



Analysis of H.R. 2454, The Waxman-Markey American Clean Energy and Security Act of 2009 (ACES)

Updated: 8/6/2009¹

As a clean energy jobs bill begins its path through the Senate, 1Sky will continue organizing throughout the country to push for the best and most comprehensive bill we can get to steer us towards a renewable energy future, and away from a climate crisis.

For members of the US Senate, taking a strong stance on clean energy means that they will be putting themselves on record as champions for both our near term economic interests and the long term health and prosperity of our country, and the world. We urge the Senate to join the majority of Americans who know that the time for action is now by supporting effective, comprehensive climate legislation that:

- 1. Transitions us away from dirty fossil fuels of the past and towards the clean energy of the future**
Ensure that we end the construction of new dirty coal plants that use outdated technology, and move us away from the dirty fuels of the past by making sure that the oldest, dirtiest coal plants control their pollution.
- 2. Takes serious steps to cutting global warming pollution as soon as possible**
Cut carbon from fossil fuels at least 20 percent by 2020. A slow start over the next decade will mean playing catch-up later, not to mention less chance of a binding global treaty, and more severe climate impacts.
- 3. Maximizes clean energy jobs for America**
Maximize the number of allowances used to create clean energy jobs and train workers to fill them. Establish effective renewable electricity and energy efficiency resource standards that allow us to pivot away from dirty fuels and add more clean energy jobs to the U.S. economy.

With these changes, and no further weakening, H.R. 2454 has the potential to:

- **Usher in a powerful clean energy economy strong enough to create millions of career-track green-collar jobs for American workers.**
- **Save hundreds of billions of dollars in energy costs, cutting energy waste** for consumers and businesses across the economy by encouraging investment in efficient buildings, appliances, vehicles, and industrial processes. Clean energy investments and money sent to consumers will allow the overwhelming majority of Americans to achieve overall energy cost savings, while reducing reliance on dirty fuels nationwide.
- **Reduce our dangerous dependence on foreign oil** and help make our country energy independent through energy efficiency and clean renewable energy.
- **Limit global warming pollution** by providing incentives for clean energy to thrive, and investing in emissions reductions worldwide. Even in its current form, analysis indicates that H.R. 2454 could reduce global warming pollution at least 28% below 2005 levels by 2020 via the combined effect of a cap on carbon and complementary policies.
- **Ensure equitable treatment of low-income consumers and marginalized communities** through targeted rebates, worker training funds, energy efficiency programs, and community development assistance.

¹ This analysis covers the final version of H.R. 2454 as passed by the House of Representatives on June 26, 2009. For questions or comments contact Jason Kowalski via e-mail at jason@1sky.org or by phone at 301.270.4550 ext. 233.

**Major Regulatory Provisions of H.R. 2454, The Waxman-Markey
“American Clean Energy and Security Act of 2009”**

| Key Items | Major Provisions | 1Sky Goals |
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| <p>Targets & Offsets</p> | <p>2020 Near-term Targets:</p> <ul style="list-style-type: none"> ✓ At least 28% below 2005 levels (18% below 1990 levels), from a combination of the cap and complementary policies. ✓ 15% of these total reductions below 2005 levels are from the cap (17% below 2005 levels over 85% of the economy), and the rest are from domestic emissions cuts outside the cap (3%), avoided tropical deforestation (10%), and potentially more cuts via discounted offsets (0-5%). <p>2050 Long-term Targets:</p> <ul style="list-style-type: none"> ✓ At least 75% cuts below 2005 levels total via the cap and complementary policies (71% below 1990 levels). <p>Biomass Land Use Accounting:</p> <ul style="list-style-type: none"> ✓ Carbon emissions associated with indirect land use from biomass production are not accounted for. This omission could reduce the potential emissions reductions achieved by the bill by as much as 6% by 2020. <p>International Offsets</p> <ul style="list-style-type: none"> ✓ High levels of international carbon offsets may be purchased in place of domestic emissions reductions – up to 1.5 billion tons annually – which is around 20% of annual emissions in the U.S. These offsets are paired with stringent quality standards and regulatory requirements, including a 1.25 offset substitution requirement starting in 2018. Recent CBO analysis suggests that existing low-cost reductions within the U.S. will keep international offset quantity much lower than originally anticipated, meaning that ACES could leverage additional private clean energy investments in place of the offsets predicted. <p>Domestic Offsets</p> <ul style="list-style-type: none"> ✓ High levels of domestic carbon offsets – up to 1 billion tons annually – may also be purchased in place of domestic emissions reductions. The USDA oversees the program, which is associated with problematic criteria for assessing offset additionality and quality. The EPA predicts that with high quality standards, less than half a billion tons of offsets will come online in the next 30 years – equivalent to about 7% of annual U.S. emissions. | <p>Cut carbon emissions by at least 35% below 2005 levels by 2020, equivalent to at least 25% below 1990 levels, in line with the Intergovernmental Panel on Climate Change (IPCC) analysis. Legislation passed this year should cut carbon at least 20% below 2005 levels by 2020 for fossil fuels subject to the cap. Achieving these targets will be far easier than initially expected; the most recent DOE forecast for U.S. emissions in the absence of climate legislation shows that energy-related emissions in 2020 will be 1 percent <i>lower</i> than 2005 levels, in sharp contrast to the 17 percent increase forecast just two years ago.</p> <p>1Sky supports comprehensive accounting methods for biomass emissions that take indirect land use into account. The “biomass loophole” in ACES will encourage the use of inefficient, higher impact forms of biomass while punishing providers of efficient, more environmentally sound biomass. Domestic land use offsets must comply with strict quality and additionality criteria.</p> <p>1Sky is also concerned that ACES allows very high levels of carbon offsets. 1Sky urges direct investments in emissions reductions rather than offsets that come in place of domestic reductions in fossil fuel consumption.</p> |
| <p>Coal</p> | <p>Elimination of Existing EPA Powers</p> <ul style="list-style-type: none"> ✓ EPA is stripped of regulatory authority to set performance standards for new and existing coal plants. <p>New EPA-enforced Performance Standards for Coal Plants</p> <ul style="list-style-type: none"> ✓ Any new coal plant permitted after 2009 is required to meet a performance standard of at least 50% sometime between 2013 and 2025 – sooner if carbon capture and storage (CCS) plants come online by 2020. Performance standards do not apply to the expansion of existing coal plants. ✓ After 2020, performance standards require that new coal plants reduce global warming pollution at least 65%. ✓ Performance standards may be met through biomass co-firing, natural gas retrofits, efficiency gains, or carbon capture and storage when available at the required scale. <p>Wires Charge to Fund New Coal Plants with CCS</p> <ul style="list-style-type: none"> ✓ Adds a fee to electricity bills that will then be given to utilities to invest in new coal plants with CCS. Price tag: \$1 billion per year for 10 years. | <p>Close the loophole allowing coal plants to expand existing capacity without meeting current performance standards. Modifications to existing coal plants resulting in a significant increase in carbon emissions must be subject to the same performance standards as new plants. We must also ensure that the oldest, dirtiest coal plants meet current performance standards once they reach the end of their intended lifespan.</p> <p>Instead of funding new coal plants, public monies should support proven renewable energy and efficiency projects that are already commercialized, create more jobs, and save consumers money.</p> |

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| <p>Clean Energy</p> | <p>Combined Efficiency and Renewable Electricity Standard (RES) of 20% by 2020</p> <ul style="list-style-type: none"> ✓ The federal RES requires individual utilities to produce 20% of their power from renewables, efficiency, and other sources by 2020. Broad renewables definition includes efficiency savings (up to 8%), biomass, combustion of coal bed methane, and MSW combustion (burning trash). New nuclear plants and fossil fuel plants with CCS (carbon capture and sequestration) can be substituted in place of renewables and efficiency. ✓ Because of utility exemptions, baseline deductions and opt-out provisions, renewable energy generation required under this proposal may be as low as 8.3% by 2020, which is lower than business as usual. <p>Federal Renewable Electricity Procurement Standard of 20% by 2020</p> <ul style="list-style-type: none"> ✓ Requires the federal government to purchase 20% of its electricity from renewables by 2020. <p>Smart Grid</p> <ul style="list-style-type: none"> ✓ Directs federal agencies to coordinate regional smart grid planning, and assess products for smart grid compatibility. | <p>1Sky is supportive of a federal Renewable Electricity Standard that will encourage renewable energy deployment beyond business as usual. The Energy Information Agency projects that current state and federal policies will result in approximately 10% renewable generation by 2020. The RES should be strengthened significantly to ensure that renewable energy deployment exceeds business as usual.</p> <p>The expanded federal renewable energy procurement standard builds on an existing program to support extra deployment of renewables.</p> <p>An improved smart grid will be crucial for developing cost-effective clean energy resources.</p> |
| <p>Energy Efficiency</p> | <p>Stronger Efficiency Standards</p> <ul style="list-style-type: none"> ✓ Strong new building codes set energy efficiency targets for new buildings: 30% by 2010 and 50% by 2016. ✓ Strengthens efficiency standards for lighting and a number of appliances such as hot tubs, furnaces, bottle-type water dispensers, and televisions, including reward programs for “best-in-class” high-performance models. Mandates better efficiency rating and labeling to help guide consumers toward cost-effective appliances, including products with smart-grid capability. ✓ Mandates states and metropolitan regions to create new transportation plans that establish emission reduction goals from their transportation sectors. A competitive grant program is authorized to implement these plans. <p>Directs the Administration to Set Efficiency Standards</p> <ul style="list-style-type: none"> ✓ Establishes programs directing the EPA and Department of Energy to work with states and local governments to improve efficiency of existing buildings through retrofits. ✓ Directs the EPA to set efficiency standards for new non-road vehicles and engines such as marine vessels and locomotives. ✓ Requires that standards be established for industrial energy efficiency, providing incentives for recovering waste energy from industrial processes, and reducing peak demand from the aging electricity grid. <p>Opportunities for Low-Income Communities:</p> <ul style="list-style-type: none"> ✓ Authorizes and increases access to grants for communities and community development organizations, providing financing to improve energy efficiency, develop distributed renewable energy supplies in low-income rural and urban communities and increase sustainable community planning capacity. ✓ Targeted worker-training programs that give low-income communities access to green construction and community development jobs. ✓ Creates new programs specifically targeted toward public and assisted housing that will encourage the adoption of energy efficiency and renewable energy technology while ensuring stable electricity rates for low-income families. | <p>1Sky is supportive of a stand-alone Energy Efficiency Resource Standard (EERS) strong enough to achieve energy savings that will take full advantage of available efficiency resources.</p> <p>1Sky is also very supportive of enhanced energy efficiency standards and investments, especially the prospect of using existing administrative authority to set and strengthen efficiency standards for vehicles, buildings, appliances, and industrial processes. Strong efficiency standards have the potential to save our economy billions of dollars that would have been spent on fossil fuels, while also encouraging innovation and creating new jobs.</p> |

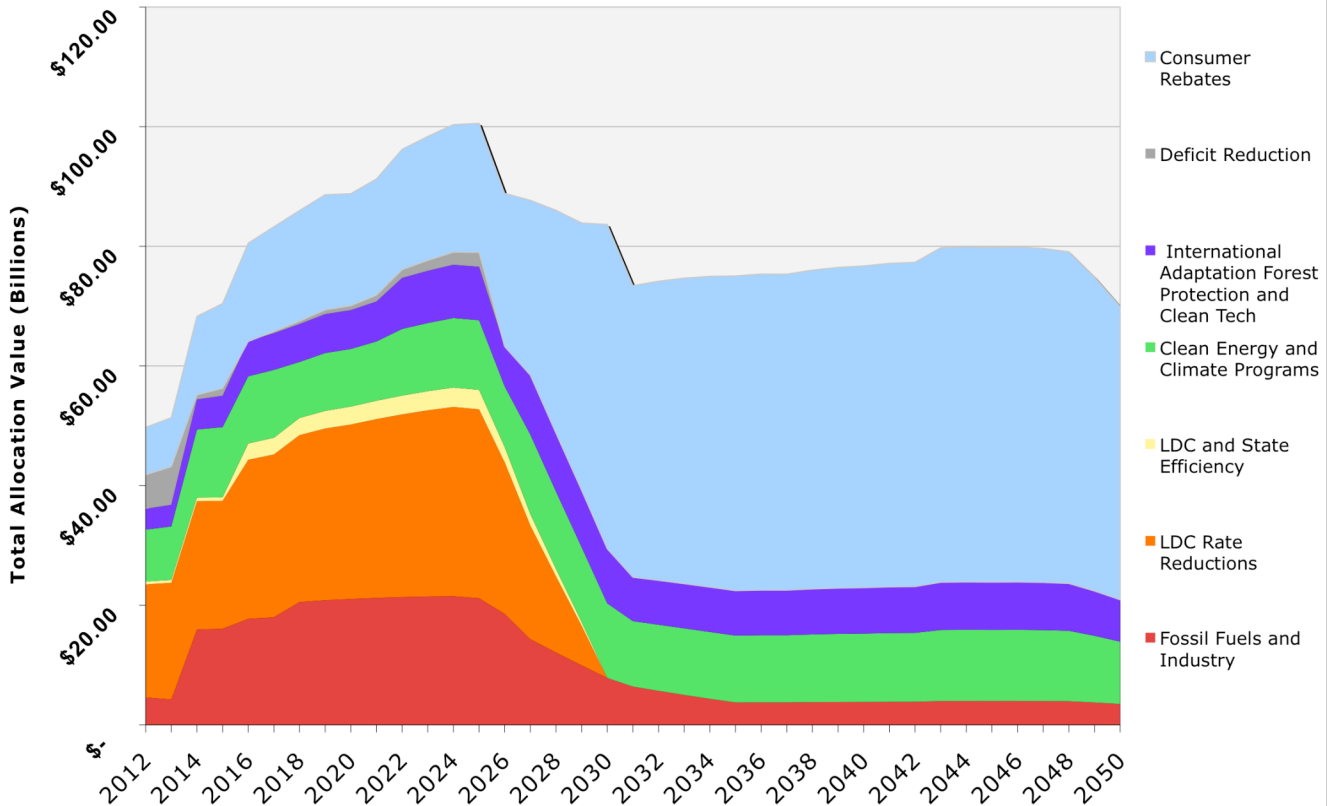
Allocation Provisions of H.R. 2454, The Waxman-Markey “American Clean Energy and Security Act of 2009” (2020 snapshot)

Under H.R. 2454, carbon pollution permits decline in quantity but increase in value starting in 2012. Each year polluters will need to purchase one permit for every ton of pollution they emit. The House Energy and Commerce Committee has decided to “allocate” these valuable pollution permits, or “allowances,” to states, administrative entities, federal programs, and the private sector. The majority of these allowances will be sold to polluters in return for revenue for the purposes identified below. Value of the compliance year allocation pool is approximately \$80 billion by 2020.

| Allowance % | Major Provisions (2020 snapshot) | 1Sky Goals |
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| Fossil Fuel Companies and Energy-Intensive Industries 26% | 2.25% Oil Refineries <ul style="list-style-type: none"> ✓ These allowances are given to the oil industry. Oil companies still feel the market signal of a price on carbon, but they also receive money to help offset the new costs associated with dirty carbon-based fuels. 5% Coal Plant Operators <ul style="list-style-type: none"> ✓ Allowances given to merchant coal and long-term power purchase agreements according to a formula developed by utilities. Utilities still feel the market signal of a price on carbon, but they also receive money to help offset the new costs associated with dirty carbon-based fuels. 5% Coal CCS (Carbon Capture and Sequestration) <ul style="list-style-type: none"> ✓ This provision gives public funding to new commercial-scale plants that use CCS technology to capture and sequester at least 50% of their carbon pollution. More funding is distributed to better-performing large-scale plants. 13.4% Energy-Intensive Trade-Exposed Industries <ul style="list-style-type: none"> ✓ These allowances are designed to prevent energy-intensive industries from moving jobs and emissions abroad. Allocations start at 15% and decline over time. ✓ Supplemented and eventually replaced by a border tax adjustment (carbon tariff) in 2025. | <p>Valuable allowances should not be given away to polluters for free. Taxpayer monies should be invested in a clean energy transition, not spent cleaning up after polluters.</p> <p>Instead of paying utilities to build new coal plants, these valuable allowances should support renewable energy and efficiency projects that are already commercialized, affordable, create more jobs, and save consumers more money than investments in fossil fuel infrastructure.</p> <p>1Sky supports a border tax adjustment (carbon tariff) as soon as possible. Output-based rebates given to trade-exposed industries should be linked with energy efficiency measures that will make U.S. companies more competitive by cutting energy costs.</p> |
| Reducing Retail Energy Prices via Local Distribution Companies (LDCs) 36% | 30% Electricity Rate Reductions via LDCs (Electric Utilities) <ul style="list-style-type: none"> ✓ The value of these allowances is equal to 90% of the increased costs for utilities under a carbon cap. With allowance value going to LDCs, power generators still feel the market signal of a price on carbon, but commercial and residential ratepayers are buffered from 90% of the price increase, which reduces the incentive for them to invest in cost-effective energy efficiency measures. State-based public utility commissions (PUCs) and the EPA are given the power to revoke allowances from LDCs if they do not pass the full value of these allowances to consumers through reduced electricity bills. 6% Natural Gas Rate Reductions via LDCs (Energy Providers) <ul style="list-style-type: none"> ✓ The value of these allowances is equal to two-thirds of the increased costs for natural gas companies under a carbon cap. Like the electric utilities, natural gas companies will still feel the market signal of a price on carbon, but commercial and residential ratepayers are buffered from two thirds of the price increase. State-based public utility commissions and the EPA are given the power to revoke allowances from natural gas companies if they do not pass the full value of these allowances to consumers through natural gas bills and energy efficiency programs. Unlike electric utilities, natural gas companies are required under the provision to dedicate one-third of their allowance value to end-use customer energy efficiency programs (in the next section). | <p>1Sky supports requiring that one-third of the allowance value allocated to electric LDCs be used for energy efficiency, consistent with the energy efficiency requirement for natural gas utilities currently included in ACES. Such an investments in energy efficiency will save consumers money and reduce the overall cost of the program. Investing in energy efficiency, clean energy, and direct consumer rebates are all more cost-effective means of reducing energy costs for ratepayers than price manipulation via LDCs. Artificially lowering the cost of energy disincentivizes private investments in energy efficiency and clean energy. Allowing a carbon price to permeate throughout the economy will produce more jobs, reduce emissions at lower net cost, and would be better on a whole for the economy. In addition, the regulatory integrity of the utility commissions overseeing LDCs varies from state to state.</p> |

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| State and LDC Energy Efficiency Investments 4% | 4% State and LDC Energy Efficiency <ul style="list-style-type: none"> ✓ These allowances are distributed to LDCs and states to invest in heating oil and natural gas efficiency measures. These projects are designed to save consumers money by investing in low-cost common sense energy-saving projects. | <p>1Sky supports extensive investments in energy efficiency. Efficiency projects reduce carbon and cut costs for consumers more cost-effectively than using valuable allowances for price manipulation via LDCs.</p> |
| Consumer Rebates 16% | 15% Federal Low-Income Consumer Rebates <ul style="list-style-type: none"> ✓ These allocations are auctioned and used to send direct lump-sum payments to low-income consumers, whose prices will be influenced by climate policy. Because low-income households spend a higher percentage of their income on energy than other households, it's important to target rebates to this segment of the population. 1% Home Heating Oil Consumer Rebates <ul style="list-style-type: none"> ✓ Distributed through states most impacted by higher heating oil prices. | <p>1Sky supports consumer rebate programs in place of manipulating energy prices via local distribution companies. Sending income-based rebates directly to low- and moderate-income consumers entirely makes up for utility rate increases, while increasing the savings gleaned from small-scale investments in energy efficiency.</p> |
| Public Investment in a Clean Energy Future 10% | 7.0% to Renewables and Energy Efficiency <ul style="list-style-type: none"> ✓ 5.5% for clean tech deployment. ✓ 1.5% for clean tech R&D. 1% Electric Vehicles <ul style="list-style-type: none"> ✓ A program to help fund research, development, and implementation for electric vehicles and other advanced automobile technology. Funded at 3% for the first 6 years. 0.5% for Green Job and Transition Programs <ul style="list-style-type: none"> ✓ Funding is targeted toward workers who are affected by the transition from fossil fuels to clean energy. Funded at 1.25% for the first 2 years. 2% for Domestic Adaptation <ul style="list-style-type: none"> ✓ Funds to help vulnerable communities and ecosystems adapt to climate change. Half for wildlife and natural resource protection, and half for other adaptation purposes, like public health. | <p>Instead of funding new coal plants, public monies should support renewable energy and efficiency projects that are already commercialized, affordable, and create four times more jobs than fossil fuel infrastructure investments.</p> <p>Training programs are necessary to ensure that new job opportunities created by this legislation are available to all communities in need of good jobs.</p> |
| International Investments 7% | 1% International Adaptation 5% Reducing Tropical Deforestation 1% Exporting Clean Energy <ul style="list-style-type: none"> ✓ Allocating funds to help vulnerable communities adapt to climate change, protect tropical forests, and export clean energy technology increase our bargaining power at the international climate negotiations coming up this December in Copenhagen. These funds assist vulnerable communities in developing countries as they transition to low-carbon economies and adapt to the changing climate. | <p>1Sky supports an increase in allocations for international investment purposes, with at least 3% of allowance value to international adaptation and 2% of allowance value to international clean energy technology partnerships. The 5% allocation for the international deforestation reduction program should be maintained. Setting aside sufficient allowances for these purposes will improve the prospects for an effective international climate agreement in Copenhagen this December.</p> |
| Deficit Reduction 1% | <ul style="list-style-type: none"> ✓ Allowance value is transferred to the U.S. Treasury, which allowed the bill to be scored as deficit-neutral by the CBO (Congressional Budget Office). | |

Waxman-Markey H.R. 2454 Allocations

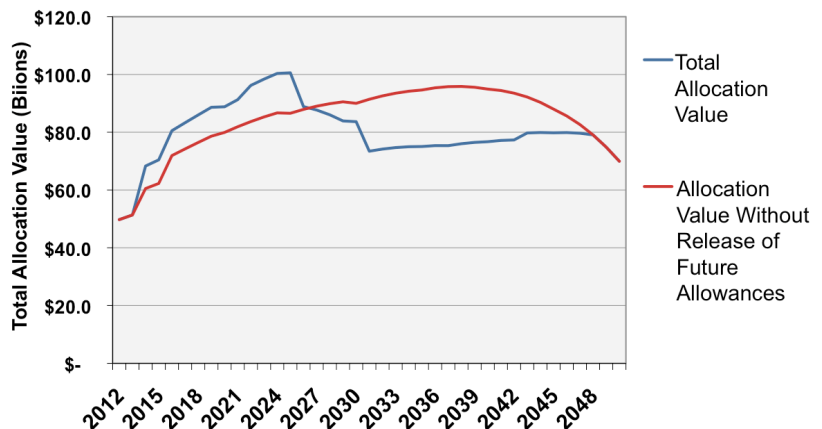


- **Allowance Price Data** is averaged from the recently updated June EPA analysis of H.R. 2454 as introduced. Allowance prices in the initial years are predicted to begin at around \$11 per allowance in 2012, rising to \$16 in 2020, and \$71 in 2050 (2005 dollars).
- **Allocation Value:** The graph above represents annual allocation value, including allowances released from future years, as specified in sections 782(g) and 782(p). The release of future allowances will not impact emissions reductions because the allowances released cannot be used for compliance immediately upon release. This analysis assumes that all allowances are sold at market price upon release, regardless of vintage year, even though these allowances may only be used for compliance in future years.
- **Strategic Reserve:** Each year 1-3% of allowances are placed in a “strategic reserve” rather than being allocated. The allowances placed into the reserve are released only if the allowance price spikes above 60% of the average three-year market price. If the strategic reserve trigger price is not reached, allowances in this reserve will not be released, in effect tightening the cap. If the trigger price is reached, international deforestation offsets are used to refill the reserve. The above graph is based on EPA allowance price figures, which do not include volatility analysis.

How Release of Future Allowances Works:

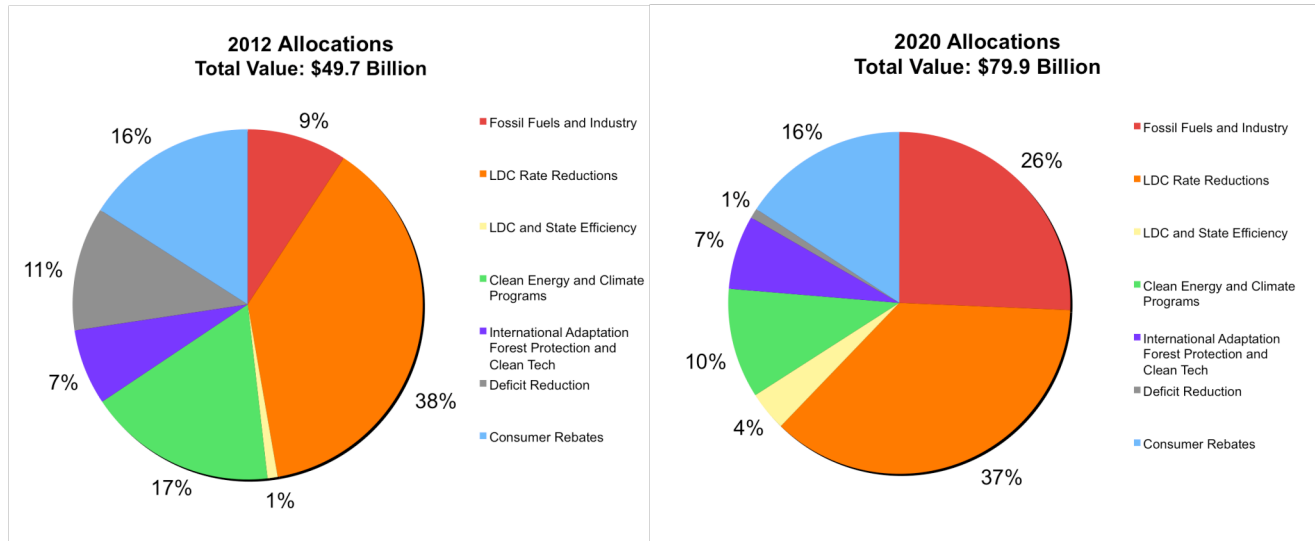
When allowances from future years are released, the graph to the right shows how these changes affect the total allocation value over time. In H.R. 2454 some allowances from the years 2027-2047 are released early on, in the years 2014-2026, per sections 782(g) and 782(p). Releasing valuable future allowances ahead of time helps provide extra resources for programs associated with the allocation priorities of later years, namely consumer rebates, clean energy technology, and adaptation.

Total Allocation Value With and Without The Release of Future Allowances



Single-Year Allocations Analysis:

Snapshots for 2012 and 2020, not including release of future allowances.



Multi-Year Allocations Analysis:

Cumulative allowance value over short- and long-term, including release of future allowances.

