

Distributing Allowance Value: Overview

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+ What is an allowance?

- + • Under a cap and trade program, the government:
 - + – Sets a cap on emissions
 - + – Issues tradable “allowances” (authorizations to emit; each authorizes one ton of GHGs)
 - + – Only issues enough allowances in total as what is allowed in total under the cap
 - + – Ensures overall allowances match overall emissions
- + • Entities covered by the program
 - + – Must hold sufficient allowances to match the emissions for which they are responsible
 - + • Can reduce emissions
 - + • Can buy or sell allowances
- + • Limited number of allowances (“scarcity”) plus requirement to hold an allowance if you want to emit makes allowances valuable
- + • Cap and trade
 - + – ensures cap is met
 - + – provides flexibility to emitters
 - + – Creates price on GHGs

+ What is Allowance Distribution?

- Decision over how emissions allowances will be *initially* distributed under a cap-and-trade program
- Does **not** affect the overall environmental result (the emission reductions achieved by the program)
- Forum for dealing with equity issues in a cap-and-trade system; affects how the program's costs are distributed
 - Can be used to compensate affected firms, workers and consumers, and ease transition to a new program
- Both a challenge, and an opportunity

+ What is Allowance Distribution? (cont'd)

- + - Basic approaches:
 - + - Some form of free allocation
 - + - Some form of auction
 - + - Hybrid (combination of both)
 - + - Shift from one to another over time
- + - Regardless of which method is chosen, either free allocation or auction revenue can be used:
 - + - To mitigate the economic impacts of the program (e.g., by granting allowances or tax breaks to consumers or competitively disadvantaged emitters)
 - + - To drive innovation (by using allowances or revenues to fund/incentivize RD&D)
 - + - Other purposes

+ What is Allowance Value?

- + • The economic worth of the allowances
- + • Can be in the form of allowances themselves, or revenues from the sale of allowances at an auction.

+ Issues in Allowance Distribution

- For what purpose?
- What public policy goal do you want to achieve?
- Who do you want to help?
- Over what time period?
- How is the goal accomplished?

+ Things to keep in mind

- Distributing allowances is like handing out money – an inherently political task
 - + – Auctions face the same problem as free allocation, with revenue distribution taking the place of allowance distribution
- + • Think about ends first, and means second
 - Debate has thus far emphasized means over ends
- + • Different kinds of “costs”
 - + – Transition
 - Competitiveness
 - Inequities
 - + – Other
- + • To achieve purpose, the questions are:
 - Who/what entity should receive the allowances?
 - Over what time period?
 - Through what mechanism?

+ What purpose?

- + • **Share burdens and benefits equitably**
 - + – States/affected sectors/workers/communities/low-income consumers/new entrants

- + • **Address economic impacts of the policy**
 - + – Consumer/worker/community/industry
 - + – Revenues/GDP
 - + – Transitional/long-term

- + • **Improve on effectiveness of policy**
 - + – Achieve co-benefits
 - + – Advance specific solutions that may not be adequately incentivized by the carbon price alone
 - + • Advance technology RD&D
 - + • Fund mitigation outside or under the cap
 - + – Ensure smooth-functioning market (including minimizing price spikes, encouraging early allowance price discovery)

+ **What purpose? (cont'd)**

- + • **Address impacts of climate change**
 - Fund climate adaptation
- + • **Reduce or eliminate distortions in the economy**
 - E.g., provide for tax cuts on labor, income and capital
- + • **Contribute to general revenues**
- + • **Other**

+ Adaptation planning and actions

+ • **Who:**

- + – State government
- + – Disaster relief agencies
- + – NGOs
- + – Long-term planning and development agencies

+ • **How long:**

- + – Long term

+ • **How:**

- + – Auction revenue distribution or allowance allocation, with dispensation to sell allowances in market for revenue
 - + • E.g., make adaptation allocation/funds contingent on state plans

+ Advance climate solutions

- **What:**
 - Any low or zero-emitting technologies
 - + – Specific climate solutions
 - carbon capture and storage
 - demand-side energy efficiency
 - + • forestry
 - transportation (vehicle, fuel, VMT)
- **Who:**
 - Anyone
 - + – Particular kinds of actors (LSEs, ESCOs)
 - State program
- **How long:**
 - Until new solutions take hold in market
- + • **How:**
 - Allocate/auction for RD&D in general
 - Allocate/auction to particular actors
 - + – Allocate/auction to state gov't or local communities
- Note: level of specificity; which technologies to incentivize are challenging issues.

+ Demand-Side Efficiency

- + • For the northeast Regional Greenhouse Gas Initiative, RGGI, much attention focused on auction vs. allocation, but key innovation is using allowance value for energy efficiency
- + • RGGI modeling indicates that using allowance value for energy efficiency programs lowers cost of complying with the cap

+ Outcomes to avoid

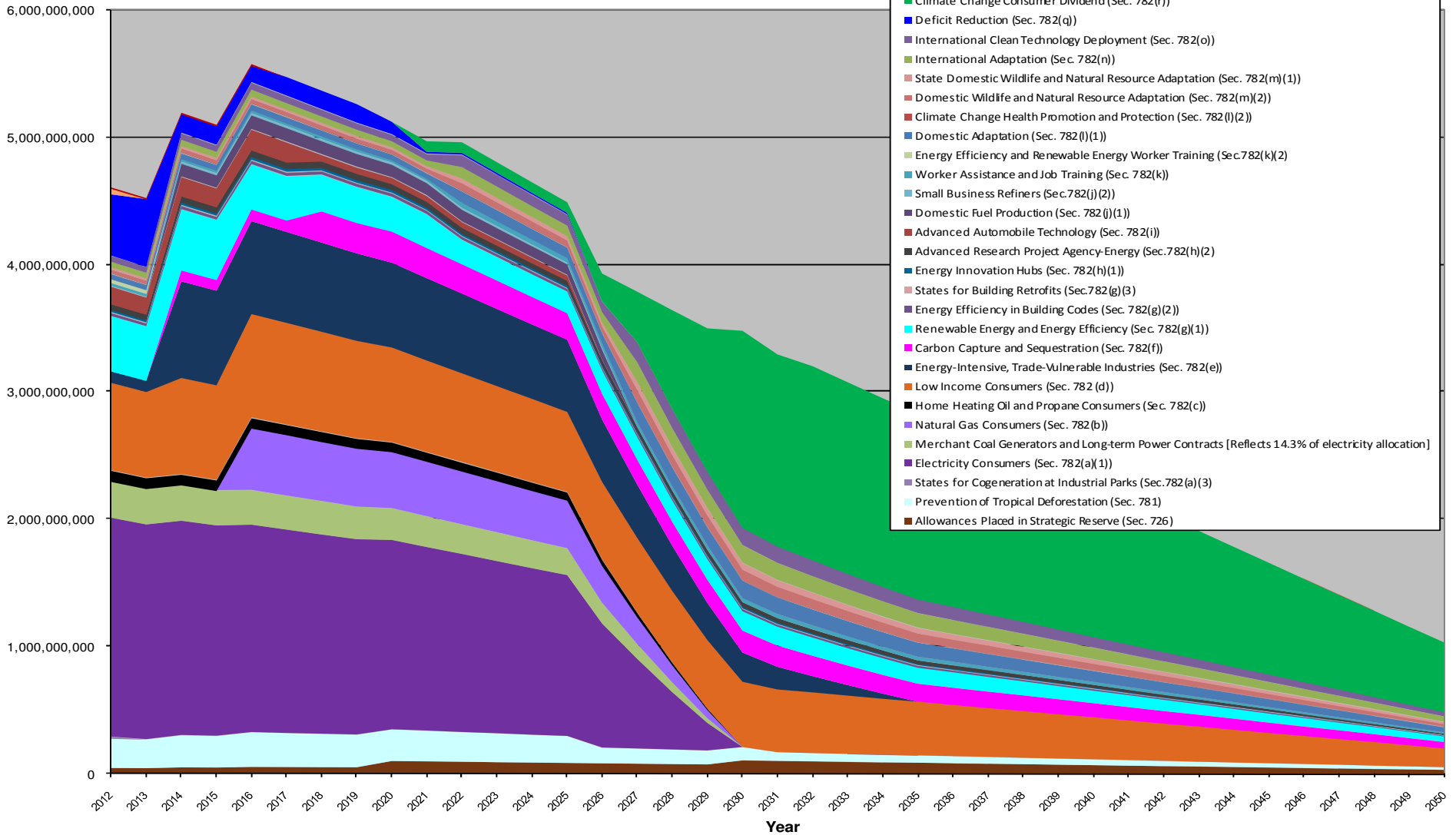
- + • Obscuring price signal, minimizing program effectiveness
- + • Creating perverse incentives or market barriers
- + • Allocations to entities capable of passing through rising prices - windfalls

Waxman-Markey Distribution



Distribution of Allowances American Clean Energy and Security Act of 2009 (H.R. 2454 - Waxman-Markey as Passed by U.S. House of Representatives)

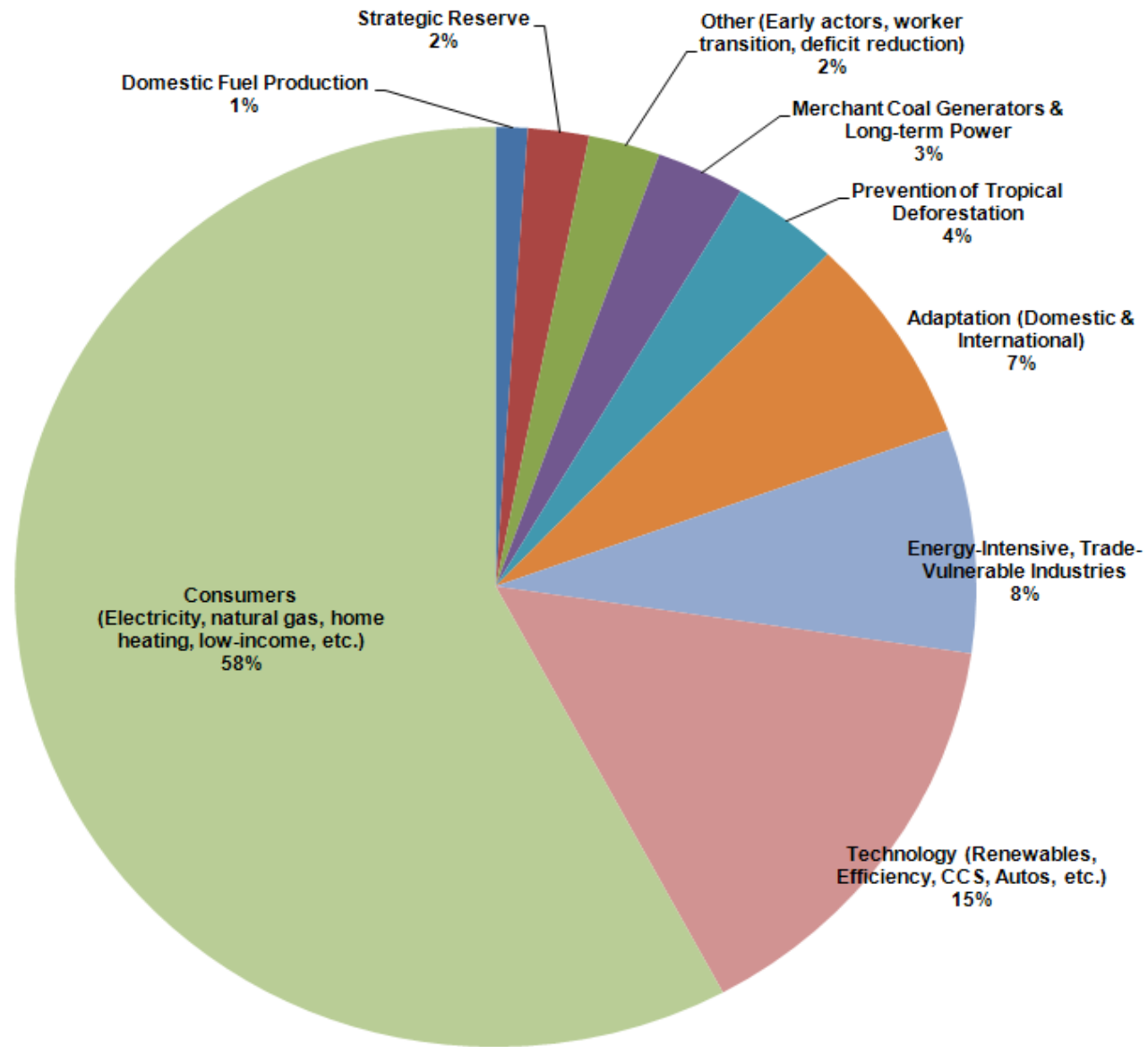
Available Allowances
(tCo2e)



- Supplemental Agriculture and Renewable Energy (Sec.782(u))
- Compensation for Early Actors (Sec. 782(t))
- Climate Change Consumer Dividend (Sec. 782(r))
- Deficit Reduction (Sec. 782(q))
- International Clean Technology Deployment (Sec. 782(o))
- International Adaptation (Sec. 782(n))
- State Domestic Wildlife and Natural Resource Adaptation (Sec. 782(m)(1))
- Domestic Wildlife and Natural Resource Adaptation (Sec. 782(m)(2))
- Climate Change Health Promotion and Protection (Sec. 782(l)(2))
- Domestic Adaptation (Sec. 782(l)(1))
- Energy Efficiency and Renewable Energy Worker Training (Sec.782(k)(2))
- Worker Assistance and Job Training (Sec. 782(k))
- Small Business Refiners (Sec.782(j)(2))
- Domestic Fuel Production (Sec. 782(j)(1))
- Advanced Automobile Technology (Sec. 782(i))
- Advanced Research Project Agency-Energy (Sec.782(h)(2))
- Energy Innovation Hubs (Sec. 782(h)(1))
- States for Building Retrofits (Sec.782(g)(3))
- Energy Efficiency in Building Codes (Sec. 782(g)(2))
- Renewable Energy and Energy Efficiency (Sec. 782(g)(1))
- Carbon Capture and Sequestration (Sec. 782(f))
- Energy-Intensive, Trade-Vulnerable Industries (Sec. 782(e))
- Low Income Consumers (Sec. 782 (d))
- Home Heating Oil and Propane Consumers (Sec. 782(c))
- Natural Gas Consumers (Sec. 782 (b))
- Merchant Coal Generators and Long-term Power Contracts [Reflects 14.3% of electricity allocation]
- Electricity Consumers (Sec. 782(a)(1))
- States for Cogeneration at Industrial Parks (Sec.782(a)(3))
- Prevention of Tropical Deforestation (Sec. 781)
- Allowances Placed in Strategic Reserve (Sec. 726)

Waxman-Markey Allowance Distribution, Cont. (Cumulative, 2012-2050)

Cumulative Distribution of Allowances (2012-2050)



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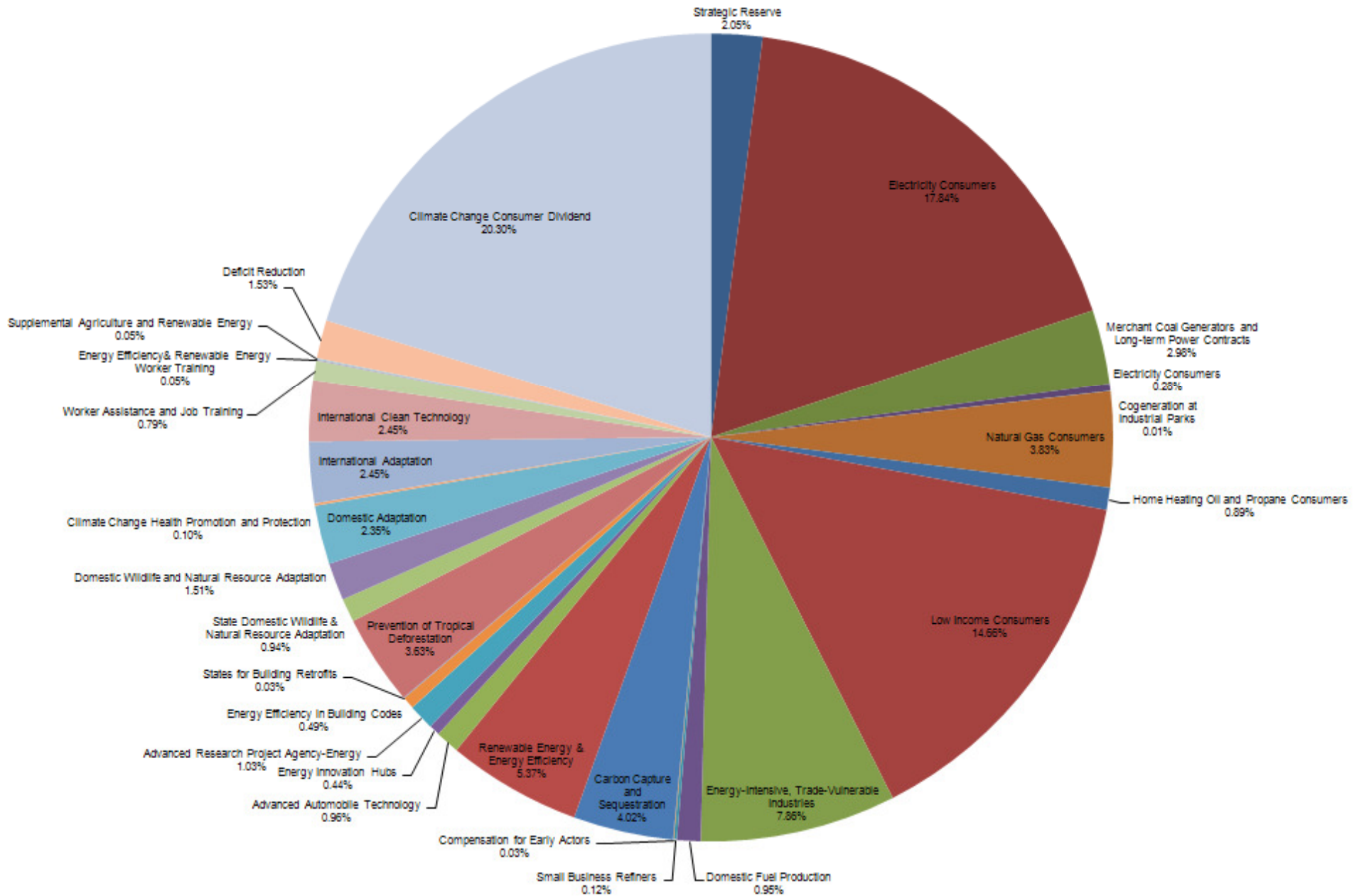
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Waxman-Markey Detailed Distribution (Cumulative, 2012-2050)



+ California MAC Allowance Distribution Principles

- Reduces the cost of the program to consumers, especially low-income consumers
- + • Avoids windfall profits where such profits could occur
- + • Promotes investment in low-GHG technologies and fuels (including energy efficiency)
- + • Advances the state's broader environmental goals by ensuring that environmental benefits accrue to overburdened communities
- + • Mitigates economic dislocation caused by competition from firms in uncapped jurisdictions
- + • Avoids perverse incentives that discourage or penalize investments in low-GHG technologies and fuels (including energy efficiency)
- + • Provides transition assistance to displaced workers
- Helps to ensure market liquidity

+ RGGI Purposes

- + • Auction proceeds are being used to
 - + – Promote energy efficiency measures
 - + – Mitigate impacts on electricity ratepayers and low-income consumers
 - + – Promotion of renewable and/or non-emitting energy technologies
 - + – Stimulate and reward investment in development of innovative emissions abatement technologies
 - + – Program administration