



# MAKING POLLUTERS PAY: HARNESSING VALUE FOR PUBLIC BENEFIT

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Sierra Club is the oldest and largest grassroots environmental group, with over 1.2 million members and supporters. Sierra Club's mission is to explore, enjoy, and protect the wild places of the earth; to practice and promote the responsible use of the earth's ecosystems and resources; to educate and enlist humanity to protect and restore the quality of the natural and human environment; and to use all lawful means to carry out these objectives.

## ACKNOWLEDGMENTS

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## ABOUT THIS TOOLKIT

This toolkit is part of a series created by the Clean Power for All Collaborative convened by Green for All. The Clean Power for All Collaborative includes People's Action Institute, Center for Community Change, Clean Energy Works, Green For All, National Housing Trust, Natural Resources Defense Council, NextGen Climate America, Sierra Club, State Innovation Exchange, Union of Concerned Scientists, and U.S. Climate Action Network. The views and opinions expressed in this toolkit are those of the authors and do not necessarily reflect the endorsement of every member of the Clean Power for All Collaborative.

## ABOUT THE CLEAN POWER PLAN

The CPP is the first national effort to regulate greenhouse gases from existing power plants, which account for nearly 40 percent of the greenhouse gas emissions in the United States.<sup>1</sup> The CPP is expected to reduce carbon pollution output by about 32 percent below 2005 levels in the electricity sector. When developing the CPP, the Environmental Protection Agency (EPA) used its authority under the Clean Air Act to derive unit-specific emission rates standards, as well as statewide pollution budgets and state average emission rates based on each state's existing energy production sources and an assessment of several available pollution reduction measures. The regulations would limit the carbon output of existing power plants, but leave plan design and implementation up to state regulators. Initially, states were required to submit an implementation plan for approval or ask for

The toolkit provides concrete solutions to state regulators and advocates for the effective implementation of the Clean Power Plan (CPP). Each toolkit in the series addresses a set of questions and concerns about equity and fairness, and provides tangible solutions to ensure that the communities hardest hit by poverty and pollution are not overlooked in the development of state plans.

To access this toolkit and other topics online, visit [www.thecleanpowerplan.com](http://www.thecleanpowerplan.com).

an extension by September 6, 2016 and to submit final plan by September 6, 2018. Compliance requirements for covered power plants are set to begin in 2022 and end in 2030. On February 9, 2016, the U.S. Supreme Court placed a stay on enforcement of the CPP until the D.C. Circuit Court of Appeals rules on the merits of the Plan and the Supreme Court either rules on the merits or denies a petition to review the lower court's decision. The stay does not speak to the legal merits of the rule, and it does not prevent the EPA from continuing to accept input and develop guidance on how states may implement these life-saving standards. During the stay, states should be continuing to plan for compliance or invest in energy policies that protect people and the planet by accelerating the deployment of clean and renewable energy and energy efficiency.

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# CONTENTS

3	Introduction
4	Best Practice: Avoid Distributing Allowances for Free
5	Best Practice: Allowance Auctions As the Preferred Method for Allowance Allocation
7	Case Study: Use of Auction Revenue Under RGGI and AB32
9	Best Practice: Allocation to Local Distribution Companies is a Possible Alternative
10	Best Practice: Allocation to Clean Energy Generators is a Possible Alternative
11	Best Practice: Allocation to Entities Required to Invest Funds in Frontline Communities
13	Key Terms
14	Key Resources
15	References

## INTRODUCTION

The Clean Power Plan provides states with an opportunity to regulate carbon pollution from existing power plants using either a mass-based or rate-based approach. If a state chooses to establish a mass-based program, it will create authorizations to pollute—called “allowances”—that the regulated power plants will be required to hold for the carbon pollution they emit during each compliance period. A mass-based program requires establishing an approach for the distribution of allowances (“allowance allocation” or “allowance distribution”). If the state establishes a trading program, allowances are tradable — power plants that hold more allowances than they need to cover their emissions can sell them to other plants that need them to show compliance.

The way allowances are distributed has important implications for ensuring economic efficiency and equitable distribution of public benefits. Giving away allowances to power plants for free could result in windfall profits to power plant owners. In order to make power plants pay for the pollution they are creating and maximize public benefits, an auction program is the best form of allowance allocation. Among other benefits, the auction approach creates

a direct economic incentive to reduce carbon dioxide emissions as much as possible to minimize the need to purchase allowances. Revenue from allowance auctions can be used to provide incentives for the expansion of renewable energy and energy efficiency, as well as to pursue environmental and economic justice ends.

If auctions are not feasible and the state must pursue a free allocation mechanism, allocating allowances to local distribution companies can help protect consumers, if the legal authority of the public utility commission allows it. In addition, in a free allocation system, states can distribute allowances directly to local weatherization agencies or designated clean energy nonprofits that sell those allowances and invest their value in frontline communities. Finally, states can also create allowance set-asides in order to provide incentives for the development of clean energy or, if set-asides are not feasible, distribute free allowances to clean energy providers. States should not include nuclear energy as an eligible resource and should conduct robust compliance analyses to confirm that this approach would not provide incentives for nuclear generation.

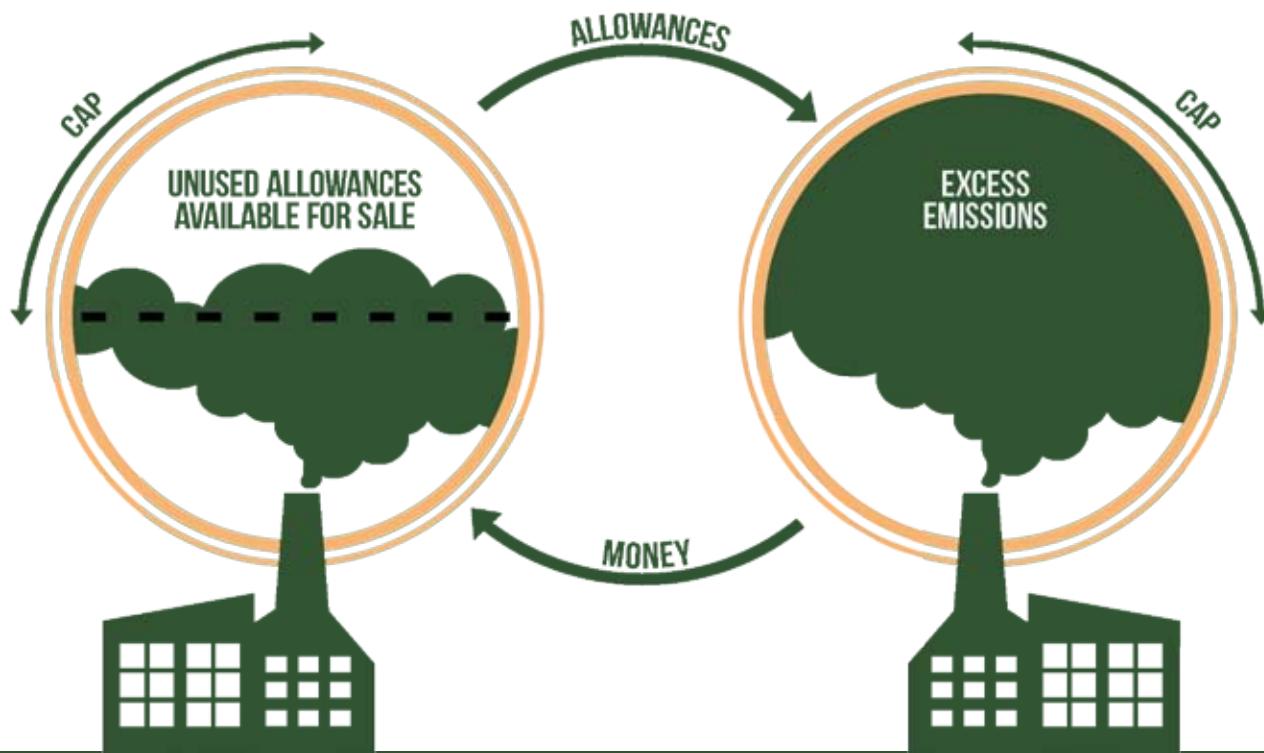


Figure 1. Allowances in Cap-and-Trade

## BEST PRACTICE:

### AVOID DISTRIBUTING ALLOWANCES FOR FREE

Allowances are authorizations to pollute. In a trading system, allowances have economic value, so power plant owners would benefit by selling the allowances not required for operation if states simply gave them allowances for free. Experts have documented that in regulated states, where utilities are only allowed to recover the costs of service actually incurred (plus a reasonable rate of return), the retail price of electricity would not reflect the value of the free allowances obtained by the power plant. But in deregulated states, where consumers can choose their electricity suppliers, the market value of emissions allowances would be reflected in electricity prices, even if the generators received the allowances for free. In this context, generators would add the market prices of allowances into their bids to provide power, which would raise the price of electricity for consumers, resulting in windfall profits to generators.<sup>1</sup>

Under several earlier trading programs for conventional air pollutants, EPA allocated allowances for free in part to gain political acceptance of those programs. For example, under Title IV's Acid Rain Program, allowances are allocated based on a combination of sources' heat input and emission rates.<sup>2</sup> The Acid Rain Program, however, was enacted at a time in which the electric sector in the entire country was "regulated," so there was no concern about the potential for windfall profits.<sup>3</sup> Based on the experience of current carbon trading programs, today there is no justification for creating trading programs solely on the basis of free allocation of allowances to gain acceptance by the regulated entities.

Free allocation of allowances can be based on emissions or generation. The reference period for these allocations also varies — it could be historical or current. States wishing to establish a mass-based program for purposes of compliance with the Clean Power Plan should not allocate free allowances based on historical information (“backward-looking” allocation)<sup>4</sup> — whether historical emission or historical electricity generation levels. Free allocation based on historical generation would reward actions taken long in the past; free allocation on the basis of historical emissions would benefit the largest, dirtiest, and least efficient sources.<sup>5</sup>

Although this is not our preferred approach, to the extent that states must pursue free allocation mechanisms, especially for the regulated power

plants, such allocations must be “forward-looking,”<sup>6</sup> on the basis of recent (instead of historical) generation, for example, according to plants’ share of total electricity generation in the prior year, updated on an annual basis. This would ensure that the distribution of allowances is based on current generation needs. If any allowances from the annual budget are not distributed, states should keep those unused allowances in a fund and either retire them, or distribute them only on the basis of needed allowances to cover generation. This approach will decrease the potential for adverse effects discussed above. However, this type of allocation will not harness value for public benefit because it will not raise funds that can be spent for these purposes. Below we discuss several allocation methodologies that would achieve these ends.

## BEST PRACTICE:

# ALLOWANCE AUCTIONS AS THE THE PREFERRED METHOD FOR ALLOWANCE ALLOCATION

Auctions should be the preferred method for allocation of allowances in mass-based state plans. Under an auction, sources must bid for the number of allowances they would like to purchase. Economics experts have extensively documented that auctions lead to an efficient distribution of allowances based on supply and demand; provide immediate price signals in the market; prevent any windfall profits that could accrue to power plant owners as a result of free allocation; create equal opportunities for all participants in the allowance market; and provide a source of revenues that can be used to provide incentives for emissions reductions and environmental and economic justice ends.<sup>7</sup>

Under an auction, the government captures the value of the allowances, and depending on how this value is distributed, these revenues will generate economy-wide (for example, if used to reduce taxes) and equity benefits (for example, if used to offset the impacts of higher electricity prices on households).<sup>8</sup> Requiring regulated power plants to purchase allowances through an auction program would have only a modest effect on their asset value,<sup>9</sup> and it would be fairer because it would give all regulated sources equal opportunities to access allowances.<sup>10</sup>

The cost of allowances will be reflected in the price of electricity across the board,<sup>11</sup> but any price increases resulting from auctioning allowances could be more than offset with clean energy investments (particularly energy efficiency, which will help to decrease electricity bills), and through targeting the use of revenues to directly address potential electricity price impacts, especially on low-income households.<sup>12</sup> States can decide how to use allowance revenues in the best interests of its residents.



“Auctions should be the preferred method for allocation of allowances in mass-based state plans.”

Current CO2 emissions trading programs such as the Regional Greenhouse Gas Initiative (RGGI), California's AB32, and the current phase of the EU Emissions Trading Scheme allocate allowances through auctions.<sup>13</sup> These programs work well and have resulted in emissions reductions, clean energy expansion, and billions of dollars in revenues, as further discussed below.

#### **Allowance Auction Revenues Should Be Used to Reduce Carbon Emissions and Further Environmental and Economic Justice Ends**

Auction revenues should be used to expand clean energy and energy efficiency to further reduce CO2 emissions, reduce energy bills, and pay the costs of administering the trading program.<sup>14</sup> They should also be used to fund investments in climate adaptation.<sup>15</sup> In addition, a percentage of revenues, determined through a stakeholder process that includes meaningful participation from communities, should be used to finance targeted investments in frontline communities affected by the pollution from dirty plants. Participation by residents of low-income communities and communities of color in the decision of which activities to fund is essential.<sup>16</sup>

States should also use a percentage of the revenues to provide financial assistance to workers affected by the transition away from coal, and for new economy job training or clean energy investments in communities where coal represents a significant part of their economy. The level of funding devoted to this transition fund should be determined through a stakeholder process that includes representatives from labor unions, potentially affected communities, state and local economic development agencies, and experts that would aid the EPA and state environmental agencies to assess potential job impacts.



*Sierra Club participating in the People's Climate March, September 21, 2014, New York City*

## CASE STUDY:

# USE OF AUCTION REVENUES UNDER RGGI AND AB32

Existing state carbon trading programs such as RGGI and AB32 have generated sizable revenues that have been invested in clean energy expansion and the pursuit of equity and environmental justice ends.

Under RGGI, each state has full discretion in deciding how to invest auction proceeds, and each state administers its own investment programs.<sup>17</sup> An assessment of the program between 2009 and 2013 found that owners of fossil fuel-fired power plants have spent nearly \$2 billion in CO<sub>2</sub> allowance purchases during this six-year period. States have invested almost the entirety of these revenues in energy efficiency measures, community-based renewable projects, credits on customers' bills; assistance to low-income customers to help pay their electricity bills; greenhouse-gas-reduction measures; and education and job training programs.<sup>18</sup>

### PROGRAMS FUNDED BY CUMMULATIVE RGGI INVESTMENTS, 2009-2013:



#### Participating Households

To date: 3.7 million



#### Participating Businesses

To date: 17,800



#### Workers Trained

To date: 3,700



#### Energy Bill Savings

To date: \$395 million; Lifetime: \$2.9 billion



#### Megawatt Hours Saved

To date: 1.8 million; Lifetime: 11.5 million



#### mmBTU Saved

To date: 2.9 million; Lifetime: 48.7 million



#### Short Tons CO<sub>2</sub> Avoided

To date: 1.3 million; Lifetime: 10.3 million



#### Equiv. Cars off Road

To date: 245,000; Lifetime: 1.9 million

Source: Regional Greenhouse Gas Initiative, Investment of RGGI Proceeds Through 2013, April 2015.

## GOVERNOR'S PROPOSED CAP-AND-TRADE EXPENDITURES (IN MILLIONS):

Program	2014-15	2015-16
High-speed rail	\$250	\$250*
Low carbon transportation	200	200
Affordable housing and sustainable communities	130	200*
Transit and intercity rail capital program	25	100*
Low-income weatherization and solar	75	75
Low carbon transit operations	25	50*
Sustainable forests and urban forestry	42	42
Wetlands and watershed restoration	25	25
Waste diversion	25	25
Energy efficiency for public buildings	20	20
Agricultural energy and operational efficiency	15	15
<b>Totals</b>	<b>\$832</b>	<b>\$1,002</b>

\*Continuously appropriated percentage of 2015-16 revenue.

Source: Mac Taylor, *The 2015-2016 Budget: Resources and Environmental Protection*, California Legislative Analyst's Office, February 2015, at 11.

Under AB32 (SB 535), regulators must allocate 25 percent of auction revenues to projects that benefit disadvantaged communities, with at least 10 percent to be spent directly in those communities.<sup>19</sup> The California Department of Finance is also required to develop three-year investment plans to ensure that those revenues facilitate greenhouse gas reductions, foster job creation, and direct investments towards the most disadvantaged communities and households in the state.

As part of the revenue distribution process, the California Air Resources Board must hold at least two public workshops in different regions of the state and one public hearing prior to DOF's submission of the investment plan to the California Legislature.<sup>20</sup>

By June 30, 2015, AB32 had generated \$2.2 billion in new revenue to the state of California. The California Environmental Protection Agency developed the Cali-

fornia Communities Environmental Health Screening Tool (CalEnviroScreen 2.0), to identify the census tracts that are the most disadvantaged communities in the state, based on data on pollution burden and other environmental indicators as well as population characteristics and socioeconomic indicators.

The resulting "Greenhouse Gas Reduction Fund" has provided revenues for a variety of programs, including affordable housing, low-carbon transportation, transit capital and operations, weatherization and renewable energy, and urban forests.<sup>21</sup>

For detailed information on best practices for distribution of revenues from trading programs to low income communities and communities of color see the Working Group's toolkit *Fair and Just Investments in Frontline Communities through the Clean Power Plan*.

## BEST PRACTICE:

# ALLOCATION TO LOCAL DISTRIBUTION COMPANIES IS A POSSIBLE ALTERNATIVE

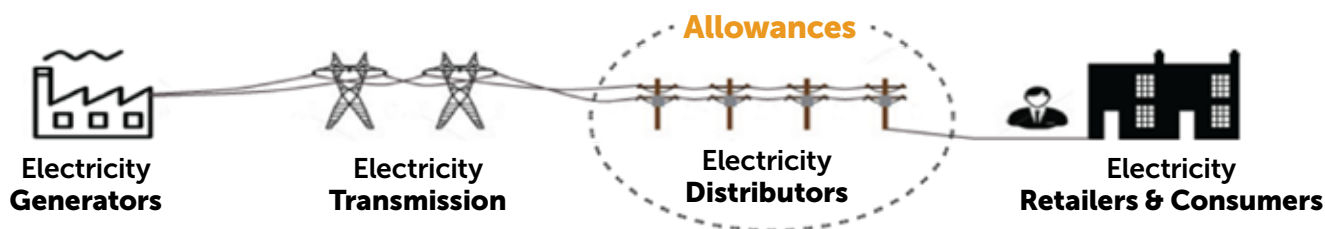
If regulators in a state lack the authority to auction allowances, and legislative remedies are infeasible, an alternative could be to allocate allowances to local distribution companies (LDCs), with oversight from state public utility commissions (PUCs). This type of allowance allocation is meant to ensure that consumers receive the value of the allowances in order to offset any potential increases in electricity prices from the implementation of the program.<sup>22</sup>

Specifically, states would allocate allowances to local distribution companies, who would sell those allowances to the regulated power plants that need them for compliance, preferably, through auction mechanisms or, alternatively, through direct sale. Local distribution companies are in most states subject to price regulation by public utility commissions (PUCs), and they can be required to return the value of any emissions allowances they receive for free to the customers they serve. Because their rates are always regulated, local distribution companies should not be able keep the allowance proceeds for themselves as windfall profits and would need to pass them on to consumers. However, when assessing the appropriateness of advocating for this type of allocation in a given state, it is critical to ensure that the PUC's legal framework is sufficiently protective of consumers. This may be the case in some states, but not in others. By way of example, California's AB32 regulations provide for allocations to electrical distribution utilities, which must consign them at the

auctions. The proceeds must be used exclusively for the benefit of retail ratepayers of those distribution utilities, and cannot be used for the benefit of other entities. Distribution companies must report on the use of the proceeds from those auctions on an annual basis.<sup>23</sup> California's investor-owned utilities must return nearly all the revenues from the sale of these allowances to their industrial, small business, and residential customers.<sup>24</sup>

In terms of how to distribute the value from the sale of allowances, PUCs could direct allowance value directly towards reductions in customers' electric bills or rebates. Refunds, as opposed to direct decreases in electricity bills, will preserve consumers' incentives to save energy. Specifically for low-income households, the Center on Budget and Policy Priorities has proposed providing these households with direct "energy refunds" to offset the impacts from higher electricity prices. Eligible households could receive these benefits through state electronic benefit transfer (EBT) systems, which are debit card systems that states already use to provide food stamps and other forms of assistance.<sup>25</sup> It is critical to note that many of the poorest households (e.g. in public housing) do not pay utility bills and therefore a special accommodation should be made to adjust rent or other types of payments.

In addition to consumer benefits in their electricity bills, the National Association of Regulatory Utility Commissioners (NARUC) has proposed that PUCs could direct allowance revenues to fund energy efficiency programs under their scope of authority.<sup>26</sup> In California, for example, the PUC ordered that almost 85 percent of the allowance value be returned to consumers as a direct rate reduction and a semi-annual "climate dividend" in the form of an on-bill credit against customers' electric bills. The distribution company customers benefited from these revenues include residential customers, small businesses, and emissions-intensive and trade-exposed industries.<sup>27</sup>



ALLOCATION OF ALLOWANCES TO LOCAL DISTRIBUTION COMPANIES

## BEST PRACTICE:

### ALLOCATION TO CLEAN ENERGY GENERATORS IS A POSSIBLE ALTERNATIVE

**“An alternative could be to allocate allowances to local distribution companies, with oversight from state public utility commissions.”**

States can also provide an allowance set-aside to clean energy generators (including verified demand-side energy efficiency projects). The Clean Power Plan requires renewable energy developers to generate (in the case of renewable energy) or save electricity (in the case of energy efficiency) in order to actually earn those set-asides.<sup>28</sup> If a state sets aside allowances for clean energy generators, but does not receive applications to distribute the entire pool, it should either permanently retire the unused allowances or hold them in reserve for future years. In other words, allowances should not be re-distributed to fossil generators if unused. As required by the CPP, set-asides for energy efficiency should be subject to a rigorous evaluation, measurement, and verification process, similar to requirements under a rate-based program for emission rate crediting (ERC). Clean energy generators can sell the set-aside allowances to earn additional revenue to invest in new projects.

If the state is not open to creating set-asides, another possibility would be to establish an output-based allocation method in which the state distributes allowances to non-emitting generators only, based on each generator's recent output. This approach would be less advantageous than a set-aside for clean energy generators because developers would access the allowances for free, without having to commit to construct new projects and generate additional clean energy, as required by the CPP's set-aside program. States should keep in mind that, at least in the early stages of Clean Power Plan compliance, many renewable energy projects will be built due to other incentives such as the Production Tax Credit (for wind projects) and the Investment Tax Credit (for solar projects).



By rewarding those projects with free Clean Power Plan allowances that would not otherwise be issued, state agencies will allow fossil fuel-fired power plants to emit additional carbon pollution.

One caution in designing a clean energy set-aside or output-based allocation, as described above, is that, if states do not tailor such programs to benefit wind, solar, and demand-side energy efficiency providers specifically, and instead create set-asides or grant free allowances for “carbon free” or “zero-emitting” generators in general, these programs could provide incentives for nuclear power plants (which do not emit carbon but present other large environmental and public health risks). States should be advised

that, given the extraordinary capital costs of new nuclear development, allocations to nuclear sources are likely to simply represent a windfall profit rather than drive new projects. In addition, nuclear energy development entails other major problems, including waste disposal, upstream impacts of mining and processing, and potential for disasters. Therefore, states should define “clean energy” so that nuclear energy is not included as an eligible resource for allocation of allowances. If states do not limit the definition as we recommend, states should undertake power-sector modeling to ensure that nuclear energy will not be favored under such methodology for allocation of allowances.

## BEST PRACTICE:

# ALLOCATION TO ENTITIES REQUIRED TO INVEST FUNDS IN FRONTLINE COMMUNITIES

In a free allocation system, states can also allocate allowances (either freely or through a set-aside) directly to local weatherization agencies, clean energy nonprofits (e.g. shared solar providers) working in frontline communities, or other legal entities (for example, existing state environmental justice offices or ad-hoc state entities) that can be required to invest funds from the sale of allowances on the basis of the pollution-reduction priorities designated by the residents of those communities.

States have ample leeway to define the methods for allowance allocation in their implementation plans, which would include distributing them to the entities mentioned above. The Clean Power Plan only provides that, under a rate-based plan, resources eligible for ERCs must have increased electric generating capacity or implemented electricity savings measures after January 1, 2013 and that they must be

connected to or save electricity on the electric grid in the contiguous United States. Eligible resources include wind, solar, geothermal, hydro, wave, and tidal renewable energy, and demand-side energy efficiency,<sup>29</sup> among others, as well as “a category identified in a State plan and approved by the EPA to generate ERCs.”<sup>30</sup> Under a mass-based plan, the rule provides that eligible resources for set-asides must meet the same requirements for ERC eligibility under rate-based programs.<sup>31</sup> If these minimum eligibility requirements are met, states have discretion to define their preferred allocation methodologies, including the methods to distribute allowances, the parties to which allowances are distributed, and incentives for certain resources (such as renewable energy and energy efficiency) and communities (for example, low-income communities) to be served,<sup>32</sup> so long as EPA approves such allocation methodologies for Clean Power Plan compliance.

A woman wearing a white hard hat with "EAGLE IRON ERECTORS, INC." and a yellow safety vest is smiling. The background shows a large array of solar panels under a clear sky.

**“...States can also allocate allowances directly to local weatherization agencies, clean energy nonprofits working in frontline communities, or other legal entities...”**

*Photo credit: UpLiftCA, Photo by Scott Hoag*

## KEY TERMS

**Allowance:** An allowance is an authorization to emit a specific amount of a pollutant under a mass-based program. Allowances are used for compliance and, in a cap-and-trade system, they can be traded among sources participating in the program.

**Allowance Allocation:** Allowance allocation refers to the specific methodology for initial distribution of allowances in a mass-based program.

**Auction:** Allowance allocation methodology whereby sources must bid for the number of allowances they would like to purchase. The government captures the value of the allowances, and depending on how this value is distributed, these revenues will generate economy-wide and equity benefits.

**Deregulated State:** State whose utilities are only responsible for power distribution to consumers. In deregulated markets, grid operators manage wholesale markets to dispatch electricity while ensuring reliability. Local distribution companies purchase electricity from generators and sell it to end-users, who can choose their preferred suppliers,

**Local distribution company:** A utility engaged in the retail sale of electricity to end-users. In regulated states, local distribution companies are the same as the generators; in a deregulated state these are generally different entities.

**Output-based allocation:** Forward-looking allowance allocation methodology that adjusts distribution of allowances based on sources' performance or market conditions; for example, on the basis of recent electric generation.

**Set-aside:** A pool of allowances reserved for specific purposes, such as clean energy expansion and investments in frontline communities.

**Regulated state:** State whose electric sector is comprised of vertically-integrated utilities that own or control the entire flow of electricity, from generation to distribution. In regulated states, utilities are only allowed to recover the costs of service actually incurred, plus a reasonable rate of return.

**SB535:** Under AB32 (SB 535), regulators must allocate 25 percent of auction revenues to projects that benefit disadvantaged communities, with at least 10 percent to be spent directly in those communities.

*Photo credit: Green For All*



## KEY RESOURCES

Clean Power Plan Final Rule, available at <https://www.gpo.gov/fdsys/pkg/FR-2015-10-23/pdf/2015-22842.pdf>

EPA, Office of Air and Radiation, *Tools of the Trade, A Guide to Designing and Operating a Cap and Trade Program for Pollution Control*, June 2003, available at <https://www.epa.gov/sites/production/files/2015-06/documents/tools.pdf>

Recent publications on allocation methodologies in the context of the Clean Power Plan:

- Ari Peskoe, *Designing Emission Budget Trading Programs Under Existing State Law*, Harvard Environmental Policy Initiative, January 27, 2016, available at <http://environment.law.harvard.edu/wp-content/uploads/2014/08/Designing-Emission-Budget-Trading-Programs-Under-Existing-State-Law.pdf>
- Franz Litz and Brian Murray, *Mass-Based Trading Under the Clean Power Plan: Options for Allowance Allocation*, Nicholas Institute for Environmental Policy Solutions and Great Plains Institute, Working Paper NI WP 16-04, March 2016, available at <https://nicholasinstitute.duke.edu/climate/publications/mass-based-trading-under-clean-power-plan-options-allowance-allocation>

Assessments of use of auction revenues under existing state carbon trading programs:

- Jeffrey Rabin et al., *A Guide to Greenhouse Gas Reduction Fund Program Designs, Expenditures, and Benefits*, UCLA Luskin School of Public Affairs, August 2015, available at <http://innovation.luskin.ucla.edu/sites/default/files/Final%20081915.pdf> .
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- <sup>7</sup>*Id.*, at 3-16.
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- <sup>9</sup>Dallas Burtraw et al., *The Effect on Asset Values of the Allocation of Carbon Dioxide Emission Allowances*, RFF Discussion Paper 02-15, at 18
- <sup>10</sup>EPA, *Tools of the Trade*, at 3-17.
- <sup>11</sup>Karen Palmer, *Consumers and Energy Price Effects Associated With the Allocation of Greenhouse Gas Emissions Allowances*, Congressional Testimony Prepared for the U.S. Senate Committee on Energy and Natural Resources, RFF, October 21, 2009, at 4.
- <sup>12</sup>Dallas Burtraw et al., *The Effect of Allowance Allocation on the Cost of Carbon Emission Trading*, at 29; Anthony Paul et al., *Compensation for Electricity Consumers under a U.S. CO2 Emissions Cap*, at 10.
- <sup>13</sup>See, e.g., CARB, Allowance Allocation; Regional Greenhouse Gas Initiative (RGGI), CO2 Auctions, available at [https://www.rggi.org/market/co2\\_auctions](https://www.rggi.org/market/co2_auctions); Jos Sijm et al., *CO2 Cost Pass Through and Windfall Profits in the Power Sector*, *Climate Policy*, Vol. 6, Issue 1, pp. 49-72, May 2006. Under the ETS, allowances were initially allocated for free. An evaluation of the first two trading periods (from 2005 to 2007 and from 2008 to 2012) showed that generators passed on the costs of free allowances to consumers. As a result, auctions are now the default mechanism for allocation. European Commission, *Auctioning*, available at [http://ec.europa.eu/clima/policies/ets/cap/auctioning/index\\_en.htm](http://ec.europa.eu/clima/policies/ets/cap/auctioning/index_en.htm)
- <sup>14</sup>EPA, *Tools of the Trade*, at 3-16.
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- <sup>16</sup> Vien Truong, *Addressing Poverty and Pollution, California's SB 535 Greenhouse Gas Reduction Fund*, 49 Harvard Civil Rights-Civil Liberties L. Rev. 493, 498 (2014).
- <sup>17</sup> Regional Greenhouse Gas Initiative, *Investment of RGGI Proceeds Through 2015*, April 2015, available at <https://www.rggi.org/docs/ProceedsReport/Investment-RGGI-Proceeds-Through-2013.pdf>, at 4.
- <sup>18</sup> Paul Hibbard et al., *The Economic Impacts of the Regional Greenhouse Gas Initiative on Nine Northeast and Mid-Atlantic States, Review of RGGI's Second Three Year Compliance*, Analysis Group, July, 2015, at 4.
- <sup>19</sup> Cal. Health & Safety Code §§ 39710-39723.
- <sup>20</sup> Cal. Health & Safety Code § 39716.
- <sup>21</sup> Jeffrey Rabin et al., *A Guide to Greenhouse Gas Reduction Fund Program Designs, Expenditures, and Benefits*, UCLA Luskin School of Public Affairs, August 2015, at 2-5.
- <sup>22</sup> See Conrad Schneider, *Power Switch: An Effective, Affordable Approach for Reducing Carbon Pollution from Existing Fossil-Fueled Power Plants*, Clean Air Task Force, February 2014.
- <sup>23</sup> 17 Cal. Code of Regs. § 95892(a)-(e).
- <sup>24</sup> Public Utilities Commission of the State of California, *Decision Adopting Cap-and-Trade Greenhouse Gas Allowance Revenue Allocation Methodology for the Investor-Owned Electric Utilities*, No. 12-12-033, December 20, 2012, available at <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M040/K631/40631611.PDF>.
- <sup>25</sup> Center on Budget and Policy Priorities, *Policy Basics, Climate Change Legislation and Low-Income Consumers*, available at [http://www.cbpp.org/sites/default/files/atoms/files/PolicyBasic\\_EffectOfCap.pdf](http://www.cbpp.org/sites/default/files/atoms/files/PolicyBasic_EffectOfCap.pdf)
- <sup>26</sup> National Association of Regulatory Utility Commissioners, *FAQ: Consumer Benefits of Free CO2 Allowances via Regulated Utilities*, available at [http://www.naruc.org/Publications/FAQ1\\_Consumer\\_Benefits.pdf](http://www.naruc.org/Publications/FAQ1_Consumer_Benefits.pdf).
- <sup>27</sup> California Public Utilities Commission, *CPUC Allocates 85 Percent Of Revenue From Sale Of Utilities' Greenhouse Gas Allowances To Residential Customers*, available at <http://yubanet.com/california/CPUC-Allocates-85-Percent-Of-Revenue-From-Sale-Of-Utilities-Greenhouse-Gas-Allowances-To-Residential-Customers.php#.VqGZivkrLIW>
- <sup>28</sup> 40 C.F.R. 60.5815(c).
- <sup>29</sup> Eligible resources also include nuclear energy and "qualified" biomass. Advocates should push strongly against inclusion of these types of resources as eligible measures for compliance with the Clean Power Plan, as biomass is not carbon neutral and nuclear energy entails environmental, health, and safety concerns.
- <sup>30</sup> 40 C.F.R. § 60.5800.
- <sup>31</sup> 40 C.F.R. § 60.5815.
- <sup>32</sup> 80 Fed. Reg. at 64,892.

# MAKING POLLUTERS PAY: HARNESSING VALUE FOR PUBLIC BENEFIT

