance obligation with future allowances (1-5 years later)
- Banking allowed
- Auctioned allowances can be purchased on lay-away
 - 25% due by March 31
 - 50% due by June 30
 - 75% due by September 30
 - 100% due by December 31
 - Future year allowance payment due within 15 months of auction



Clean technology deployment

- CCS- 2-5% allowances dedicated to developing CCS technology
 - 25% to industrial sector
 - EPA to develop regulations
 - Projects must sequester $\geq 85\%$ of industrial source emissions; no other incentives, loans, grants, tax credits
- Renewable energy deployment
 - 2-3.5% allowances
 - Electric generation from solar, wind, geothermal, ocean, biomass; 1 allowance/2MW delivered
- Smart grid
 - 0.75-1.25% allowances
- Clean vehicle technology
 - 2.5-4% allowances
- Clean fuels
 - 1.25-3% allowances



Recognition for early action

- Starting 2012- 2-3% allowances to entities who
 - Hold allowances issued by CA or RGGI for cost of those allowances
 - Commenced an offset project after 1/1/2002 and before enactment
 - Registered or meets standards of existing programs



Safety valve-cost containment

- No safety valve referencing \$/Te
- Strategic reserve at 2.665 billion allowances borrowed from years 2012-2050
- 4 strategic reserve auctions/yr
- Covered entities could buy up to 10% of obligations
- Minimum price in 2012 TBD, but \$20-30 with increases in future years
- Office of Carbon Market Oversight within FERC



GHG registry or inventory

- EPA establish and administer GHG registry
- Require facilities where feasible to use CEMS or equivalent for monitoring and reporting
- All covered facilities + any entity emitting any GHG that EPA identifies and fleets to report
 - Annually for 2007-2012
 - Quarterly thereafter



Pre-emption

- Prevent states from enacting any GHG reduction program that would cap emissions or use tradable emissions allowances
- One sensible comprehensive program



Efficiency measures

- 9.5-13.5% of allowances dedicated to
 - State EE development fund
 - State electricity efficiency and recycling
 - State and local transportation efficiency
 - Energy efficiency and conservation block grants
 - Weatherization assistance
 - Buildings
 - Energy sustainability and efficiency grant and loans for institutions
 - Waste energy programs



Industrial energy efficiency programs

- DOE to
 - Develop ANSI standards for industrial benchmarking
 - Industrial plant energy efficiency certification standards
 - Seek ANSI certification
 - Establish program to award allowances to new and existing electric generation or thermal energy production facilities using fossil fuel or nuclear energy to encourage thermal energy recovery



CAA amendment

- Add new titles
 - Title VII- GHG Cap and Trade Program
 - Title VIII- GHG Standards
 - Use NSPS to require GHG emission reductions from stationary sources not already covered facilities under Title VII
 - List categories within 12 months
 - Cover $\geq 95\%$ of total GHG emissions from industrial sector
 - Staggered promulgation- all within 10 years



CAA existing authority

- No GHG may be
 - Listed as criteria pollutant
 - Added to list of HAPs under 112 unless meets criteria independent of climate change effects
- NSR does not apply to GHG
- Title V permit not required solely due to regulation under Title VIII
 - (not all issues addressed)