

	CLEAR Act	House-passed ACES Act (H.R. 2454)
Legislative Approach	Cap-and-Refund	Cap-and-Trade
Point of Regulation	Upstream, economy-wide cap on all fossil carbon	Downstream cap on emissions from selected industries and sectors
Coverage	Addresses over 93% of greenhouse gas (GHG) emissions when 2-4% of auction revenues used to reduce non-CO ₂ gases Cap coverage <ul style="list-style-type: none"> • 96% of CO₂ • 82% of total GHG 	Exemptions for facilities emitting <25,000 tons CO ₂ annually and additional coverage from separate cap Cap coverage (% total GHGs) <ul style="list-style-type: none"> • 66.2% in 2012-2013 • 75.7% in 2014-2015 • 84.5% beyond 2016
Economy-Wide Reduction Standards	<ul style="list-style-type: none"> • 20% below 2005 in 2020 • 30% below 2005 in 2025 • 42% below 2005 in 2030 • 83% below 2005 in 2050 	<ul style="list-style-type: none"> • 3% below 2005 in 2012 • 20% below 2005 in 2020 • 42% below 2005 in 2030 • 83% below 2005 in 2050
Modeled Reductions of Gross Carbon Dioxide Emissions	<u>Cap on Fossil Carbon</u> <ul style="list-style-type: none"> • 5.9% below 2005 in 2020 • 44.1% below 2005 in 2035 • 80.5% below 2005 in 2050 <p>† Assumes the economy-wide goals are met by the cap and 2-5% of auction revenues (depending on auction carbon share price) used to fund programs to reduce non-CO₂ GHGs; 2-5% of auction revenues used to fund domestic offset-type projects; and 2-5% of auction revenues used to fund international offset-type projects that include deforestation reduction</p>	<u>EPA modeling results (Scenario 2)</u> <ul style="list-style-type: none"> • 15.3% below 2005 in 2020 • 26.4% below 2005 in 2035 • 40.1% below 2005 in 2050 <p>† Domestic and (mostly) international offsets account for the difference between economy-wide goals and gross emissions levels</p> <p>Note: These are the modeled results of EPA rather than the widely cited targets or economy-wide goals</p>

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Greenhouse Gases Covered	<p><u>Upstream Cap:</u></p> <p>Carbon dioxide from fossil carbon</p> <p><u>Direct funding for programs:</u></p> <ul style="list-style-type: none"> • Methane • Nitrous oxide • Sulfur hexafluoride • Hydrofluorocarbons • Perfluorocarbons • Nitrogen trifluoride • Any other gas designated by the EPA administrator 	<p><u>Downstream Cap:</u></p> <ul style="list-style-type: none"> • Carbon dioxide • Methane • Nitrous oxide • Sulfur hexafluoride • Perfluorocarbons • Nitrogen trifluoride • Any other gas designated by the EPA Administrator <p><u>Separate Cap:</u></p> <p>Hydrofluorocarbons</p>
Share/Allowance Allocation	<ul style="list-style-type: none"> • 100% of cap shares auctioned monthly to “first sellers” of carbon only • No offsets permitted to count against the cap • 75% of auction revenues refunded directly to all legal U.S. residents, each month, on an equal per capita basis as non-taxable income • 25% of auction revenues go to a dedicated trust to fund climate mitigation and adaptation, clean energy and efficiency, and transition assistance programs • Additional “bonus” shares (not included in the aggregate number of auctioned carbon shares) are granted to entities that permanently sequester carbon in their products and business operations; bonus 	<p>Several industries, sectors and other entities receive free allowances that phase out gradually from 2025 through 2035; less than 20% of the allowances are auctioned through 2025</p> <p><u>From 2012 to 2025:</u>38% for utilities, of which</p> <ul style="list-style-type: none"> – 32% to local electricity distribution companies – 9% to natural gas distributors (2016-2025) <ul style="list-style-type: none"> • 19% transition assistance of which <ul style="list-style-type: none"> – 2% to domestic oil refiners (2014-2026) – 5% to merchant coal and electricity producers – 15% to trade-vulnerable industries in 2014 and 0% by 2025 • 15% of allowances (via auction proceeds) distributed to low income families • 13% for clean energy and energy efficiency

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	shares may be sold to upstream first sellers with a compliance obligation.	<ul style="list-style-type: none"> • 10% for domestic adaptation • 3% to ensure budget neutrality • 1.6% for heating oil rebates
Auction Design Features	<ul style="list-style-type: none"> • Auctions held monthly • Purchase of shares is open only to “first sellers” of fossil carbon (i.e., regulated entities) to prevent speculation/price manipulation • Hoarding is not permitted • Carbon shares may be traded among first sellers • Shares are valid for 10 years from initial date of purchase at auction • Rolling 2-yr. compliance period 	<ul style="list-style-type: none"> • Auctions held quarterly • Auctions open to all entities • Strategic reserve auction held quarterly • Sets up a strategic reserve with 1% of allowances for 2012-2019, 2% for 2020-2029 and 3% 2030-2050 in the event carbon prices rise faster than expected or reach unexpectedly high levels at auction
Auction Price Safeguards	<ul style="list-style-type: none"> • Floor price of \$7 in 2012; rises annually by 6.5% plus rate of inflation • Ceiling price of \$21 in 2012; rises annually by 5.5% plus rate of inflation • The price safeguards always keep prices equal to or less than $\pm 50\%$ of the mean 	<ul style="list-style-type: none"> • Floor price of \$10 in 2012; rises annually by 5% plus rate of inflation • Minimum strategic reserve price in 2012 is set at \$28 – twice the EPA-modeled allowance price; price rises by 5% plus rate of inflation for 2013 and 2014, and at 60% above the 36-month average thereafter
Other Cost Containment Mechanisms	<ul style="list-style-type: none"> • Economic emissions trajectory with lead time for investment and deployment of new technologies and processes • Limited banking (10-year) • Rolling 2-year compliance period 	<ul style="list-style-type: none"> • Limited borrowing — up to 5 years with interest • Unlimited banking • Fixed 2-year compliance period (on April 1st)

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Role of Offsets in Achieving Policy Goals	<ul style="list-style-type: none"> • No role toward meeting the fossil carbon cap • Dedicated funding stream will be appropriated for similar projects on a competitive basis to achieve additional net reductions 	<ul style="list-style-type: none"> • 2 billion metric tons CO₂ equivalent annually (50% or more are international) • EPA modeling estimates over \$1.4 trillion spent on roughly 51,000 million metric tons of international offsets thru 2050 • Establishes Offsets Integrity Advisory Board to determine eligible offsets and offset projects, and to determine additionality, leakage, uncertainty, verifiability, etc. • Majority of emissions reductions 2012-2030 achieved through offsets
Carbon Capture and Sequestration (CCS)	<ul style="list-style-type: none"> • Carbon allowances (in excess of those provided under the cap) are granted for sequestered carbon and may be sold to upstream first sellers of carbon; this provision provides a robust monetary incentive for the adoption of CCS technologies and a long-term future for coal • Dedicated funding likely appropriated for CCS R&D and deployment activities 	<ul style="list-style-type: none"> • Coal plants permitted between 2009-2015 lose eligibility for federal financial assistance if they fail to retrofit with CCS technologies within five years of commissioning • Coal plants permitted between 2015-2020 lose eligibility for federal financial assistance if they do not include CCS systems; plants that fail to incorporate CCS must retrofit (without federal assistance) before 2025 • Coal plants permitted after 2020 must use CCS • The 2025 retrofit deadline is accelerated if 4 GW of generation capacity is deployed w/ CCS prior to 2025 • 2% of allowances in 2014-2017 for electric utilities installing CCS and 5% thereafter • \$10 billion in CCS technologies

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Carbon Leakage and Competitiveness Provisions	<ul style="list-style-type: none"> • Importers of energy-intensive commodities (e.g., iron, steel, glass, cement, paper) pay fees equal to the auction clearing price for the production process carbon emitted in the manufacture of their products in the country of origin • Fees must be WTO-compliant and predicated on a demonstrated competitive disadvantage on the part of exposed U.S. commodity producers • Funding for regionally specific transition assistance and aid to competitively disadvantaged industries • Energy-intensive commodity exporters may also receive output-based financial support 	<ul style="list-style-type: none"> • Trade-exposed industries (e.g., iron, steel, cement, and paper) receive allowances to cover their additional costs • 14% of allowances set aside for trade exposed industries in 2014, decreasing based on percent reduction in the carbon emissions cap • Allowances phased out in 2025 • Oil refiners receive 2% of allowances starting in 2014, ending in 2026 • Merchant coal producers and electricity producers receive 5% of allowances through 2025
Other Notable Provisions	<ul style="list-style-type: none"> • Auction revenues allocated to climate and clean energy needs go through normal, annual Congressional appropriations process • Revenues from carbon share sales in excess of the cap at the safety valve price are directed explicitly to programs for mitigation of non-CO₂ greenhouse gases and offset-type projects • The cap on fossil carbon takes into account the emissions reductions due to voluntary purchases of carbon reduction credits such as renewable energy certificates or energy efficiency certificates 	