

Cap-and-Trade Program Summary of 2013-2017 Electrical Distribution Utility Allocated Allowance Value Usage

Purpose

This report summarizes how electrical distribution utilities (EDUs) have 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 2013-2017. 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 Per 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 2017, including value from vintage 2017 allocated allowances and value from allocated allowances with prior vintage years (2013-2016) spent in 2017.

Allowances allocated to EDUs currently represent close to 25 percent of each year’s 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) are electric utilities owned by investors and include the largest electric utilities in the State. The Regulation requires IOUs to consign all of their allocated allowances from each vintage year to the four Program

¹ Note that proceeds resulting from the auction of EDU and natural gas supplier allowances are distinct from the auction proceeds received by the State from the auction of California-owned allowances that are sold at auction and deposited into the Greenhouse Gas Reduction Fund pursuant to section 16428.8 of the California Government Code.

² https://www.arb.ca.gov/cc/capandtrade/capandtrade/ct_reg_unofficial.pdf

auctions held in that calendar year. Senate Bill 1018 (2012) (SB 1018) and the California Public Utilities Commission (CPUC) together require IOUs to distribute nearly all of proceeds to their industrial, small business, and residential customers.³ The other EDUs receiving allowance allocations are publicly owned utilities (POUs) and electrical co-operatives (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 Regulation requirements.

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 preceding calendar year. EDUs must describe how allocated allowance value was used during the calendar year and describe how that use was consistent with the requirements of the Regulation.

Prior to October 1, 2017, each EDU was required to report to CARB on its use of allocated allowances *received for the prior calendar year*. Because not all proceeds received for the prior calendar year are spent during that prior calendar year, this reporting structure left potential gaps in the reporting on use of allowance value to CARB. The 2016 amendments to the Regulation that took effect October 1, 2017 require reporting on all auction proceeds *spent during the previous calendar year*, thus closing potential reporting gaps and providing a more complete picture to CARB of the use of allocated allowance value. The Regulation effective October 1, 2017 also requires each EDU to report the value of all proceeds received during prior years that remained unspent at the beginning of the previous calendar year. For use of allowance value reports with a June 30, 2018 reporting deadline, the Regulation also required EDUs to report amounts of allocated allowance auction proceeds spent before January 1, 2017 that were not previously reported to CARB as spent. This additional reporting filled in historic reporting gaps and provided CARB with complete information about past use of allocated allowance value.

The information reported for data year 2017 reflects these changes in the Regulation and includes several corrections and updates made by EDUs to prior use of allowance value reports. The data year 2017 reports also reflect a shift from reporting estimated auction proceeds received based on the average allowance price at auction in the data year to reporting actual auction proceeds received.⁴ The combination of these changes

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

<http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M040/K631/40631611.PDF>.

⁴ The value of allowances deposited for compliance is estimated based on the average price of an allowance at auction for the data year, calculated as the average of the four auction settlement prices for the year. For 2017, this amount was \$14.30.

and updates resulted in changes both to the reported amounts of auction proceeds received and to the reported amounts spent in some expenditure categories during the period 2013-2016. For these reasons, this report covers the data years 2013-2017 and supersedes the prior Use of Allocated Allowance Value Reports.

The “IOU Use of Allocated Allowance Value in 2017” section of this report summarizes individual IOU use of allowance value reporting to CARB and is also based on information provided to CARB by CPUC. The majority of allowance value allocated to IOUs has been returned to various ratepayers in the form of climate credits.

The “POU and COOP Use of Allocated Allowance Value in 2017” section of this document summarizes the individual POU and COOP use of allowance value reports submitted to CARB. Most allowance value allocated to POU and COOPs has been used for compliance with the Program, for renewable energy and energy efficiency projects, and to return proceeds to various ratepayers.

EDUs report annually to CARB on their use of allocated allowance value, and CARB will continue to regularly post updated summary reports on EDU uses of allocated allowance value to the Program web page.

IOU Use of Allocated Allowance Value in 2017

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 CalPepco Electric), and Golden State Water Company (doing business as Bear Valley Electric Service, BVES).⁵ PG&E, SCE, and SDG&E are larger than the other three utilities. Together, IOUs distribute approximately three-quarters of the electricity sold in the State⁶ and receive approximately two-thirds of the allowances allocated to EDUs. The total value of vintage 2017 allowances that CARB allocated to IOUs in October 2016 was approximately 837 million dollars. 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

⁵ BVES is much smaller than most utilities, delivering less than a tenth of one percent of electricity in California and receiving fewer than 70 allocated allowances per year. CPUC instructed BVES to distribute all its allocated allowance value to its customers on a per-kilowatt-hour basis to minimize administrative costs (see D.12-12-033),

<http://docs.cpuc.ca.gov/publisheddocs/published/g000/m040/k631/40631611.pdf>

⁶ See Electricity Consumption Data Management System, California Energy Commission, 2017 data, <http://www.ecdms.energy.ca.gov/elecbyutil.aspx>.

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.

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 not otherwise funded.

Figure 1a shows the spending of allocated allowance auction proceeds by all IOUs in 2017, and Figure 1b shows the cumulative spending of auction proceeds by all IOUs during the period 2013-2017. 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](#).

Figures 1a and 1b represent the amounts of allowance value available and expended during the relevant period. When IOUs return auction proceeds to their residential and small business 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 result from differences between forecast and actual auction proceeds received. For example, in 2017, the value of allocated auction proceeds was 837 million dollars; however, in 2016, the IOUs returned more auction proceeds than they received, and therefore the balance available for distribution to ratepayers in 2017 was approximately 774 million dollars.

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 trued-up in the amounts of auction proceeds available for distribution to ratepayers in subsequent years.

Figure 1a. IOU Use of Allocated Allowance Value in 2017 (\$774 million).¹⁰

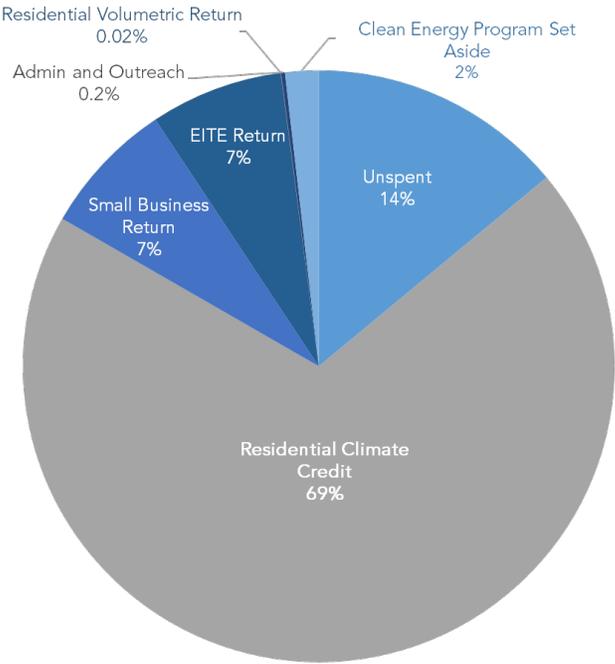
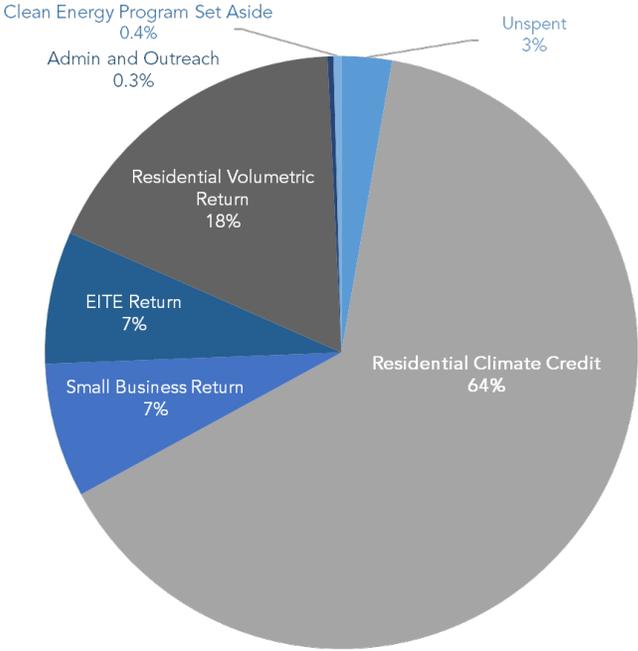


Figure 1b. IOU Use of Allocated Allowance Value in 2013-2017 (\$3.94 billion).



¹⁰ The totals shown in Figures 1a may not exactly equal the sum of the components due to rounding. The tables include accrued interest on auction proceeds prior to the distribution of proceeds to ratepayers. CPUC requires IOUs to distribute the accrued interest to ratepayers in addition to the actual auction proceeds.

Figure 1a shows that of the proceeds available in 2017, the IOUs provided 69 percent as semi-annual California Climate Credits to residential customers, seven percent to small businesses, seven percent to EITE industrial entities, and a small percentage was used to cover outreach and administrative costs associated with spending allocated allowance value. Figure 1a also shows a small percentage of proceeds were returned to residential ratepayers volumetrically. Following residential rate reform, the IOUs transitioned from providing any volumetric return of proceeds to residential customers (i.e., return of proceeds proportional to electricity use) to using the proceeds to increase the per-customer residential California Climate Credits, which provides the same an annual credit to all residential customers of each IOU. In 2017, there continued to be small amounts of volumetric returns to residential customers, which reflects the final phase-out of any volumetric returns of proceeds. After 2017, CARB expects that no proceeds will be used on volumetric return to residential customers.

Figure 1b shows that 82 percent of the allowance value allocated to IOUs over the history of the Program has been 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 EITE industrial ratepayers. From 2013-2017, about half a percent was set aside for mandated clean energy and energy efficiency projects.

Residential California Climate Credit

The residential California Climate Credit is a twice-annual bill credit given to all IOU residential customers. All auction proceeds not used for the other purposes listed below are divided equally among the residential customers of each IOU. These credits began appearing on customer bills in April 2014.¹¹

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. 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,¹² CPUC decided that volumetric

¹¹ For more information see: <http://www.cpuc.ca.gov/ClimateCredit/>.

¹² 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). <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M153/K110/153110321.PDF>.

return of proceeds to residential customers would end on December 31, 2015. 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. In Figure 1a, the proceeds used for “Residential Volumetric Return” in 2017 amount reflect the final true-up and phase-out of this usage. 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 EITE industries to compensate for some of the Program costs included in their electricity rates. CPUC determined that all facilities in industries eligible for industry assistance pursuant to the Regulation should also be eligible for CA Industry Assistance, even if they are not covered entities under the Regulation.¹³ 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, each recipient’s credit is calculated based on their 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 webpage on CA Industry Assistance](#).

The fourth CA Industry Assistance credit, covering the year 2019, was distributed to eligible facilities in April 2019. The amount distributed to each facility is calculated using data submitted by facilities and the three large IOUs to CARB and CPUC.

Small Business California Climate Credit

The small business California Climate Credit is a volumetric, 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.¹⁴ This monthly credit began in April 2014 by offsetting 100 percent of Program costs in small business electricity rates, and this percentage declines by ten

¹³ Decision Adopting Greenhouse Gas Allowance Revenue Allocation Formulas and Distribution Methodologies for Emissions-Intensive and Trade-Exposed Customers, D.14-12-037 (Dec. 2014). <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M144/K130/144130487.pdf>.

¹⁴ Monthly demand must not exceed 20kW more than three times in the prior year.

percent per year after 2015. In 2017, this credit offset eighty percent of Program costs.¹⁵

Administrative and Outreach Costs

Administrative and outreach costs include the costs of administering the proceeds distribution and the costs of conducting outreach to relevant ratepayers. 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 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 on low- and no-cost efforts such as bill inserts and emails notifying ratepayers of the California Climate Credit. Energy Upgrade California will continue to be funded from other sources.¹⁶ The 2017 administrative and outreach cost category reflects costs to distribute the climate credits to ratepayers, and as shown by Figure 1a, represents 0.2 percent of the allowance proceeds available in 2017.

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 rulemaking 14-10-033 developed the process by which IOUs may seek approval to use auction proceeds allocated by CPUC for clean energy or energy efficiency projects that are not otherwise funded. 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 set aside auction proceeds to be used for the multifamily affordable housing solar roofs program.¹⁷ In 2017, IOUs set aside more than 14 million dollars in allocated allowance auction proceeds to fund this program.

¹⁵ 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).

<http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M082/K829/82829359.PDF>

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

<http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M164/K022/164022015.PDF>.

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

<http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M201/K940/201940057.pdf>

POU and COOP Use of Allocated Allowance Value in 2017

There are 43 POU, four COOPs, and one Federal Power Marketing Authority (FPMA) that received vintage 2017 allowance allocation. Together, these utilities sold approximately one-quarter of the State's electricity¹⁸ and received approximately one third of allowances allocated to the electricity sector. Of this electricity, approximately 30 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 2017 allowances that CARB allocated to POU, COOPs and FPMA was approximately 431 million dollars.¹⁹ 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 2017 and in 2013-2017, respectively, as reported in EDU use of allowance value reports. Note that Figures 2a and 2b for POU and COOPs present usage on a calendar year basis, whereas reporting in previous years was on a vintage 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 consigned and sold at auction. The left pie charts in Figures 2a and 2b show the percentage of allocated allowance value deposited for compliance versus the percentage that was held as auction proceeds, and the right pie charts show how the proceeds from auctioned allowances were used.

¹⁸ "Electricity Consumption Data Management System," California Energy Commission, 2017 data, available at <http://www.ecdms.energy.ca.gov/elecbyutil.aspx>.

¹⁹ The calculation of total allowance value assumes a deposited allowance is worth \$14.30 in 2017 (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 2017 (\$547 million).

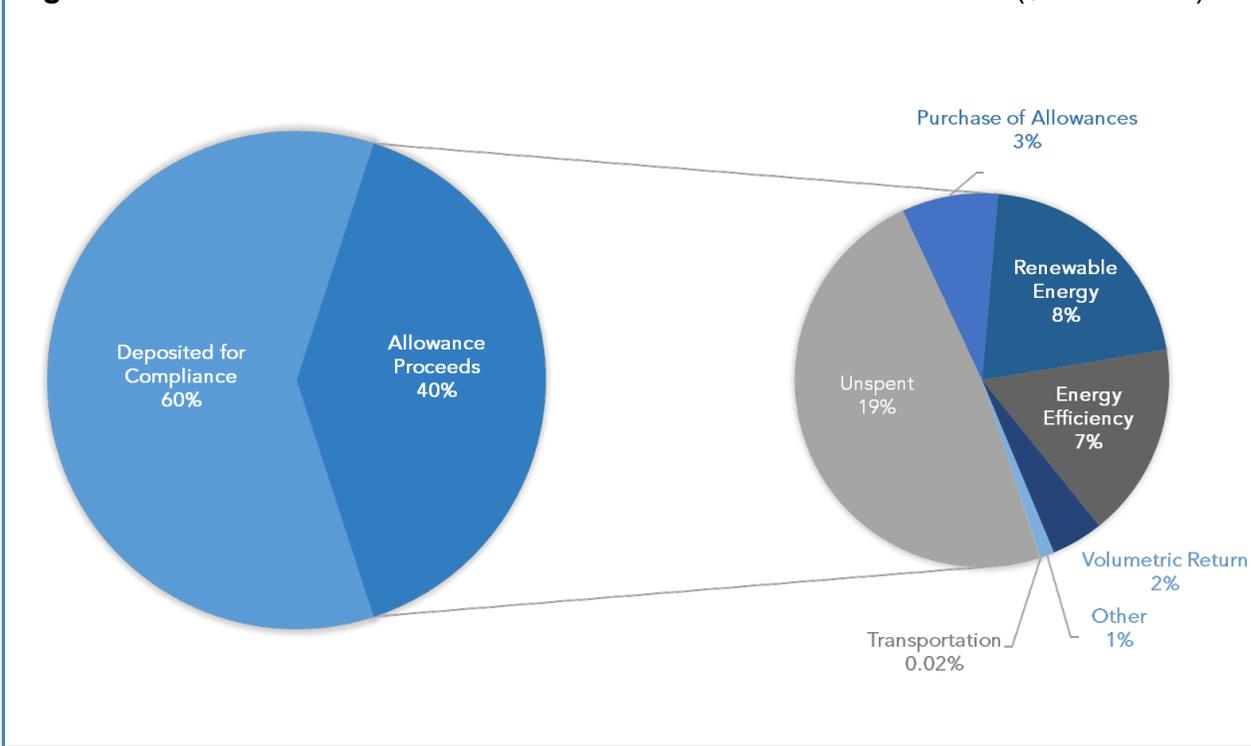
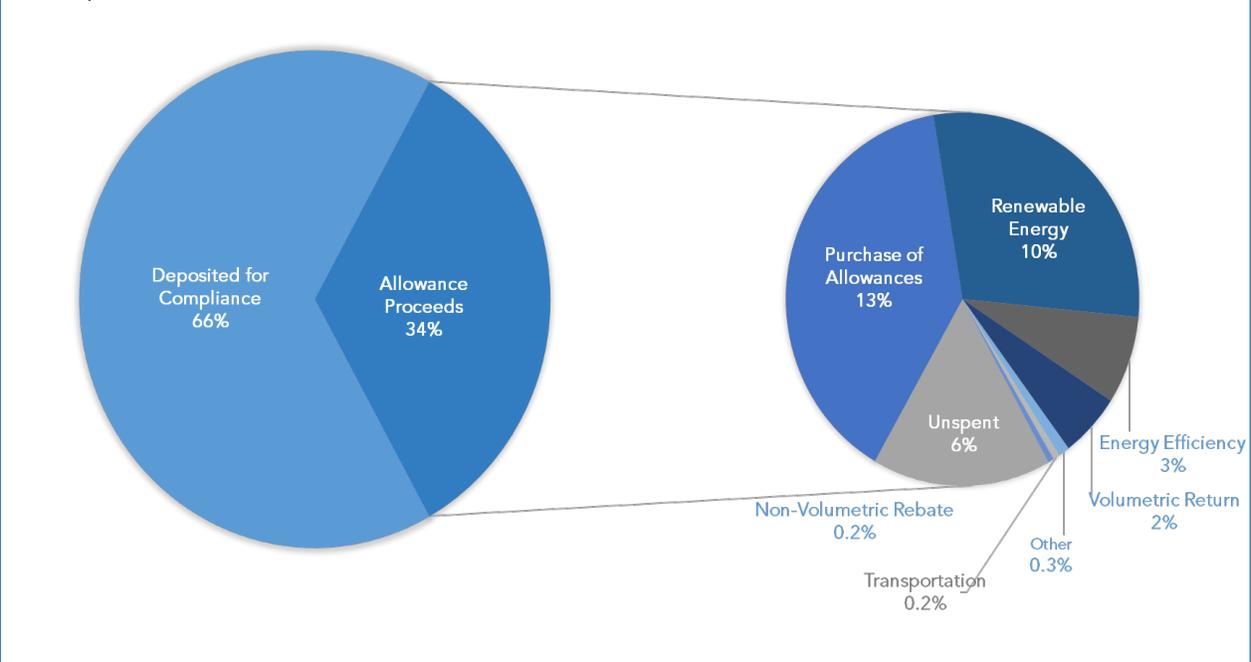


Figure 2b. Cumulative POU and COOP Use Allowance Value 2013-2017 (\$1.90 billion).



POUs and COOPs held 547 million dollars in allocated allowance value in 2017, 431 million dollars in allocated vintage 2017 allowance value and 116 million dollars in unspent auction proceeds carried into 2017 from previous years. The left side of Figure 2a shows that POUs and COOPs directly deposited 60 percent of their allocated allowance value for Program compliance. The right side of Figure 2a shows that most allocated allowance auction proceeds held by POUs and COOPs during 2017 remained unspent at the end of the 2017 calendar year. Eight percent of the total allocated allowance value held in 2017 was spent on renewable energy projects, and seven percent was spent on energy efficiency projects.

Figure 2b shows POUs' and COOPs' cumulative use of all 2013 through 2017 allowance value, totaled across all POUs and COOPs, as reported in their EDU use of allowance value reports to date. Allowance value allocated to POUs and COOPs for 2013 through 2017 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, provide customer rebates, purchase renewable energy, and invest in energy efficiency.

The left side of Figure 2b shows that 66 percent of the total allowance value allocated to POUs and COOPs over the history of the Program has been used for direct compliance with the Program. The right side of Figure 2b shows that 13 percent of the total allowance value allocated to POUs and COOPs over the history of the Program has been used to purchase additional allowances.²⁰ Ten percent of total 2013 through 2017 allocated allowance value (\$188 million) has been used to purchase and build renewable energy and three percent (\$49 million) has been invested in energy efficiency. Of the cumulative (2013–2017) allocated allowance value used to distribute proceeds to retail customers of POUs and COOPs, 91 percent (\$36 million) was used for volumetric rate decreases, and the remaining nine percent (\$3.4 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, POUs began phasing out this usage. Finally, about six percent of total allocated allowance value (\$105 million) remained unspent at the end of the 2017 calendar year. Some utilities 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 2013-2017. This table is available in Microsoft Excel format at the EDU use of allocated allowance value [webpage](#).

²⁰ Effective April 1, 2019, purchasing allowances with allocated allowance value is prohibited.