



Cap-and-Trade Program Summary of 2013-2018 Electrical Distribution Utility Allocated Allowance Value Usage

Purpose

This report summarizes how electrical distribution utilities (EDUs) used the value of allowances allocated to them by the California Air Resources Board (CARB) under the Cap-and-Trade Program (Program) during the period 2013-2018. The value of these allocated allowances is referred to as “allocated allowance value,” or, if the allowances have been consigned to auction and sold, “allocated allowance auction proceeds” or “auction proceeds.”¹

Background

EDUs receive allowance allocations from CARB pursuant to provisions of the Cap-and-Trade Regulation (title 17, California Code of Regulations, sections 95801 *et seq.*) (Regulation).² Under the Regulation, these allowances must be used for the benefit of ratepayers, consistent with the goals of the California Global Warming Solutions Act of 2006 (Assembly Bill 32, Nuñez, Chapter 488, Statutes of 2006, AB 32). This report summarizes how EDUs used the value of allocated allowances in 2018, including value from vintage 2018 allocated allowances and value from allocated allowances with prior vintage years (2013-2017) spent in 2018.

For 2018, allowances allocated to EDUs were 24 percent of the total allowance budget. The number of allowances allocated to each EDU from each budget year 2013 to 2020 is defined by the Regulation, which specifies the total amount to be allocated to all EDUs (section 95870(d)(1)) and the percentage of the total EDU allocation to be allocated to each EDU (section 95892(a)(1), and Tables 9-3 and 9-3a). The resulting amount allocated to each EDU from each budget year 2013 to 2020 is shown in the [Annual Allocation to EDUs under the Cap-and-Trade Regulation](#) document. The annual allocation to each EDU from each budget year 2021 to 2030 is specified by section 95892(a)(2) and Table 9-4 of the Regulation.

Allowances are allocated to two types of EDUs: investor-owned utilities (IOUs) and other utilities. Investor-owned utilities (IOUs) include the largest electric utilities in the State and are subject to oversight by the California Public Utilities Commission (CPUC).

¹ Proceeds resulting from the auction of allowances allocated to EDUs are distinct from the auction proceeds received by the State from the auction of California-owned allowances, which are deposited into the Greenhouse Gas Reduction Fund (GGRF) pursuant to section 16428.8 of the California Government Code. For information of GGRF expenditures see: [California Climate Investments web page](#).

² [Cap-and-Trade Regulation \(unofficial copy\)](#)

The Regulation requires IOUs to consign all of their allocated allowances from each vintage year to the four Program auctions held in that calendar year. Senate Bill 1018 (2012) (SB 1018) and the CPUC together require IOUs to distribute nearly all allowance proceeds to their industrial, small business, and residential customers.³ The other EDUs receiving allowance allocations are publicly owned utilities (POUs) and electrical cooperatives (COOPs). POUs are owned and operated by local governments such as cities, local utility districts, and irrigation districts, while COOPs are owned by their members. The governing boards of POUs and COOPs determine how to use their allocated allowances in accordance with the requirements in the Regulation.

CARB Reporting Requirements and This Summary Report

The Regulation requires each EDU to report to CARB by June 30 of each year on its use of allocated allowance value during the prior calendar year. EDUs must describe how allocated allowance value was used during the calendar year and how those uses were consistent with the requirements of the Regulation. The information reported for data year 2018 includes reporting on calendar year 2018 expenditures plus several corrections and updates made by EDUs to prior use of allowance value reports.

The “IOU Use of Allocated Allowance Value in 2018” section of this report summarizes individual IOU use of allowance value reporting to CARB. The majority of allowance value allocated to IOUs was returned to residential ratepayers in the form of semi-annual on-bill California Climate Credits.

The “POU and COOP Use of Allocated Allowance Value in 2018” section of this document summarizes the individual POU and COOP use of allowance value reports submitted to CARB. Unlike IOUs, POUs and COOPs may deposit allocated allowances into compliance accounts to fulfill Program compliance obligations, thereby reducing compliance costs. Most allowance value allocated to POUs and COOPs was used for compliance with the Program, renewable energy, and energy efficiency projects.

³ Decision Adopting Cap-and-Trade GHG Allowance Revenue Allocation Methodology for the IOUs, Decision (D.) 12-12-033 (December 2012). [CPUC D. 12-12-033](#).

IOU Use of Allocated Allowance Value in 2018

There are six IOUs in California: Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), San Diego Gas & Electric Company (SDG&E), PacifiCorp, Liberty Utilities LLC (formerly CalPeco Electric), and Golden State Water Company (doing business as Bear Valley Electric Service, BVES).⁴ PG&E, SCE, and SDG&E are significantly larger than the other three utilities. Together, IOUs distribute approximately seventy two percent of the electricity sold in the State⁵ and receive approximately sixty five percent of the allowances allocated to EDUs. The total value of vintage 2018 allowances that CARB allocated to IOUs in October 2017 was 846 million dollars.⁶ All of this value, except for a small amount used for administration and outreach, was distributed to ratepayers or is slated for clean energy and energy efficiency projects that benefit ratepayers.⁷ Pursuant to the requirements of the Regulation, IOUs distributed allocated allowance value to both bundled and unbundled ratepayers, including those ratepayers served by community choice aggregators.

SB 1018⁸ mandates that CPUC oversee the distribution of all IOU allocated allowance auction proceeds to the IOUs' residential, small business, and emissions-intensive, trade-exposed (EITE) retail customers, and it authorizes CPUC to allow the IOUs to use up to 15 percent of proceeds for approved clean energy and energy efficiency projects.

Figure 1a shows the spending of allocated allowance auction proceeds by all IOUs in 2018, and Figure 1b shows the cumulative spending of auction proceeds by all IOUs during the period 2013-2018. The information presented in Figures 1a and 1b is based on the IOU reports to CARB as well as data provided by CPUC.⁹ Each category of allowance value use shown in Figures 1a and 1b is described in later sections of this report. The data presented in Figures 1a and 1b are available in a [spreadsheet](#).

⁴ BVES is the smallest IOU, delivering less than a tenth of one percent of electricity in California and receiving fewer than 70 allocated allowances per year through 2020. CPUC instructed BVES to distribute all its allocated allowance value to its customers on a per-kilowatt-hour basis, as the administrative expenses of distributing the value via the methodology of the other IOUs would "far exceed the value of the allowances received." (See D.12-12-033), [CPUC D. 12-12-033](#).

⁵ See Electricity Consumption Data Management System, California Energy Commission, 2018 data, [CEC Electricity Consumption Data Management System](#).

⁶ The total value of allowances allocated to IOUs is based on actual auction proceeds received as reported by IOUs to CARB rounded to the nearest million.

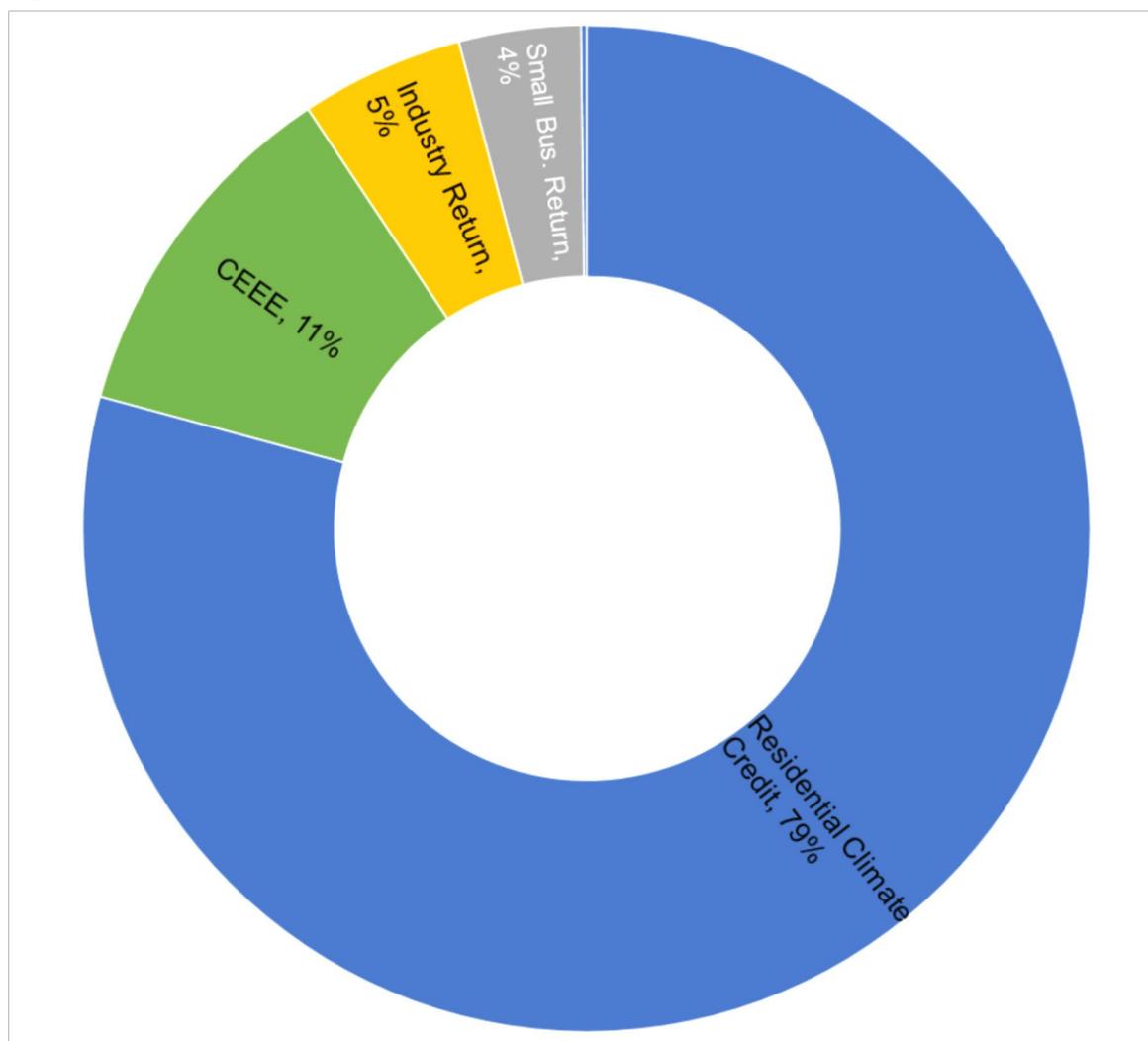
⁷ Allowances are provided to each IOU on behalf of its customers and customers whose electricity is distributed by the IOU, including customers of community choice aggregators.

⁸ Codified in Section 748.5 of the State of California Public Utilities Code.

⁹ The spending in these figures reflects calendar year spending. The proceeds spent in a given calendar year may derive from proceeds received both during the calendar year and prior to the calendar year. In some years, spending may exceed auction proceeds received because spending is forecast ahead of time based on projected auction proceeds. These amounts are true-up in the amounts of auction proceeds available for distribution to ratepayers in subsequent years.

Figures 1a and 1b represent the amounts of allowance value available and expended during the relevant period. When IOUs return auction proceeds to their ratepayers, the value distributed to ratepayers during a given year is derived from auction proceeds from the allowance vintage of that calendar year, plus any (likely small) balance carried over from the preceding year that results from differences between forecast and actual auction proceeds received. For example, in 2018, the value of allocated allowance auction proceeds provided to IOUs was about 846 million dollars; however, in 2017, the IOUs returned fewer auction proceeds than they received, and therefore the balance available for distribution to ratepayers in 2018 was 975 million dollars.¹⁰

Figure 1a. IOU Use of Allocated Allowance Value in 2018 (\$1.02 billion).¹¹



¹⁰ Including interest and Franchise Fees and Uncollectibles. CPUC requires IOUs to distribute the accrued interest to ratepayers in addition to the auction proceeds. In 2018, IOUs forecast and returned more value than they received and the accrued interest represented a small expense for most IOUs.

¹¹ The individual percentages may not add to 100 percent due to rounding. The slices too small to be labeled include 0.2 percent expended on administrative and outreach and 0.01 percent expended on the phase out of the residential volumetric return.

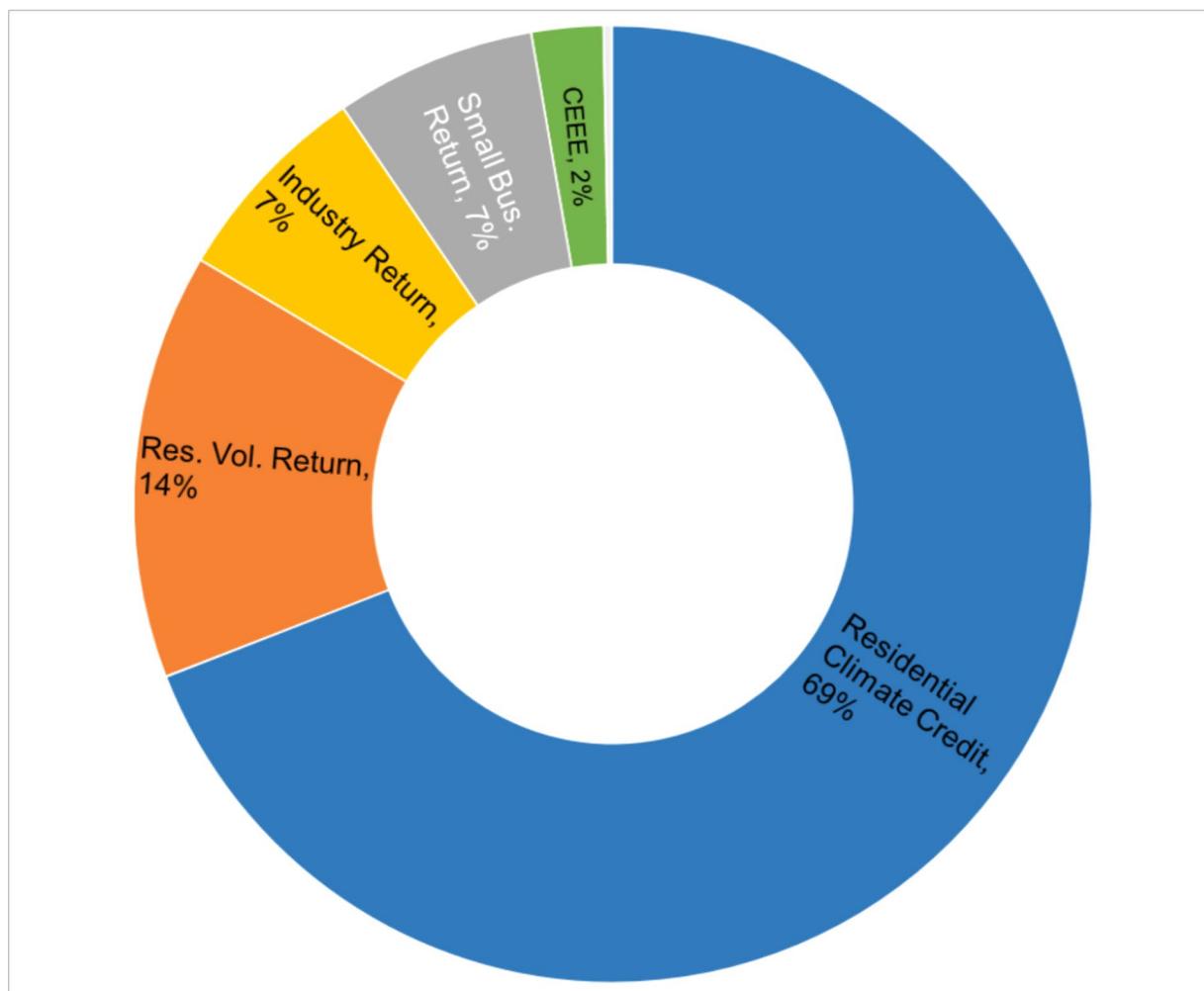
Figure 1b. IOU Use of Allocated Allowance Value in 2013-2018 (\$4.84 billion).¹²

Figure 1a shows that of the proceeds available to IOUs in 2018, 79 percent was returned to residential customers as semi-annual California Climate Credits, five percent was returned to industrial entities through CA Industry Assistance, four percent was returned as the small business California Climate Credit, and a small percentage was used to cover outreach and administrative costs for these uses. In addition, 11 percent of the auction proceeds were designated for clean energy and energy efficiency projects (CCEE).

¹² The individual percentages may not add to 100 percent due to rounding. The unlabeled grey slice reflects administrative and outreach expenditures of 0.3 percent.

Figure 1b shows that 84 percent of the value allocated to IOUs over the history of the Program was used to return proceeds to residential ratepayers. IOUs have returned seven percent of their allocated allowance value to small business ratepayers and another seven percent to industrial ratepayers. From 2013-2018, approximately two percent of auction proceeds were designated for mandated clean energy and energy efficiency projects.

Residential California Climate Credit

The residential California Climate Credit is a twice-annual on-bill credit given to all IOU residential customers, including customers of community choice aggregators. For each IOU, all auction proceeds not used for the other purposes listed below are divided equally among that IOU's residential customers. These credits began appearing on customer bills in April 2014.¹³

Residential Volumetric Rate Offset

During 2014 and 2015, PG&E, SCE, and SDG&E temporarily used a portion of their auction proceeds to offset Cap-and-Trade Program-related costs to consumers by reducing residential rates (i.e., they provided a volumetric return of proceeds to residential customers). This use of auction proceeds began in April 2014 for SCE and SDG&E and in May 2014 for PG&E, coincident with the introduction of Program costs into rates for residential and other customer classes. For each IOU, the magnitude of the residential rate offset exactly matched the Program costs that would have been passed through to the residential customer class during those years. CPUC permitted this residential volumetric rate offset due to the historically wide disparity between lower-tier and upper-tier electricity rates, which was caused by statutory limitations on CPUC authority to allocate costs. These limitations were lifted by Assembly Bill 327 (2013) and, in 2015, when CPUC approved new residential rate structures,¹⁴ CPUC decided that volumetric return of proceeds to residential customers would end on December 31, 2015. Volumetric returns to residential customers were accordingly phased out and are no longer applied. CPUC did not permit PacifiCorp and Liberty Utilities to provide a volumetric return of proceeds to residential customers because these utilities were not subject to the same historic ratemaking limits.

CPUC CA Industry Assistance

CPUC's CA Industry Assistance is an annual bill credit that is provided to facilities in emissions intensive, trade exposed (EITE) industries to minimize leakage related to Program costs included in their electricity rates. CPUC determined that all facilities

¹³ For more information see: [CPUC's California Climate Credit web page](#).

¹⁴ Decision on Residential Rate Reform for Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company and Transition to Time-of-Use Rates, D.15-07-001 (July 2015). [CPUC D. 15-07-001](#).

operating in industrial sectors eligible for industrial allowance allocation pursuant to the Regulation should also be eligible for CA Industry Assistance, even if they are not covered entities under the Regulation.¹⁵ These industries include petroleum and natural gas extraction; cement, glass, and paper production; petroleum refining; steel manufacturing; and food processing; among others. (For a complete list of industrial activities eligible for CA Industry Assistance, see the NAICS codes listed in Table 8-1 of the Cap-and-Trade Regulation.) For some industries, the credit is calculated based on the recipient's historical electricity use, while for others it is based on a product benchmark and the amount of product they produced during the preceding year. For more details on how these credits are calculated, see [CPUC's web page on CA Industry Assistance](#).

The CA Industry Assistance credit, covering the year 2018, was distributed to eligible facilities in April 2018. The amount distributed to each facility is calculated using data submitted by the facilities and the three large IOUs to CARB and CPUC.¹⁶

Small Business California Climate Credit

The small business California Climate Credit is a volumetric, monthly on-bill credit that partially compensates eligible small businesses for Program costs that are included in their electricity rates. The purpose of the credit is to help small businesses adapt to the presence of carbon costs in electricity rates and to provide them an opportunity to invest in measures to reduce their electricity consumption. CPUC defined an eligible small business as any non-residential customer with a typical energy demand of less than 20 kW per month.¹⁷ This credit began in April 2014 by offsetting 100 percent of Program costs in small business electricity rates, and this percentage declines by ten percent per year after 2015 until 2020. In 2018, this credit offset seventy percent of Program costs.¹⁸

Administrative and Outreach Costs

Administrative and outreach costs include the costs of administering the proceeds distribution and the costs of conducting outreach for allowed uses of auction proceeds as expended in each year. A portion of the auction proceeds was used in 2014 and 2015 to conduct a broad-based public outreach and education campaign in partnership with CPUC's Energy Upgrade California. Energy Upgrade California is a marketing, education, and outreach program to raise Californians' awareness about State efforts to

¹⁵ Decision Adopting Greenhouse Gas Allowance Revenue Allocation Formulas and Distribution Methodologies for Emissions-Intensive and Trade-Exposed Customers, D.14-12-037 (Dec. 2014). [CPUC D. 14-12-037](#).

¹⁶ To date no EITE facilities have been identified in the other IOU service territories.

¹⁷ Monthly demand must not exceed 20kW more than three times in the prior 12-month period.

¹⁸ See App. 2, Decision Adopting GHG Allowance Revenue Formula and Distribution Methodology for Small Business Customers and Modifying D. 12-12-033, D.13-12-002 (Dec. 2013). [CPUC D. 13-12-002](#).

fight climate change and about actions they can take to reduce their energy consumption and shift toward cleaner sources of energy. In 2016, CPUC directed PG&E, SCE, and SDG&E to focus future auction proceeds spending on education and outreach about low- and no-cost efforts to reduce energy consumption, such as bill inserts and emails notifying ratepayers of the California Climate Credit. Energy Upgrade California is now funded from other sources.¹⁹ The 2018 administrative and outreach cost category reflects costs to distribute credits to ratepayers of all types, and as shown by Figure 1a, represents 0.2 percent of the allowance proceeds spent in 2018.

Clean Energy and Energy Efficiency Projects

SB 1018 allows CPUC to allocate up to 15 percent of each IOU's auction proceeds for clean energy or energy efficiency projects. CPUC developed the process by which IOUs may seek approval to fund clean energy or energy efficiency projects that are not otherwise funded using auction proceeds. In 2016, per the requirements of Assembly Bill 693 (2015) (AB 693), Senate Bill 92 (2017), and a CPUC decision directing the implementation of AB 693, the IOUs began to designate auction proceeds to be used for the Solar on Multifamily Affordable Housing program.²⁰ In 2018, pursuant to requirements set by the CPUC, IOUs designated more than 117 million dollars in allocated allowance auction proceeds to fund this and other clean energy and energy efficiency programs.²¹

¹⁹ See Decision Addressing Customer Education and Outreach Plans for GHG Allowance Proceeds Return, D.16-06-041 (June 2016). [CPUC D.16-06-041](#).

²⁰ Decision Adopting Implementation Framework For AB 693 And Creating the Solar On Multifamily Affordable Housing Program, D. 17-12-022 (Dec. 2017). [CPUC D.17-12-022](#).

²¹ CEEE funding reflects the year the IOUs designated these funds, as reported by IOUs to CARB. This may differ from the year CPUC directed IOUs to set aside these funds from the auction proceeds.

POU and COOP Use of Allocated Allowance Value in 2018

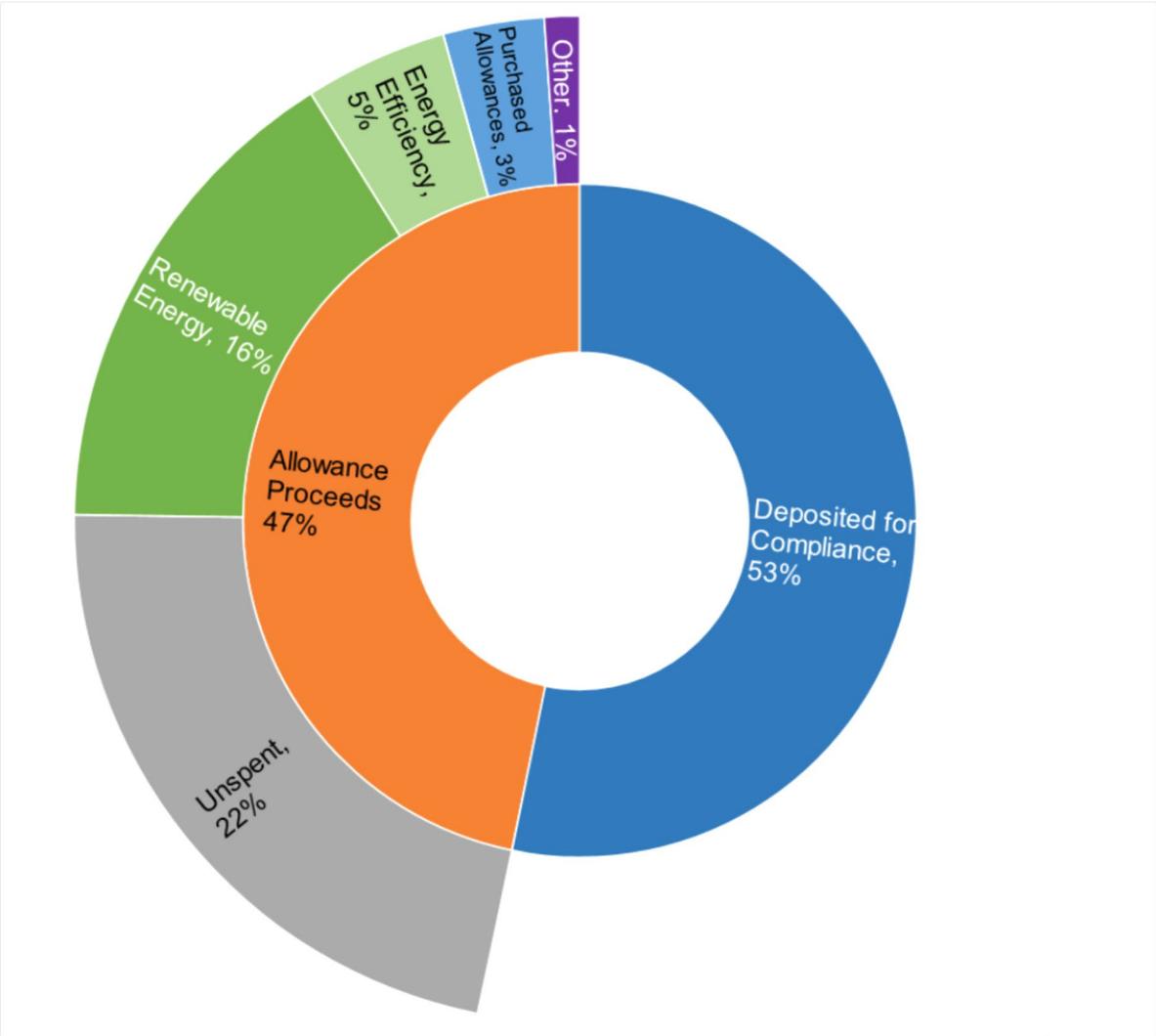
There are 43 POU, four COOP, and one Federal Power Marketing Authority (FPMA) that received vintage 2018 allowance allocation. Together, these utilities sold approximately twenty eight percent of the State's electricity²² and received approximately thirty five percent of allowances allocated to the electricity sector. Of this electricity, approximately 32 percent was sold by the Los Angeles Department of Water and Power and 15 percent was sold by Sacramento Municipal Utility District. The total value of vintage 2018 allowances that CARB allocated to POU, COOP and FPMA was approximately 451 million dollars.²³ The Regulation requires that the use of these allowances must benefit ratepayers and be consistent with the goals of AB 32.

POUs and COOPs are not subject to CPUC jurisdiction. Each POU or COOP makes its own decisions about how to use its allocated allowances, subject to Regulation requirements to benefit ratepayers and maintain consistency with AB 32. Figures 2a and 2b show how POU and COOP in total used allocated allowance value in 2018 and in 2013-2018, respectively, as reported in EDU use of allowance value reports. Note that Figures 2a and 2b for POU and COOP present usage on a calendar year basis. As for IOUs, spending by POU and COOP of auction proceeds from a particular allowance vintage can occur in the calendar year that is the same as the vintage year of the allowance or in subsequent calendar years. Unlike IOUs, POU and COOP can use allocated allowances for compliance with the Program. Allowances allocated to POU and COOP can be either deposited for compliance or sold at auction, with auction proceeds returning to the POU or COOP. Figures 2a and 2b show the percentage of allocated allowance value deposited for compliance and how the proceeds from auctioned allowances were used.

²² "Electricity Consumption Data Management System," California Energy Commission, 2018 data, available at [CEC Electricity Consumption Data Management System](#).

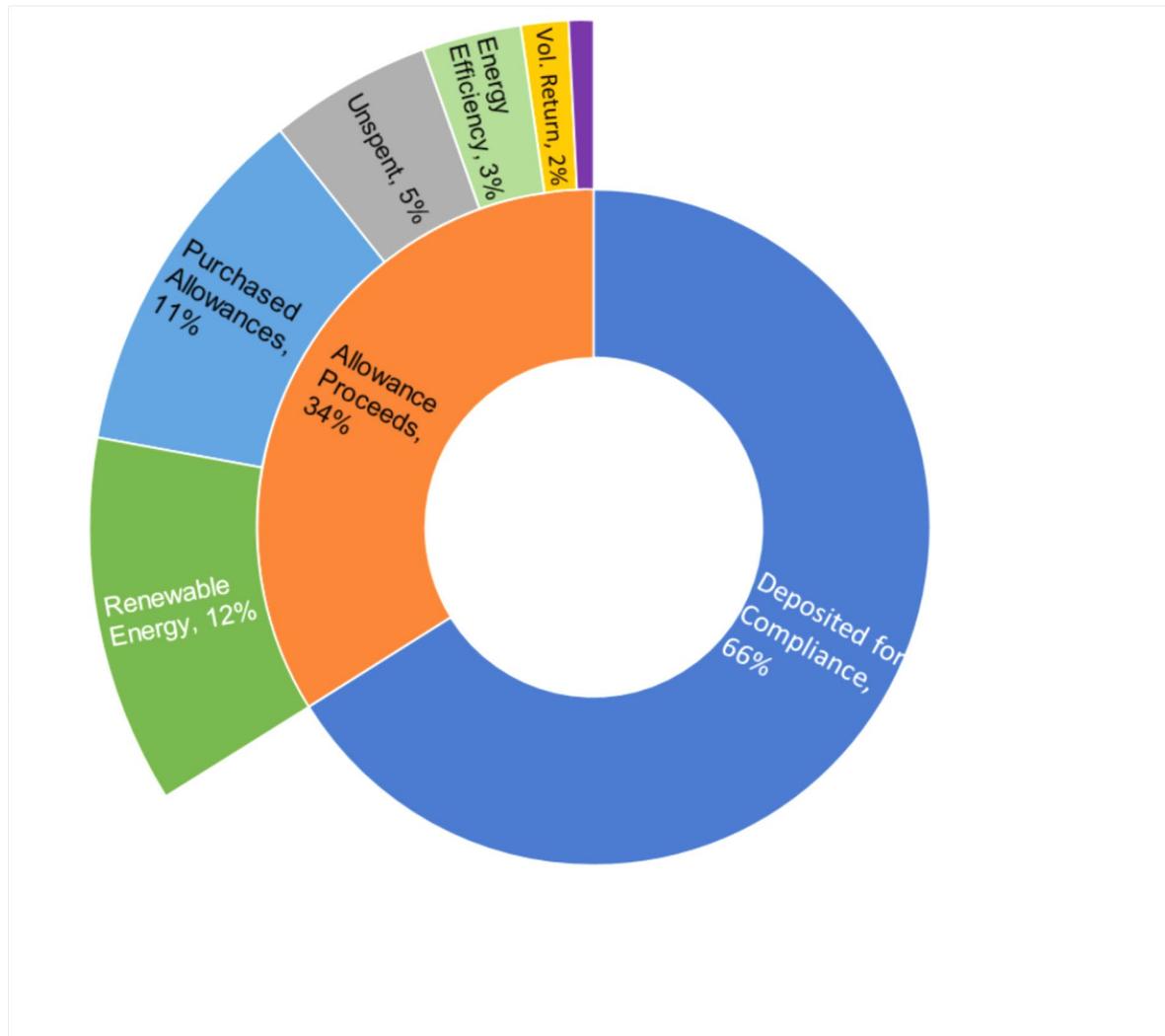
²³ The calculation of total allowance value assumes a deposited allowance is worth \$14.91 in 2018 (the average of the settlement prices at the four auctions held in each year) and relies on auction proceeds amounts reported by the POU/COOP to CARB in the EDU use of allowance value reports to date.

Figure 2a. POU and COOP Use of Allocated Allowance Value in 2018 (\$557 million).²⁴



²⁴ The individual percentages may not add to 100 percent due to rounding. The “other” slice includes, “other uses” (0.6 percent), administrative and outreach costs (0.1 percent), volumetric return (0.03 percent), transportation (0.3 percent) and direct non-volumetric return (0.1 percent).

Figure 2b. Cumulative POU and COOP Use of Allowance Value 2013-2018 (\$2.35 billion).²⁵



POUs and COOPs held approximately 557 million dollars in allocated allowance value in 2018, 451 million dollars in allocated vintage 2018 allowance value and 105 million dollars in unspent auction proceeds carried into 2018 from previous years. Figure 2a shows that POUs and COOPs directly deposited 53 percent of their allocated allowance value for Program compliance and purchased allowances with three percent of allocated allowance proceeds.²⁶ Sixteen percent of the total allocated allowance value held by POUs and COOPs in 2018 was spent on renewable energy projects, five percent was spent on energy efficiency projects, and 22 percent remained unspent.

²⁵ The individual percentages may not add to 100 percent due to rounding. The unlabeled slice (purple) is about one percent of the total, and includes “other uses” (0.4 percent), transportation (0.2 percent), administrative and outreach costs (0.04 percent), and direct non-volumetric return (0.1 percent).

²⁶ Effective April 1, 2019, purchasing allowances with allocated allowance value is prohibited.

Figure 2b shows POU's and COOP's cumulative use of all 2013 through 2018 allowance value, totaled across all POU's and COOP's, as reported in their EDU use of allowance value reports to date. Allowance value allocated to POU's and COOP's for 2013 through 2018 has primarily been used to reduce ratepayer costs, either directly or indirectly. This usage includes depositing allowances for compliance and using allowance value to purchase allowances, providing customer rebates, purchasing renewable energy, and investing in energy efficiency.

Figure 2b shows that 66 percent of the total allowance value allocated to POU's and COOP's over the history of the Program was used for compliance with the Program and 11 percent of the total allowance value allocated to POU's and COOP's over the history of the Program has been used to purchase allowances. Twelve percent of total 2013 through 2018 allocated allowance value (\$276 million) has been used to purchase and build renewable energy, and three percent (\$74 million) has been invested in energy efficiency. Of the cumulative (2013–2018) allocated allowance value used to distribute proceeds to retail customers of POU's and COOP's, 94 percent (\$36 million) was used for volumetric rate decreases, and the remaining six percent (\$2.5 million) was distributed on a non-volumetric basis. Effective October 1, 2017, volumetric return of proceeds is prohibited by the Regulation, and in late 2017, POU's began phasing out this usage. Finally, about five percent of total allocated allowance value (\$122 million) remained unspent at the end of the 2018 calendar year. Some POU's/COOP's have not yet used any allocated allowance auction proceeds.

CARB has prepared a [comprehensive table](#) that lists each use of allocated allowance value reported by a POU or COOP for the period 2013-2018. This table is available in Microsoft Excel format at the Cap-and-Trade Program's [EDU Use of Allocated Allowance Value web page](#).