CALIFORNIA
AIR RESOURCES BOARD

Cap-and-Trade Program
Summary of Vintage 2014–2016 Electrical Distribution Utility Allocated Allowance Value Usage

Purpose

This report summarizes how electrical distribution utilities (EDU) used the value of vintage 2014 through 2016 allowances allocated to them by the California Air Resources Board (CARB) under the Cap-and-Trade Program (Program). 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 allowances allocated to them for vintage years 2014 through 2016.

Allowances allocated to EDUs currently represent approximately 25 percent of each year's allowance budget.[3] The number of allowances allocated to each EDU for 2013 to 2020 is defined by the Regulation, which specifies the formula for EDU allocation, including 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 (Tables 9-3 and 9-3a). The resulting amount allocated to each EDU is shown in the Annual Allocation to EDUs under the Cap-and-Trade Regulation document. The annual allocation to each EDU for 2021 to 2030 can be found in Table 9-4 of the Regulation.

The Regulation specifies two types of EDUs to be allocated allowances: investor-owned utilities and other utilities. Investor-owned utilities (IOU) are electric utilities owned by investors and include the largest electric utilities in the State. The Regulation requires IOUs to consign all of the allocated allowances for each vintage year to the four Program auctions held in that year. Senate Bill 1018 (2012) (SB 1018) and the California Public Utilities Commission (CPUC) together require IOUs to distribute nearly

[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/unofficial_ct_100217.pdf

[3] In 2014 EDUs represented approximately 60 percent of the allowance budget.

all of the resulting proceeds to their industrial, small business, and residential customers.[4] The other EDUs receiving allowance allocations are publicly owned utilities (POU) and electrical co-operatives (co-op). POUs are owned and operated by local governments such as cities, local utility districts, and irrigation districts, while co-ops are owned by their members. The governing boards of POUs and co-ops determine how to use their allocated allowances.

CARB Reporting Requirements and This Summary Report

Each year, EDUs are required to report to CARB by June 30 describing how each EDU utilized the allocated allowances it received for the prior year (see section 95892(e) of the Regulation). For example, for vintage 2014 allowances allocated to EDUs, the report from each EDU was due to CARB by June 30, 2015. Utilities must describe how the allocated allowance value was used[5] and explain how that use was consistent with the requirements of the Regulation.

For reporting of vintage 2014 through 2016 allowance value, although there was no requirement to report on the use of value left unspent in previous years, most EDUs reported the status of any previously unspent funds. EDUs may not use the value of a specified vintage all at once, as they may accrue the value from multiple vintages in order to enable programs or procurement of resources that provide larger benefits to ratepayers and the purposes of AB 32. This report, and the attached spreadsheet, documents the expenditures and unspent amounts reported by the EDUs and based on data from the CPUC. The 2016 amendments to the Regulation that took effect October 1, 2017 require reporting on all allowance proceeds spent during the previous year and all previously unspent proceeds, thus providing a more complete picture of the use of EDU allowance value going forward. Future reports will reflect this change and provide updates on all expenditures of prior unspent funds, remaining unspent funds and all new expenditures in a given year.

The "IOU Use of Vintage 2014–2016 Allocated Allowance Value" section of this document is based on data provided by CPUC reflecting annual IOU spending of allocated allowance value proceeds. The amount of allocated proceeds spent during a given year varies due to the timing of allowance revenue received and CPUC direction to IOUs.

For POUs and co-ops, this report summarizes the individual EDU use of allowance value reports submitted to CARB in fulfillment of the Regulation's reporting requirements. These individual reports provide information on a vintage year basis; they report on the disposition of value from each allowance within that vintage year. POU/co-op use of allocated allowance value is summarized by general usage across these utilities, general categories of allocated allowance proceeds use, and specific projects that fit within those general categories.

[4] Decision Adopting Cap-and-Trade Greenhouse Gas Allowance Revenue Allocation Methodology for the Investor-Owned Electric Utilities, Decision (D.) 12-12-033, issued December 20, 2012, http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M040/K631/40631611.PDF.

[5] CARB's request to EDUs in reporting on the use of allocated allowance value was to include only the amount of funds that had already been spent by the date of the signature on the form (if used).

As EDUs report annually on the use of allocated allowance value CARB will continue to issue regular updates on their uses of allocated allowance value.

IOU Use of Vintage 2014–2016 Allocated Allowance Value

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).[6] Together, IOUs sell just under three quarters of electricity in the State[7] and receive over two thirds of the allowances allocated to EDUs. The total value of allowances that CARB allocated to IOUs was approximately $745 million for vintage 2014, $781 million for vintage 2015, and $771 million for vintage 2016.[8] All of this value, except for a small amount for administration and outreach, was distributed to ratepayers.

SB 1018[9] 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. It also 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.[10]

In 2014, CPUC began requiring IOUs to include Program costs in electricity rates and to distribute allowance auction proceeds to residential and small business customers.[11] The final methodology for distributing allocated allowance proceeds to EITE customers was approved in 2015, resulting in the distribution of proceeds to these customers starting in 2016. Except for value reserved for EITE customers, CPUC directed the IOUs to distribute all vintage 2014 allocated allowance value plus half of vintage 2013 allocated allowance value to customers in 2014. Similarly, the remaining half of the 2013 value was distributed in 2015 along with all vintage 2015 allowance value. Figures 1a–1c show the spending of vintage 2013, 2014, 2015, and 2016 IOU allocated allowance value in 2014, 2015, and 2016, respectively. Figure 1d shows the cumulative spending of allowance value over the entire three-year period. The information presented in Figures 1a-1d are based on data provided by CPUC, including the vintage

[6] Bear Valley Electric Service is much smaller than most utilities, delivering less than a tenth of one percent of electricity in California (see reference in next footnote) and receiving fewer than 70 allocated allowances per year. CPUC instructed this utility 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.

[7] Electricity Consumption Data Management System, California Energy Commission, 2014 & 2015 data, http://www.ecdms.energy.ca.gov/elecbyutil.aspx.

[8] As reported to CARB in vintage 2014–2016 EDU use of allowance value reports.

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

[10] No vintage 2014–2016 allowance proceeds were approved for clean energy or energy efficiency projects.

[11] Though CARB first allocated allowances to EDUs in 2012, CPUC directed the utilities to defer including Program-related costs and allowance proceeds in customer bills until it finalized the details necessary to introduce these costs and credits in customer bills.

2014 and 2015 allowance value distributed to industrial entities in 2016.[12] After 2016, the allocated allowance value distributed during a given year will derive from allowances with a vintage that is the same as the calendar year, plus any (likely small) balance carried over from the preceding year that results from the difference between forecast and actual values.

From 2014 through 2016, IOUs provided semi-annual California Climate Credits to residential customers, provided proceeds distribution to EITE industrial entities and small businesses, and covered outreach and administrative costs associated with allocated allowance value. In 2016, following residential rate reform, the IOUs transitioned out of providing volumetric[13] proceeds distribution to residential customers and instead used the proceeds to increase the per-customer residential California Climate Credits. Also in 2016, IOUs began providing proceeds distributions to EITE industrial entities. Figures 1a–1d represents the IOUs' total CPUC-approved uses of vintage 2014–2016 allocated allowance proceeds as spent in each calendar year. Each category of allowance value use shown in Figures 1a–1d is described below. The data presented in Figures 1a–1d are also available in a spreadsheet, broken out by year.

[12] The spending in each of these figures reflects calendar year spending. In earlier years, this covers auction proceeds from allowances from multiple vintage years. In some years spending may exceed allowance proceeds because spending is forecast ahead of time based on projected allowance revenues. These amounts are trued-up in the amounts of allowance proceeds available for distribution to ratepayers in subsequent years.

[13] "Volumetric" means a constant dollar amount per amount of energy (i.e., dollars per kilowatt-hour). Under the 2016 amendments to the Regulation, effective October 1, 2017, volumetric return of proceeds is now prohibited.

Residential California Climate Credit
The residential California Climate Credit is a twice-annual bill credit given to all IOU residential customers. All allowance 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.[14] The amount of these credits increased in 2016 when the residential volumetric rate reduction was discontinued.

Residential Volumetric Rate Reduction
During 2014 and 2015, PG&E, SCE, and SDG&E temporarily used a portion of their allowance proceeds to compensate for Cap-and-Trade Program-related costs to consumers by reducing residential rates. This use of allowance proceeds began in April 2014 for SCE and SDG&E and May 2014 for PG&E, coincident with the introduction of Program costs into rates for residential and other customer classes. CPUC did not permit PacifiCorp and Liberty Utilities to use allowance proceeds in this manner because these utilities were not subject to the same historic ratemaking limits. CPUC permitted this residential volumetric rate compensation 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,[15] CPUC decided that this use of allowance proceeds would end on December 31, 2015. The magnitude of the residential rate compensation exactly matched the Program costs that would have been allocated to the residential customer class during those years. The 2016 amounts reflect the true-up and phase-out of this usage.

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 associated with the electricity they purchase. CPUC determined that all facilities in industries eligible for industry assistance pursuant to the Regulation should also be eligible for this credit, even if they are not covered entities under the Regulation.[16] 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 industries 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.

[14] For more information see: http://www.cpuc.ca.gov/ClimateCredit/.
[15] 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, issued July 3, 2015, http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M153/K110/153110321.PDF.
[16] Decision Adopting Greenhouse Gas Allowance Revenue Allocation Formulas and Distribution Methodologies for Emissions-Intensive and Trade-Exposed Customers, D.14-12-037, issued December 18, 2014, http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M144/K130/144130487.pdf.

The first CA Industry Assistance credit, covering the years 2013–2016, was distributed to eligible facilities in October 2016. The amount distributed to each facility is calculated using business confidential data submitted by facilities 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 the impacts of the Program on their electricity bills. CPUC defined an eligible small business as any non-residential customer with a typical energy demand of less than 20 kW per month. This credit began by compensating 100 percent of Program costs in small business electricity rates. This percentage declines by 10 percent per year after 2015, since 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.

Administrative and Outreach Costs

Administrative and outreach costs include the costs of administering the proceeds distribution and an outreach and education program focused on educating ratepayers about energy savings actions that they can take with California Climate Credits. 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 allowance 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.[17]

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 Decision 14-10-033 developed the process by which IOUs may seek approval to use auction proceeds for clean energy or energy efficiency projects that are not otherwise funded. As of 2016, auction proceeds have yet to be expended on any clean energy or energy efficiency project projects. In 2017, per the requirements of Assembly Bill 693 (2015) (AB 693) and an Administrative Law Judge's (ALJ) Ruling providing interim direction on the implementation of AB 693, the IOUs began to set aside auction proceeds to be used for the multifamily affordable housing solar roofs program.[18]

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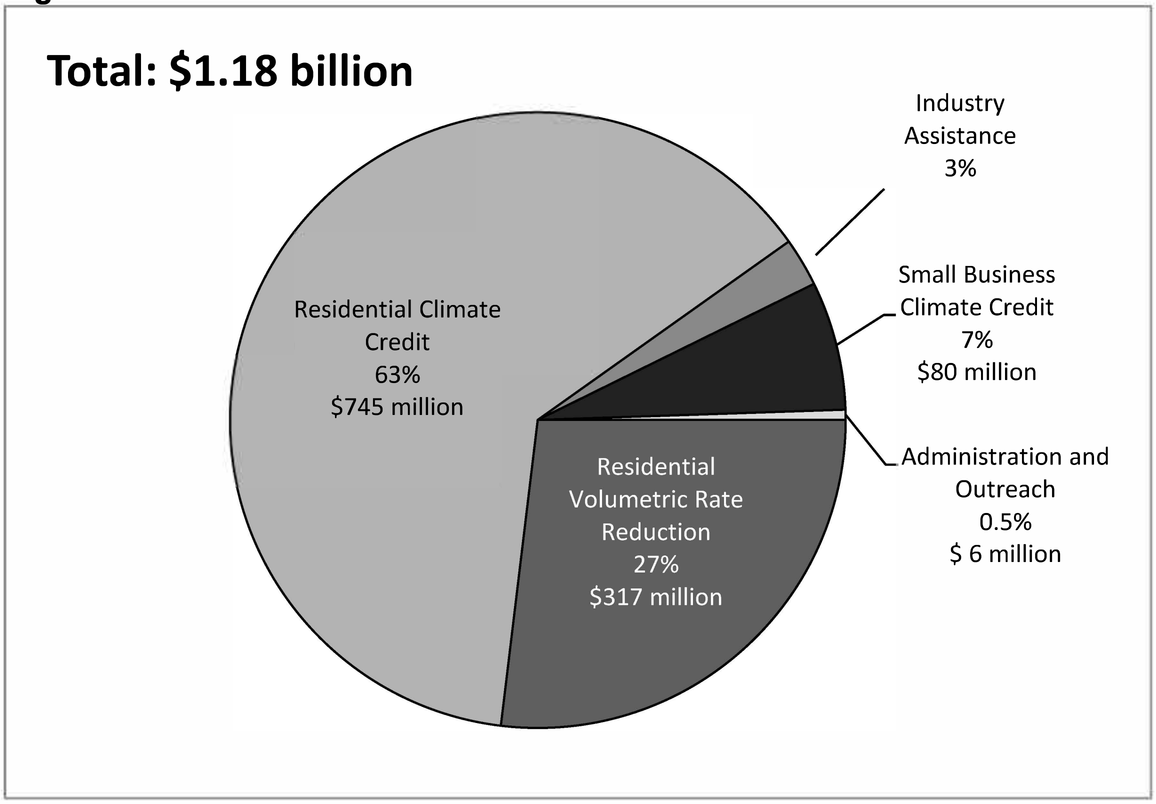
[17] *See* Decision Addressing Customer Education and Outreach Plans for Greenhouse Gas Allowance Proceeds Return, D.16-06-041, issued June 24, 2016, http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M164/K022/164022015.PDF.

[18] ALJ Ruling (1) Adding Respondents and (2) Providing Interim Direction to California Electric Utilities on Accounting for Funds for Implementation of Assembly Bill 693 in R.14-07-002, issued March 18, 2016, http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M159/K625/159625681.PDF.

Figure 1a. IOU 2014 use of allocated allowance value.[19]



[19] The totals shown in Figures 1a-1d may not exactly equal the sum of the components due to rounding. They also do not 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 1b. IOU 2015 use of allocated allowance value.

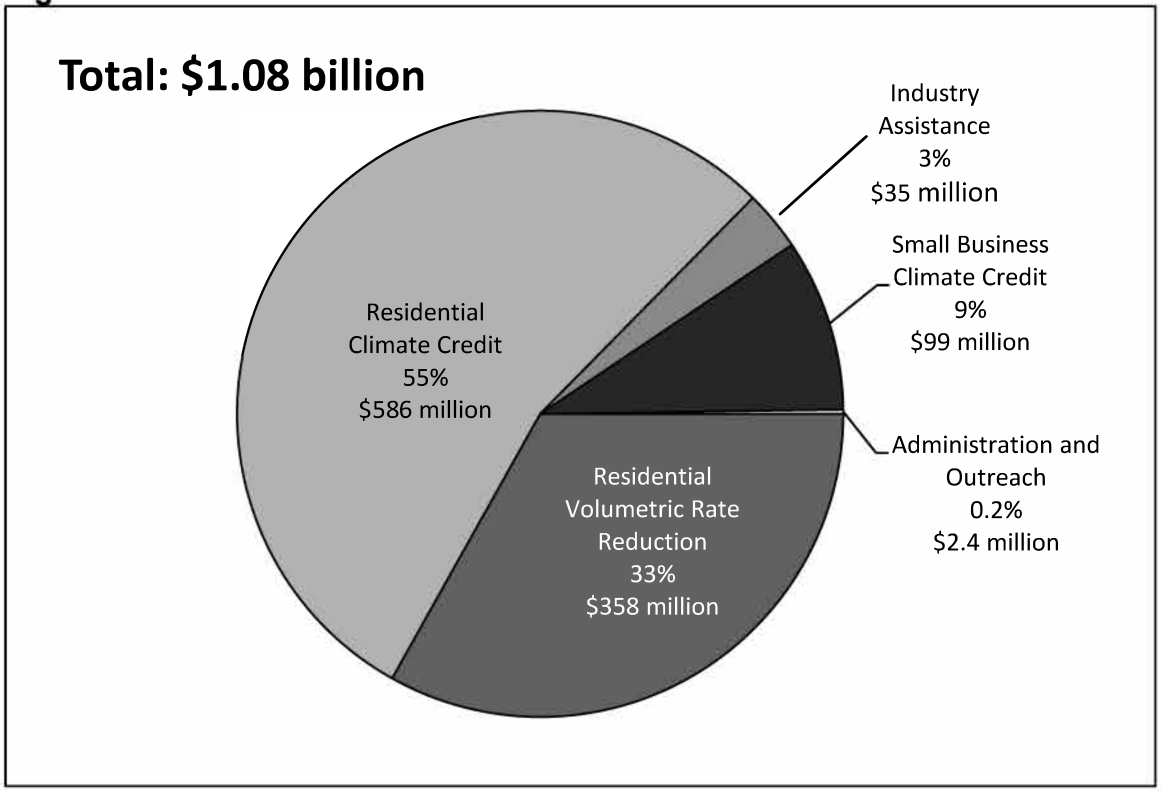


Figure 1c. IOU 2016 use of allocated allowance value.

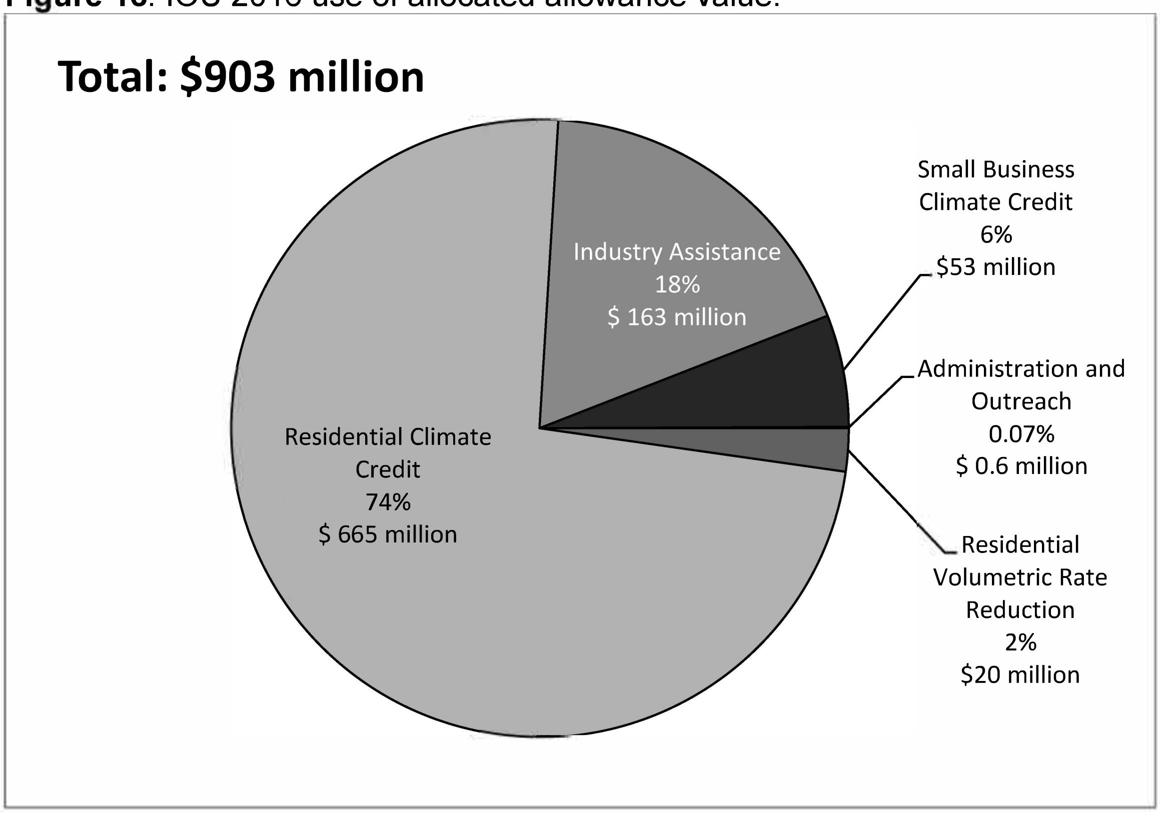
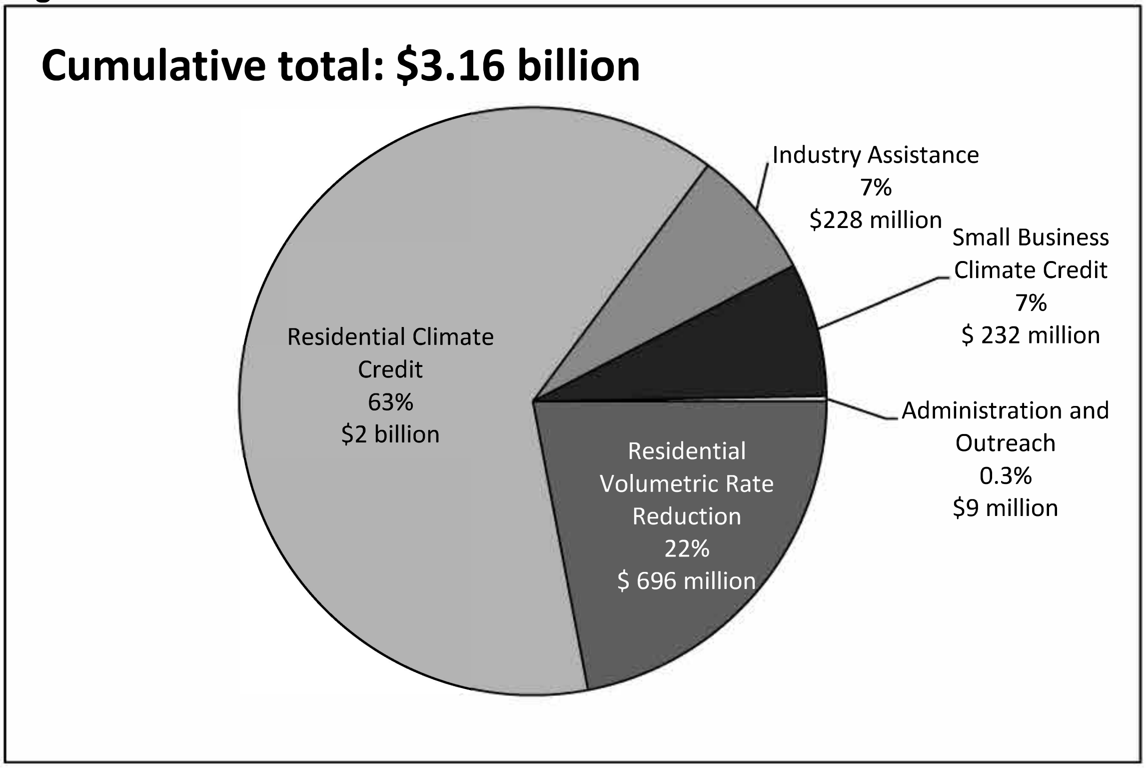


Figure 1d. IOU 2014–2016 use of allocated allowance value.



POU and Co-op Use of Vintage 2014–2016 Allocated Allowance Value

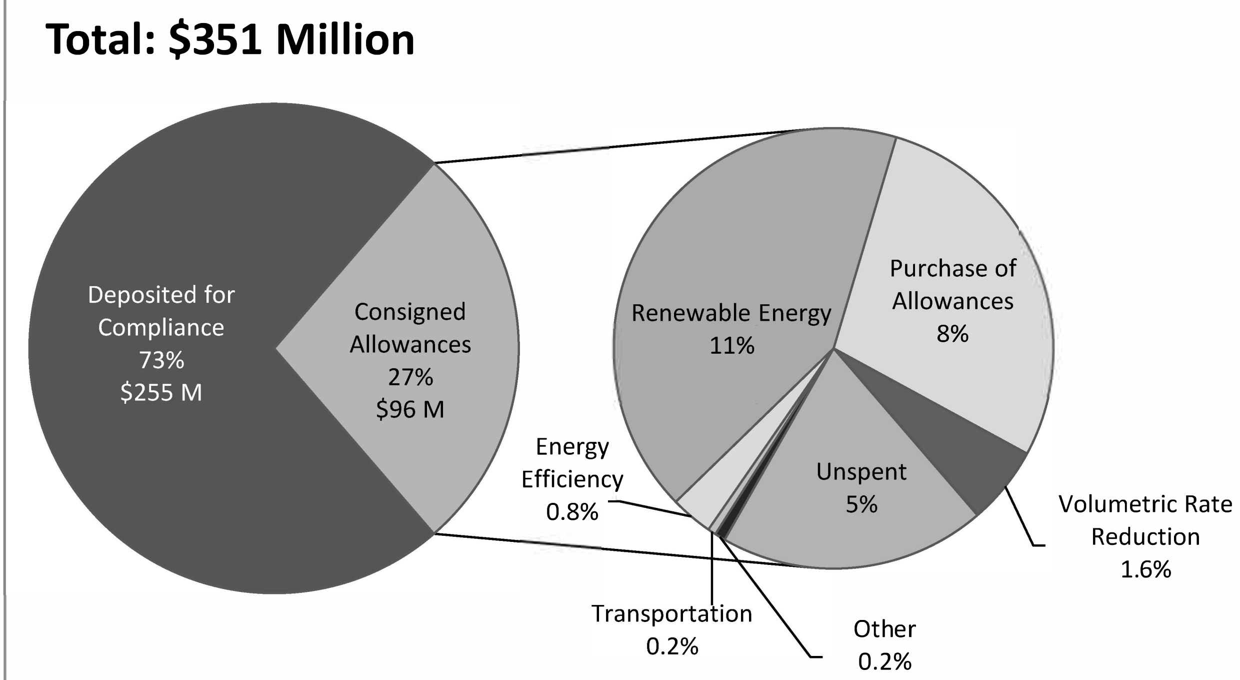
There are 45 POUs and four co-ops that received allowance allocation for the vintage years 2014 through 2016. Together, these utilities sold just over 25 percent of the State's electricity[20] and received approximately 33 percent of allowances allocated to the electricity sector. Of this electricity, approximately 35 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 allowances which CARB allocated to POUs and co-ops was $351 million for vintage 2014, $366 million for vintage 2015, and $383 million for vintage 2016.[21] The use of these allowances must benefit ratepayers and be consistent with the goals of AB 32.

POUs and co-ops are not subject to CPUC jurisdiction. Each POU or co-op makes its own decisions about how to use its allocated allowances, subject to approval from its governing board and conformance with Regulation requirements to benefit ratepayers and maintain consistency with AB 32. Figures 2a–2c show how POUs and co-ops in total used vintage 2014, 2015, and 2016 allocated allowances, respectively, as reported in EDU use of allowance value reports to date. Note that Figures 2a–2c for POUs and co-ops present usage for each allowance vintage year, whereas Figures 1a–1c for IOUs

[20] "Electricity Consumption Data Management System," California Energy Commission, 2014 and 2015 data, available at http://www.ecdms.energy.ca.gov/elecbyutil.aspx.
[21] The calculation of total allowance value assumes a deposited allowance is worth $11.645 in 2014, $12.44 in 2015 and $12.73 in 2016 (the average of the settlement prices at the four auctions held in each year) and relies on auction proceeds amounts reported by the POUs/co-ops to CARB in the EDU use of allowance value reports to date.

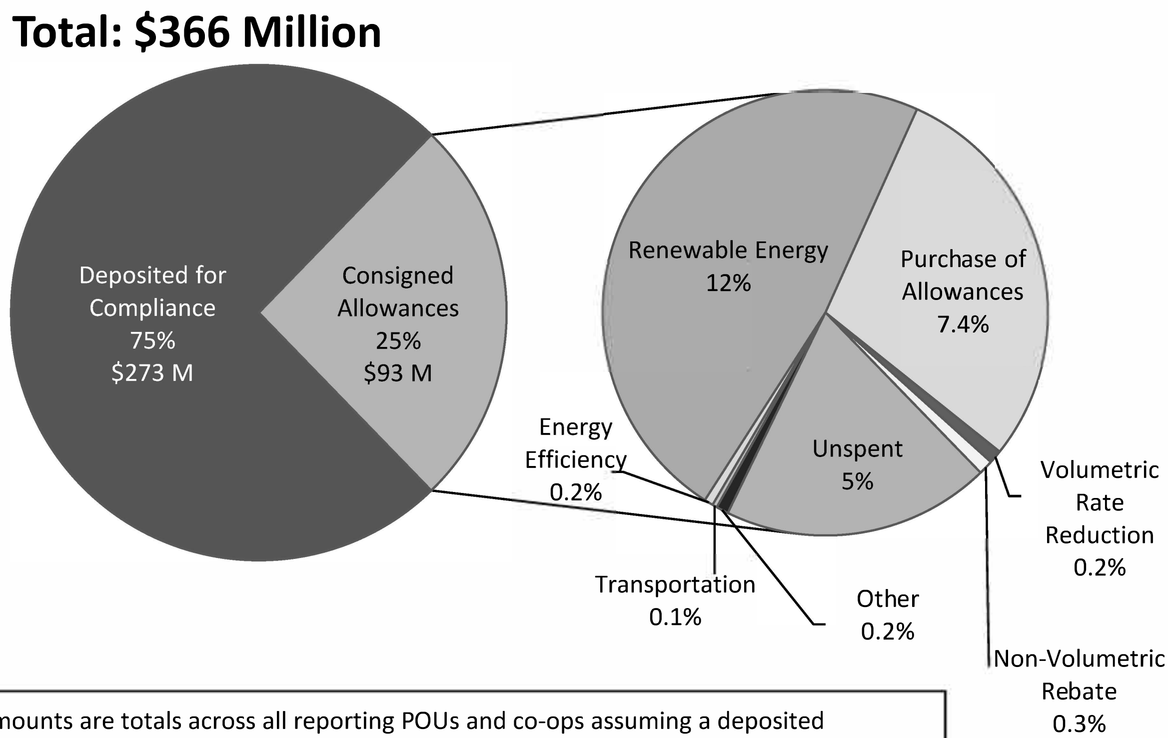
present spending in calendar year. As with the IOUs, spending of auction proceeds from a particular allowance vintage by POUs and co-ops can occur in the calendar year that is the same as the vintage year or in future calendar years. Each allowance can be either deposited for compliance with the Regulation or consigned and sold at auction. The left pie charts in Figures 2a–2c show how many allowances were deposited for compliance versus how many were auctioned, and the right pie charts show how the proceeds from auctioned allowances were used.

Figure 2a. POU and co-op use of vintage 2014 allowance value.



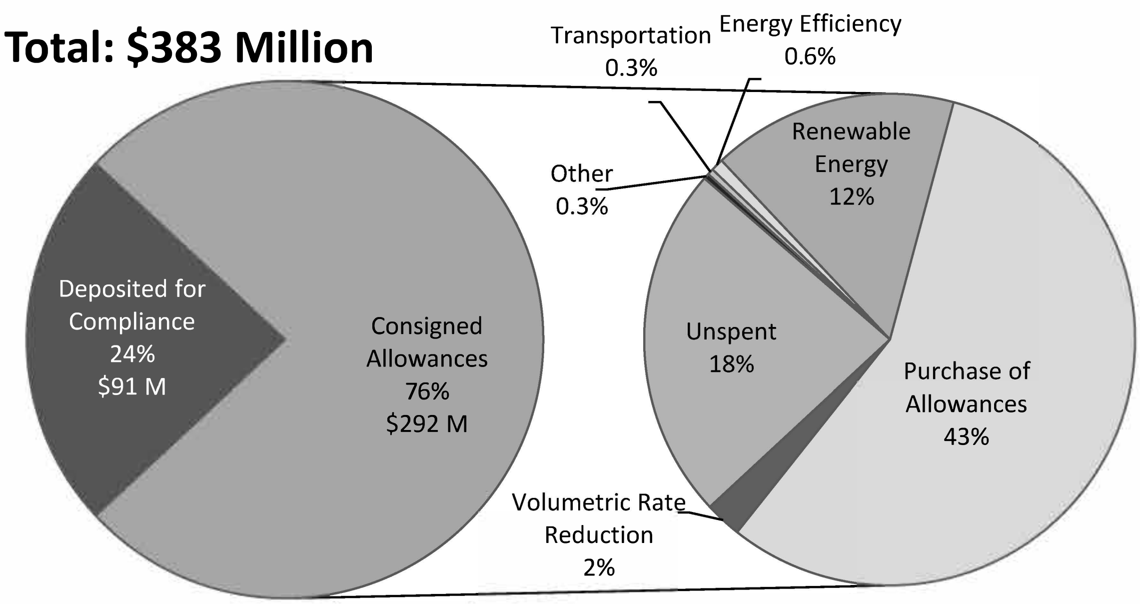
Amounts are totals across all reporting POUs and co-ops assuming a deposited allowance is worth $11.645, the average of the prices at the 2014 auctions, and all other dollar amounts are those reported to CARB in use of allowance value reports. The 0.01% of spent on Non-Volumetric Rebates is not shown in the breakdown of consigned allowances because the amount is too small to represent.

Figure 2b. POU and co-op use of vintage 2015 allowance value.



Amounts are totals across all reporting POUs and co-ops assuming a deposited allowance is worth $12.44, the average of the prices at the 2015 auctions, and all other dollar amounts are those reported to CARB in use of allowance value reports.

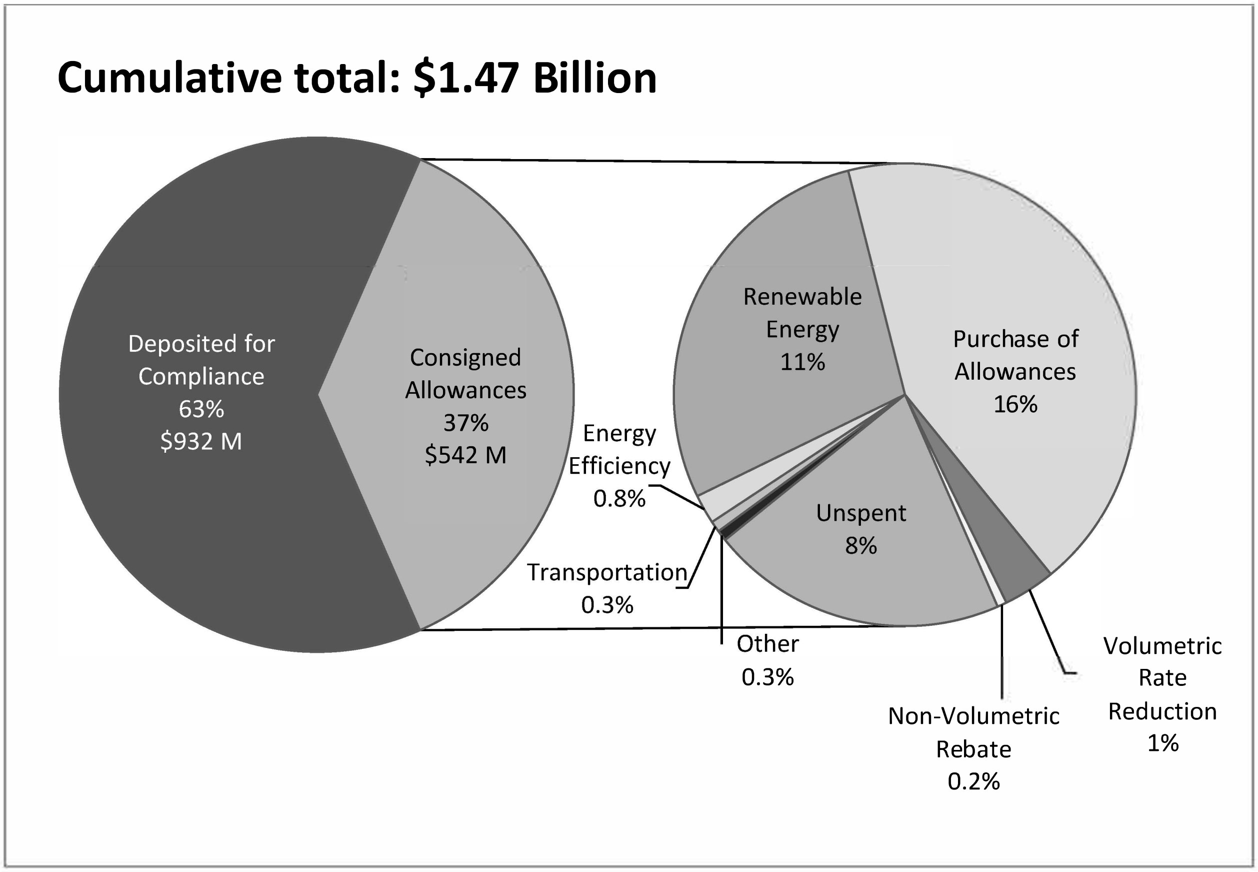
Figure 2c. POU and co-op use of vintage 2016 allowance value.



Amounts are totals across all reporting POUs and co-ops assuming a deposited allowance is worth $12.73, the average of the prices at the 2016 auctions, and all other dollar amounts are those reported to CARB in Use of Allowance Value Reports.

Figure 2d shows POUs' and co-ops' cumulative use of all vintage 2013 through 2016 allowance value, totaled across POUs and co-ops, as reported in their EDU use of allowance value reports to date. As in Figures 2a–2c, the left pie chart in Figure 2d shows the percentage of allowances deposited for compliance and the percentage that were consigned to auction, and the right pie chart shows how the proceeds from auctioned allowances were used.

Figure 2d. Cumulative POU and co-op use of vintage 2013–2016 allowance value.



POU and co-op allocated allowance value to date (vintages 2013 to 2016) has been spent to reduce ratepayer costs, either directly or indirectly. This includes allowances deposited for compliance and allowance value used to purchase allowances, provide customer rebates, purchase renewable energy, and invest in energy efficiency.

Of the cumulative (vintage 2013–2016) auction proceeds distribution to retail customers of POUs, 85 percent ($19.8 million) was used for volumetric rate decreases. The rest (15 percent, $3.6 million) was distributed on a non-volumetric per-residential customer or per-business basis. Approximately two percent of total vintage 2013 through 2016 allocated allowance value ($11 million) was invested in energy efficiency. Finally, about 8 percent of allocated allowance value ($110 million) has not yet been spent. Some utilities have not yet used any of their allocated allowance value.

Customer incentives to reduce energy use based on a carbon price signal are maintained when allocated allowance value is provided to ratepayers in ways that preserve Cap-and-Trade Program costs in electricity prices. Uses such as volumetric revenue return and purchasing allowances for compliance reduce the price effect and thus limit the incentive for end-user conservation. Other uses—like spending on energy efficiency, efficient transportation, and other GHG-reducing programs—benefit ratepayers, but may not counteract the carbon price signal. Additional uses consistent with maintaining a carbon price signal include equal-per-customer rebates to ratepayers similar to the California Climate Credit provided by IOUs. Both IOU and POU non-volumetric credits/rebates provide a credit to ratepayers without dampening incentives to improve energy efficiency or reduce energy use. Reducing energy use, while decarbonizing the grid, are both recommended actions in the recently adopted 2017 Scoping Plan Update.[22]

Each use of allocated allowance value reported by a POU or co-op can be found in a comprehensive table that lists POU and co-op uses of allowance value from 2013 through 2016, including specific uses of auction proceeds and allowances deposited for compliance. This table is available for download as a sortable table in Microsoft Excel format.

[22] California's 2017 Climate Change Scoping Plan (November 2017) https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf