

Cap-and-Trade Program Summary of 2013-2020 Electrical Distribution Utility Use of Allocated Allowance Value

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 2013-2020. 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 2020, including value from vintage 2020 allocated allowances and value from allocated allowances with prior vintage years (2013-2019) spent in 2020.

For 2020, allowances allocated to EDUs were 25 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](#)

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 webpage](#).

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

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 general types of EDUs: investor-owned utilities (IOUs) and other utilities. IOUs include the largest electric utilities in the State and are subject to oversight by the California Public Utilities Commission (CPUC). The Regulation requires IOUs to consign all 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). POU 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 POU 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 2020 includes reporting on calendar year 2020 expenditures plus several corrections and updates made by EDUs to prior use of allowance value reports.

The “IOU Use of Allocated Allowance Value in 2020” section of this report summarizes individual IOU use of allowance value reporting to CARB. Most of the 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 2020” section of this document summarizes the individual POU and COOP use of allowance value reports submitted to CARB. Unlike IOUs, POU and COOPs may deposit allocated allowances into compliance accounts to fulfill Program compliance obligations, thereby reducing compliance costs. Most allowance value allocated to POU 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 2020

There are six electricity IOUs in California: Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), San Diego Gas & Electric Company (SDG&E), PacifiCorp (doing business as Pacific Power), Liberty Utilities LLC (formerly CalPeco Electric), and Bear Valley Electric Service, Inc., (BVES, formerly Golden State Water Co, doing business as BVES).⁴ PG&E, SCE, and SDG&E are significantly larger than the other three utilities. Together, IOUs distribute approximately 73 percent of the electricity sold in the State⁵ and receive approximately 66 percent of the allowances allocated to EDUs. The total value of vintage 2020 allowances that CARB allocated to IOUs in October 2019 was approximately 928 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, and submetered households.⁸

SB 1018⁹ 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) industrial 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 2020, and Figure 1b shows the cumulative spending of auction proceeds by all IOUs during the period 2013-2020. The information presented in Figures 1a and 1b is based on the IOU reports to CARB as well as data provided by CPUC.¹⁰ Each category of allowance value use

⁴ BVES is the smallest IOU, delivering less than 0.1% of all 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 volumetric (per-kilowatt-hour) basis, as the administrative expenses of distributing the value via other methodologies would "far exceed the value of the allowances received." ([CPUC D.12-12-033](#)). Starting with vintage 2021 allowance allocation, BVES receives substantially larger annual allocations. In 2021, CPUC adopted a new methodology, starting in 2022, for Bear Valley to distribute its allocated allowance value to its customers – eliminating its volumetric residential return and transitioning it to the same methodologies as the other IOUs for all climate credits. See [CPUC D.21-08-026](#) (August 2021).

⁵ See Electricity Consumption Data Management System, California Energy Commission, 2020 data, [CEC Electricity Consumption Data Management System](#).

⁶ The total value of allowances is based on auction proceeds received rounded to the nearest million.

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

⁸ In 2019, SB 1117 clarified that the residential credit must be provided to submetered households.

⁹ Codified in Section 748.5 of the State of California Public Utilities Code.

¹⁰ 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.

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 [comprehensive table](#).

Figures 1a and 1b represent the amounts of allowance value 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 2020, the value of allocated allowance auction proceeds provided to IOUs was 928 million dollars; however, in 2019, the IOUs returned and spent fewer auction proceeds than they received, and therefore the balance available for distribution to ratepayers, and for clean energy and energy efficiency programs (CEEE) in 2020 was approximately 1.14 billion dollars.¹¹

¹¹ This value excludes interest and Franchise Fees and Uncollectibles as reported by IOUs to CARB but includes, as required by the CPUC and the Regulation, the accrued interest to ratepayers in addition to the auction proceeds. In 2020, accrued interest represented a small fraction of total proceeds for most IOUs.

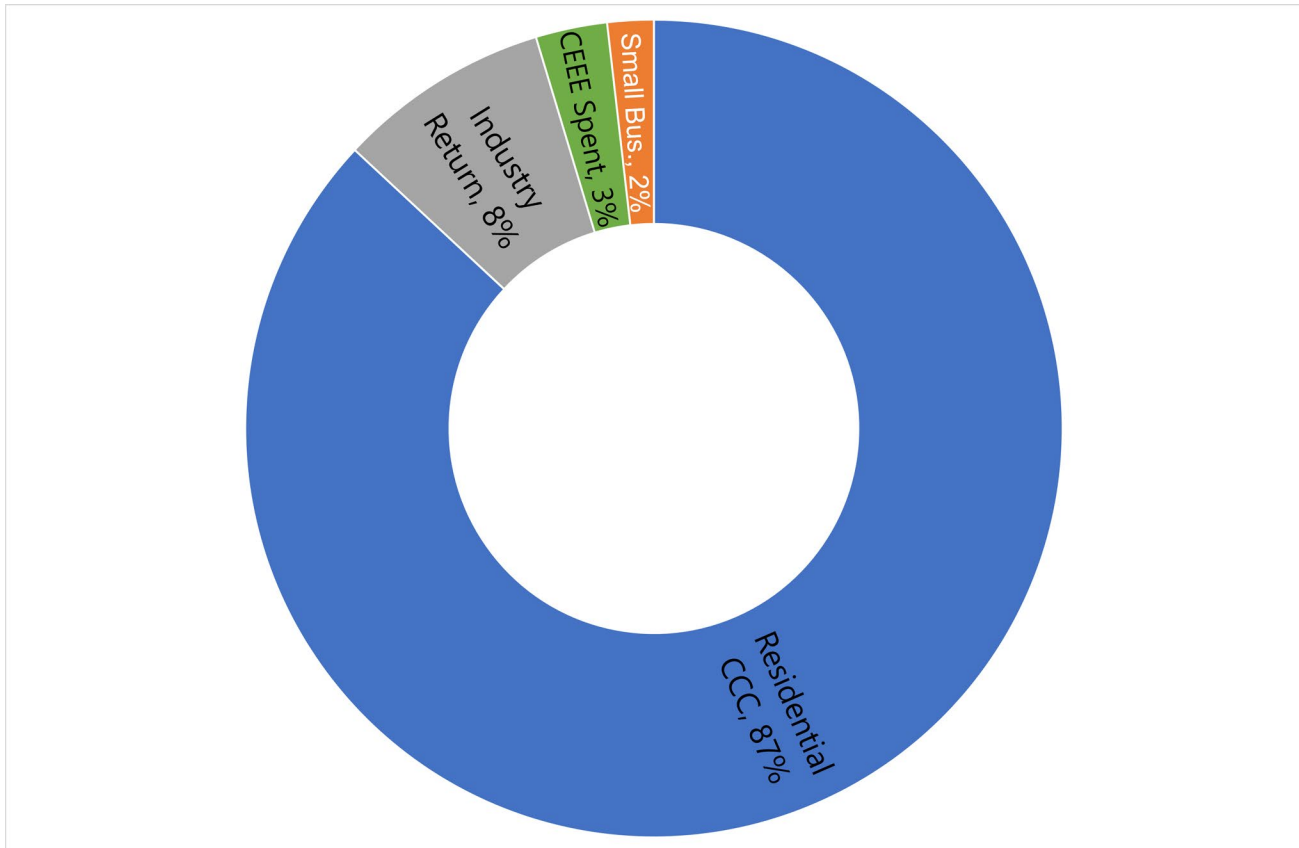
Figure 1a. IOU Use of Allocated Allowance Value in 2020 (\$915 million)¹²

Figure 1a shows that of the proceeds spent by IOUs in 2020, 87 percent was returned to residential customers as semi-annual California Climate Credits (CCC), eight percent was returned to industrial entities through CA Industry Assistance, about three percent was returned as the small business California Climate Credit, and around two percent was expended on CEEE. Administrative and outreach costs made up less than two percent of the 2020 expenditures. In addition, about 17 percent of the 2020 auction proceeds were designated for future use on CEEE programs; these proceeds are not shown in Figure 1a. At the end of 2020, approximately 222 million dollars in auction proceeds remained unspent.

¹² The individual percentages may not add to 100 percent due to rounding. Administrative costs are included in CEEE spent and for climate credits, in the Residential CCC. Not shown is 0.00035 percent expended on the phase out of the residential volumetric rate offset.

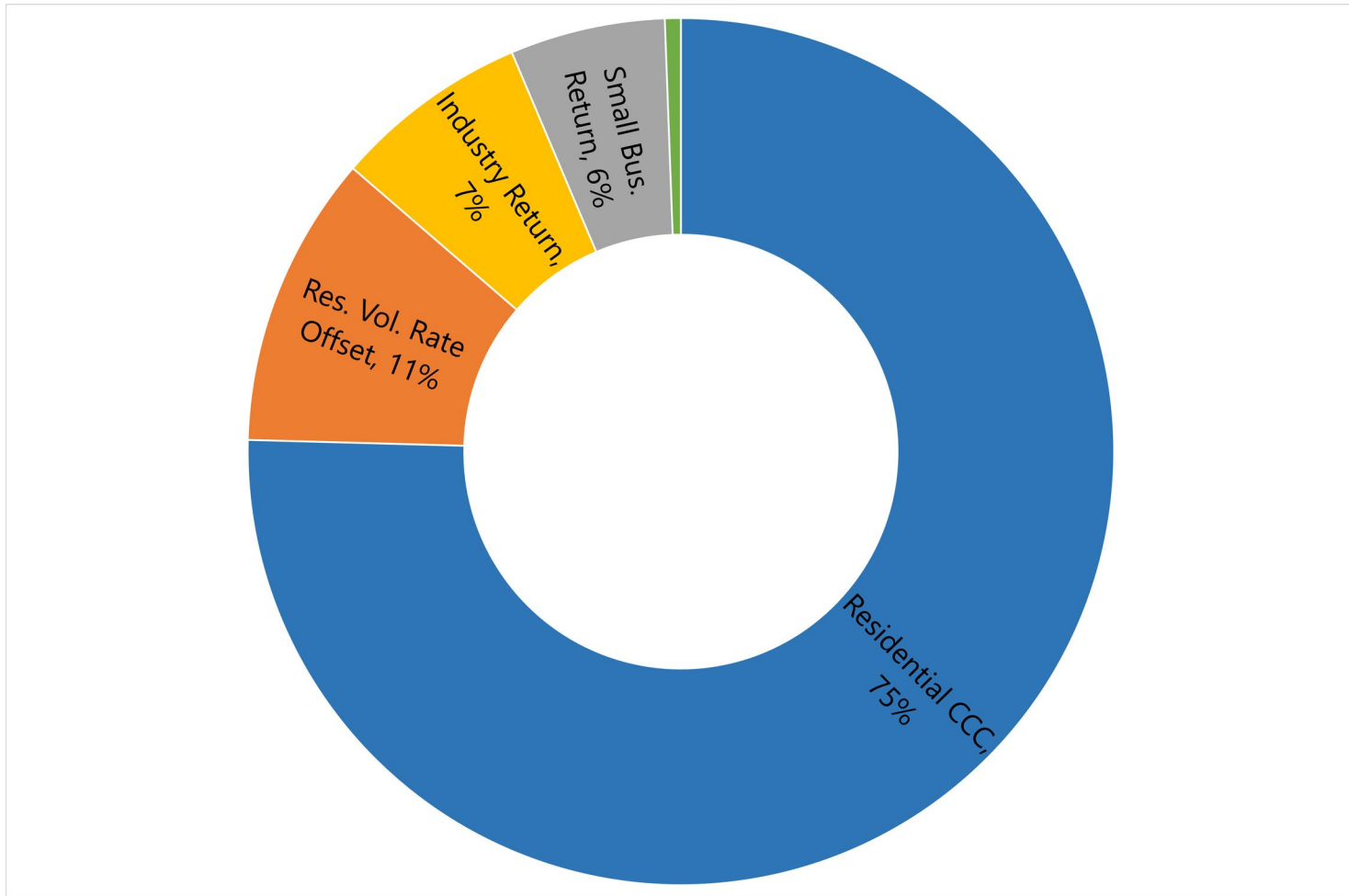
Figure 1b. IOU Use of Allocated Allowance Value in 2013-2020 (\$6.40 billion)¹³

Figure 1b shows that 86 percent of the value spent by IOUs over the history of the Program has been used to return proceeds to residential ratepayers. IOUs have distributed about six percent of proceeds spent to small business ratepayers, seven percent to industrial ratepayers, and 0.6 percent on CEEE, shown in the unlabeled green slice. At the end of 2020, 222 million dollars remained unspent. From 2013 to 2020, close to 365 million dollars was designated for CEEE but not yet spent, representing 5.5 percent of all IOU auction proceeds.

Residential California Climate Credit (CCC)

The residential California Climate Credit is a twice-annual on-bill credit given to all IOU residential customers, including customers of community choice aggregators and submetered households. For each IOU, all auction proceeds not used for the other purposes

¹³ The individual percentages may not add to 100 percent due to rounding. The total value includes interest accrued on auction proceeds prior to the distribution of proceeds to ratepayers. Administrative costs are included in CEEE spent and for climate credits, in the Residential CCC.

listed below are divided equally among that IOU's residential households. These credits began appearing on customer bills in April 2014. In 2020, in response to the COVID-19 pandemic, the CPUC directed PG&E, SCE, and PacifiCorp to divide the residential California Climate Credit that was originally intended to be distributed in October 2020 in half and to distribute each half earlier, in the Spring and Summer of 2020.¹⁴ Liberty Customers received their full October residential California Climate Credit earlier, in Summer 2020.¹⁵

Residential Volumetric Rate Offset

During 2014 and 2015, PG&E, SCE, and SDG&E temporarily used a portion of their auction proceeds to offset 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 that existed at that time, 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,¹⁶ 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.

California Industry Assistance Credit

The California Industry Assistance credit 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 operating in industrial sectors eligible for industrial allowance allocation pursuant to the Regulation should also be eligible for California Industry Assistance, even if they are not covered entities under the Regulation.¹⁷ These industries include petroleum and natural gas extraction; cement, glass, and paper production; petroleum refining; steel manufacturing; and food processing,

¹⁴ Decision Modifying Schedule of Climate Credit Disbursements for Residential Electric Customers, [D.20-04-027](#) (April 2020) and Decision Modifying Schedule of California Climate Credit Disbursements for Residential Electric Customers of Liberty Utilities LLC and PacifiCorp D/B/A Pacific Power, [D.20-05-052](#) (May 2020).

¹⁵ For more information see: [CPUC's California Climate Credit webpage](#).

¹⁶ 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](#).

¹⁷ 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](#).

among others. (For a complete list of industrial activities eligible for California Industry Assistance, see the NAICS codes listed in Table 8-1 of the Regulation.) For some facilities, the credit is calculated based on the recipient's historic 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 webpage on California Industry Assistance](#).

The California Industry Assistance credit for the year 2020 was distributed to eligible facilities in April 2020. The amount distributed to each facility is calculated using data submitted by the facilities and the three large IOUs to CARB and CPUC.¹⁸

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.¹⁹ This credit began in April 2014 by offsetting 100 percent of Program costs in small business electricity rates. This credit also offset 100 percent of Program costs in 2015, and after 2015, this percentage declines by ten percent per year through 2020. In 2020, this credit offset sixty percent of Program costs.²⁰ In October 2020, CPUC approved an interim methodology for the 2021 climate credit to ensure small businesses continue to receive the climate credit while it evaluated options to provide future small business climate credits in a non-volumetric manner.²¹ In August 2021, CPUC changed the small business climate credit from a volumetric return to a non-volumetric credit, in conformance with the Regulation's prohibition on volumetric returns.²² Volumetric credits ended in January 2022 and beginning with credits distributed in April 2022, the flat small business climate credit will be equal to and on the same distribution schedule as the residential California Climate Credit.

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 expended in each year. A portion of IOU 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

¹⁸ To date no EITE facilities have been identified in the other IOU service territories.

¹⁹ Monthly demand must not exceed 20 kW more than three times in the prior 12-month period.

²⁰ 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](#).

²¹ Decision Addressing Threshold and Near-Term Issues, D.20-10-002 (Oct. 2020). [CPUC D.20-10-002](#).

²² Decision Adopting Customer Climate Credit Updates, [CPUC D. 21-08-026](#) (August 2021).

outreach program to raise awareness about State efforts to fight climate change and about actions Californians 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. The 2020 administrative and outreach costs include the costs to distribute credits to ratepayers of all types and administrative costs related to the start-up and administration of the CEEE programs. Administrative and outreach costs represented less than two percent of total expenditures in 2020.

Clean Energy and Energy Efficiency Programs

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 (SOMAH).²³ In 2020, pursuant to requirements set by the CPUC, IOUs spent close to 26 million dollars on and designated 160 million dollars in auction proceeds to fund SOMAH and other CEEE programs.²⁴ Other programs funded include programs supporting distributed solar generation in disadvantaged communities, such as the DAC-SASH (Disadvantaged Community Single-Family Affordable Solar Homes), DAC-GT (Disadvantaged Community Green Tariff), and CSGT (Community Solar Green Tariff) programs, and SCE's Clean Energy Optimization Pilot.

²³ 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](#).

²⁴ 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 2020

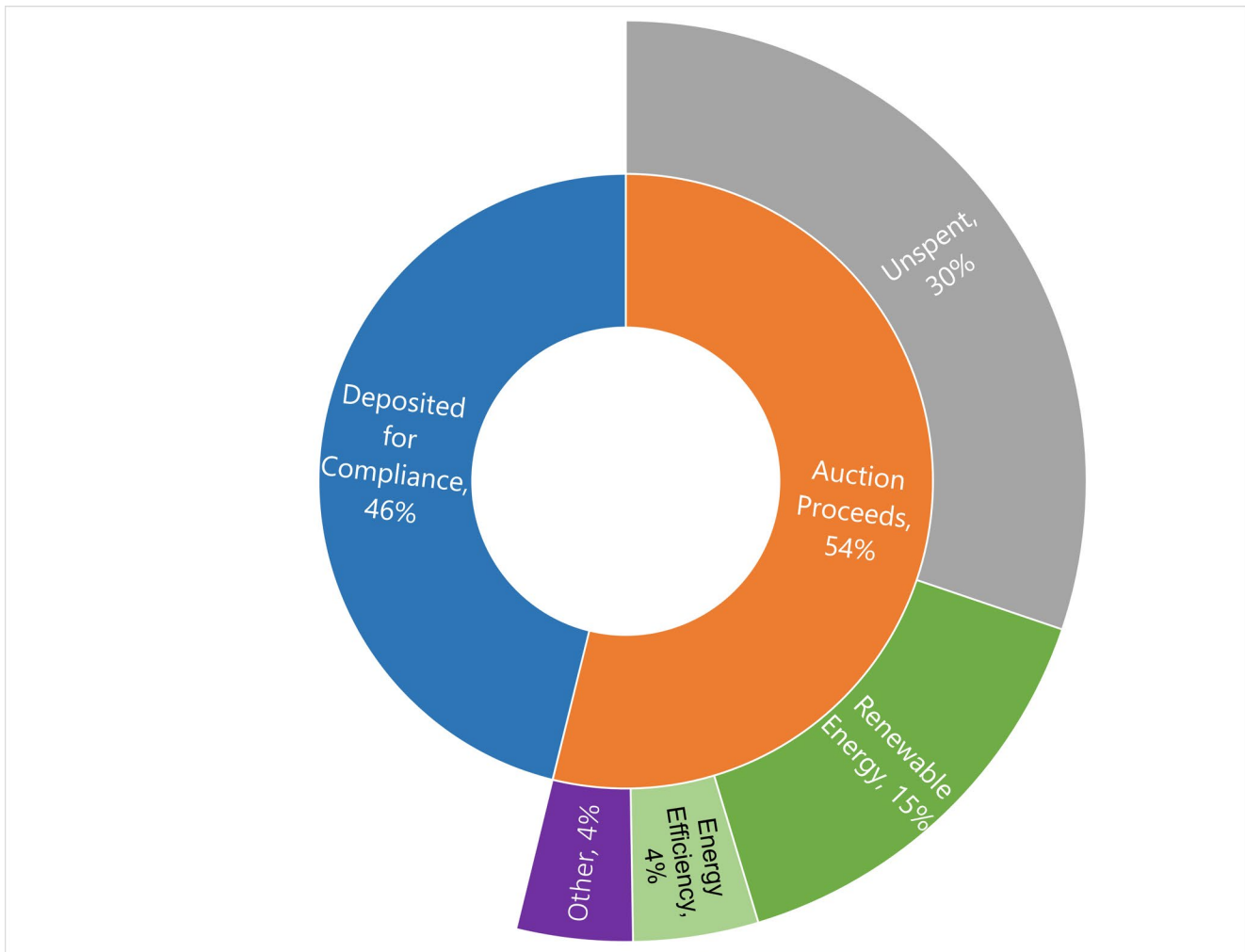
There are 43 POU, four COOPs, and one Federal Power Marketing Authority (FPMA) that received vintage 2020 allowance allocation. Together, these utilities sold approximately 27 percent of the State's electricity²⁵ and received approximately 34 percent of allowances allocated to the electricity sector. Of this electricity, approximately 31 percent was sold by the Los Angeles Department of Water and Power and 16 percent was sold by Sacramento Municipal Utility District. The total value of vintage 2020 allowances that CARB allocated to POU, COOP, and FPMA was approximately 488 million dollars.²⁶ 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 COOPs in total used allocated allowance value in 2020 and in 2013-2020, respectively, as reported in EDU use of allocated allowance value reports to CARB. Note that Figures 2a and 2b for POU and COOPs present usage on a calendar year basis. As for IOUs, spending by POU and COOPs 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 COOPs can use allocated allowances for compliance with the Program. Allowances allocated to POU and COOPs can be either deposited for compliance or sold at auction, with the 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.

²⁵ "Electricity Consumption Data Management System," California Energy Commission, 2020 data, available at [CEC Electricity Consumption Data Management System](#).

²⁶ The calculation of total allowance value assumes a deposited allowance is worth 17.04 in 2020 (the average of the settlement prices at the four auctions held in each year) and relies on auction proceeds amounts reported by the POU/COOPs to CARB in the EDU use of allowance value reports to date.

Figure 2a. POU and COOP Use of Allocated Allowance Value in 2020 (\$648 million)²⁷



POUs and COOPs held approximately 648 million dollars in allocated allowance value in 2020, 489 million dollars in allocated vintage 2020 allowance value and 159 million dollars in unspent auction proceeds carried into 2020 from previous years. Figure 2a shows that POUs and COOPs directly deposited 46 percent of their allocated allowance value for Program compliance.²⁸ Fifteen percent of the total allocated allowance value held by POUs and COOPs in 2020 was spent on renewable energy projects, four percent was spent on energy efficiency projects, and 30 percent remained unspent. Included in these expenditures are administrative and outreach costs, which represent 0.4 percent of auction proceeds held in 2020.

²⁷ The individual percentages may not add to 100 percent due to rounding. The purple slice labeled “Other” includes transportation electrification (0.9 percent), other uses (0.4 percent), and direct non-volumetric return (2.8 percent).

²⁸ Effective April 1, 2019, purchasing allowances with allocated allowance value is prohibited.

Figure 2b. Cumulative POU and COOP Use of Allowance Value in 2013-2020 (\$3.33 billion)²⁹

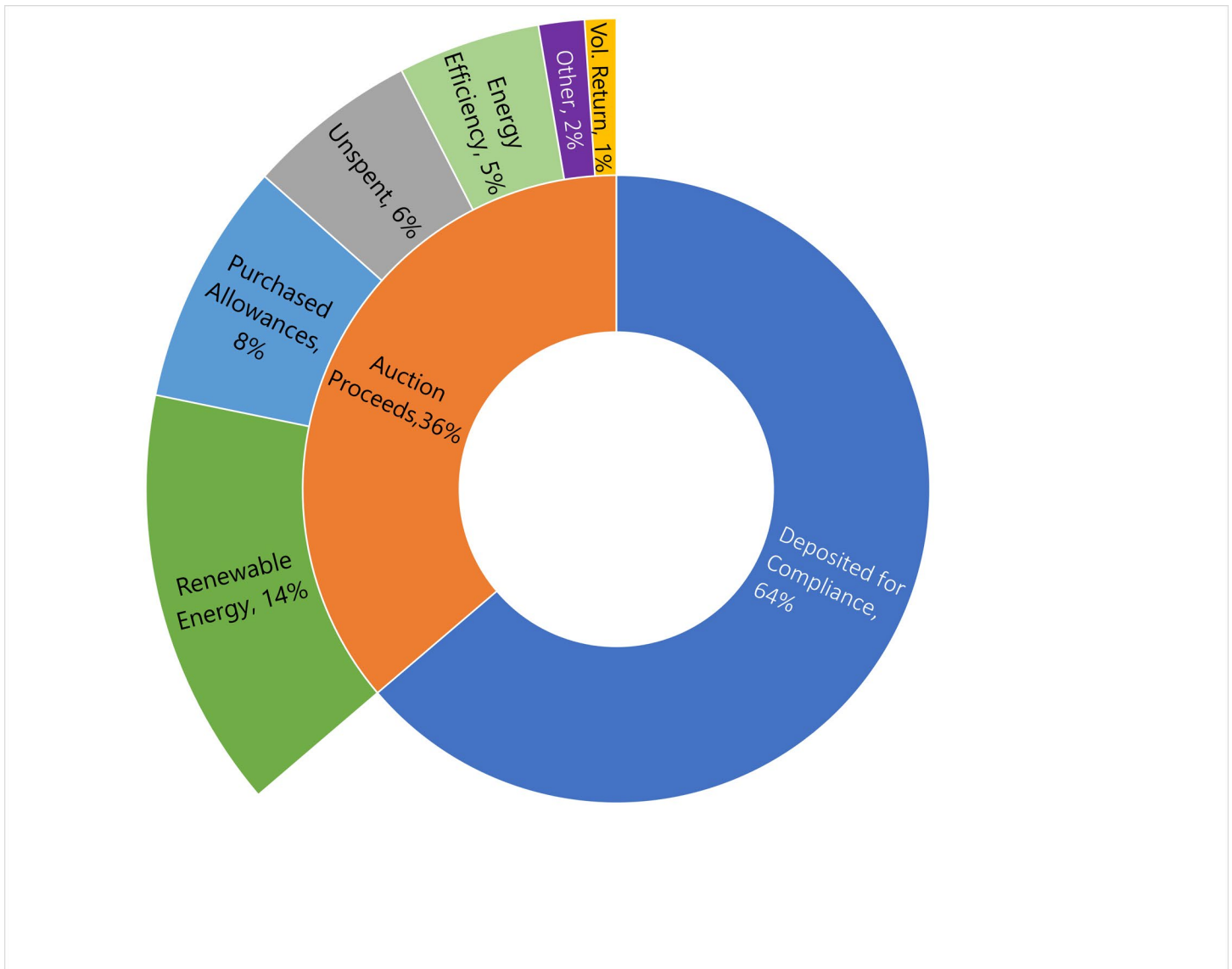


Figure 2b shows cumulative use of all allocated allowance value by POU and COOPs during 2013 through 2020, as reported in their EDU use of allowance value reports to date. Allowance value allocated to POU and COOPs for 2013 through 2020 has primarily been used to reduce ratepayer costs, either directly or indirectly. This usage includes depositing allowances for Program compliance and using allocated allowance auction proceeds to

²⁹ The individual percentages may not add to 100 percent due to rounding. Other in the purple slice includes "other uses" (0.4 percent), transportation (0.5 percent), and direct non-volumetric return (0.6 percent).

purchase allowances, provide customer rebates, purchase renewable energy, and invest in energy efficiency.

Figure 2b shows that 64 percent of the total allowance value allocated to POU and COOP over the history of the Program has been deposited for compliance with the Program and eight percent of the total allowance value allocated to POU and COOP over the history of the Program has been used to purchase allowances. Fourteen percent of total 2013 through 2020 allocated allowance value (\$481 million) has been used to purchase and build renewable energy and close to five percent (\$163 million) has been invested in energy efficiency. Of the cumulative (2013-2020) allocated allowance value used to distribute proceeds directly to retail customers of POU and COOP, 63 percent (\$36 million) was used for volumetric rate decreases, and 37 percent (\$21.2 million) was distributed on a non-volumetric basis. Effective October 1, 2017, volumetric return of proceeds is explicitly prohibited by the Regulation, and in late 2017, POU began phasing out this usage. Included in these expenditures are administrative and outreach costs, which represent 0.2 percent of total auction proceeds. About six percent of total allocated allowance value (\$196 million) remained unspent at the end of the 2020 calendar year.

CARB has prepared a [comprehensive table](#) that lists each use of allocated allowance value reported by a POU or COOP for the period 2013-2020. This table is available in Microsoft Excel format at the Cap-and-Trade Program's [EDU Use of Allocated Allowance Value webpage](#).