



Cap-and-Invest Program Allowance Auction Revenue Forecast Summary – December 2024 –

Purpose

To update revenue estimates from cap-and-invest allowance auctions under the Climate Commitment Act and provide a summary of the process and methodology for forecasting this fund source.

Background

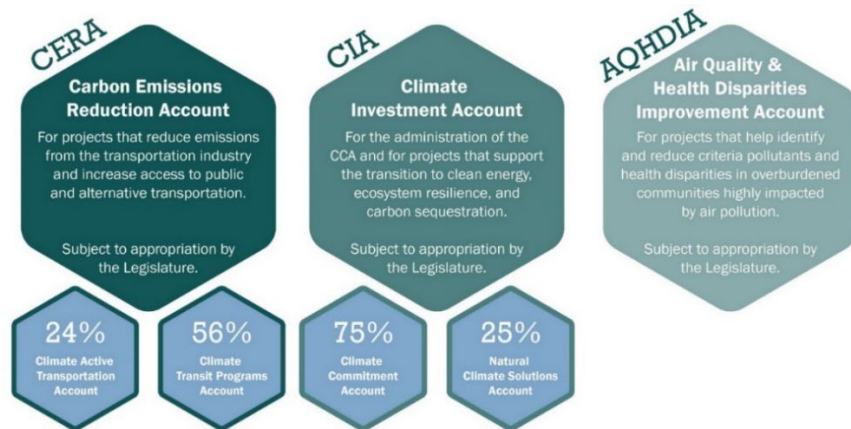
In 2021, the Legislature passed the Climate Commitment Act (CCA), [Chapter 70A.65 RCW](#), which establishes a comprehensive, market-based program to reduce carbon pollution and achieve the greenhouse gas limits set in state law.

The cap-and-invest program under the CCA sets a limit, or cap, on overall carbon emissions in the state and requires businesses to obtain allowances equal to their covered [greenhouse gas emissions](#). These allowances can be obtained through [quarterly auctions](#) hosted by Ecology’s contracted vendor, or bought and sold on a secondary market (just like stocks and bonds). The cap will be reduced every year to help ensure Washington achieves its 2030, 2040, and 2050 emissions-reduction commitments, which means Ecology will issue fewer emissions allowances each year.

The program began January 1, 2023, and the first allowance auction took place on February 28, 2023. As of December 2024, there have been eight quarterly auctions and three Allowance Price Containment Reserve (APCR) auctions. For more information on the cap-and-invest program, please visit: <https://ecology.wa.gov/Air-Climate/Climate-Commitment-Act/Cap-and-invest>.

Accounts and Revenue Overview

The CCA established three primary accounts and two sub-accounts to house cap-and-invest auction proceeds until they are appropriated for specific uses and projects by the Legislature. During the 2022 legislative session, ESSB 5974 established two additional accounts that received revenue transfers from the Carbon Emissions Reduction Account (CERA). Funds in each of these seven accounts are earmarked for specific types of climate, environmental justice, and ecological projects. Per RCW 70A.65.100, auction proceeds must first be deposited into CERA each fiscal year, and statute sets those deposit amounts.





Updated Revenue Forecast

Ecology provided its first revenue estimates for the cap-and-invest program auctions in October 2022. At that time, the program was still a few months from launching and hadn't held its first quarterly auction yet. A first official revenue forecast was provided in November 2023. The revenue estimates provided in this summary reflect current information regarding auction results as of December 2024, including the results of the calendar year 2024 auctions in both Washington and the combined California/Québec market, as well as updates to allowance supply and allocations for Washington's program.

Current Forecast – December 2024

\$ in thousands	FY24 ¹	FY25	FY26	FY27	FY28	FY29
Total Auction Revenue	\$1,291,962	\$956,086	\$876,372	\$766,584	\$676,196	\$571,823
26A - CERA ²	\$356,697	\$366,558	\$359,117	\$359,117	\$359,117	\$359,117
26E - AQHDIA ³	\$2,500	\$2,500	\$10,000	\$10,000	\$10,000	\$10,000
26B - CIA ⁴	\$932,765	\$587,028	\$507,255	\$397,467	\$307,079	\$202,706

Previous Forecast – June 2024

\$ in thousands	FY24 ¹	FY25	FY26	FY27	FY28	FY29
Total Auction Revenue	\$1,291,962	\$972,343	\$841,882	\$791,906	\$771,543	\$670,954
26A - CERA ²	\$356,697	\$366,558	\$359,117	\$359,117	\$359,117	\$359,117
26E - AQHDIA ³	\$2,500	\$2,500	\$10,000	\$10,000	\$10,000	\$10,000
26B - CIA ⁴	\$932,765	\$603,285	\$472,765	\$422,789	\$402,426	\$301,837

Change – June 2024 to December 2024

\$ in thousands	FY24 ¹	FY25	FY26	FY27	FY28	FY29
Total Auction Revenue	\$0	(\$16,257)	\$34,490	(\$25,322)	(\$95,347)	(\$99,131)
26A - CERA ²	\$0	\$0	\$0	\$0	\$0	\$0
26E - AQHDIA ³	\$0	\$0	\$0	\$0	\$0	\$0
26B - CIA ⁴	\$0	(\$16,257)	\$34,490	(\$25,322)	(\$95,347)	(\$99,131)

¹ Reflects actual revenue collections for completed auctions during fiscal year 2024.

² Annually, beginning July 1, 2023, the State Treasurer will transfer 24% of the revenues in Carbon Emissions Reduction Account (CERA) to the Climate Active Transportation Account (Fund 26M) per RCW 46.68.490, and 56% to the Climate Transit Programs Account (Fund 26N) per RCW 46.68.500. State Treasurer transfers are not reflected in the revenue estimates above (revenue is shown in CERA).

³ FY26-FY29 amounts based on legislative intent in RCW 70A.65.280(3) that no less than \$20 million per biennia be dedicated to AQHDIA for the purposes of the account.

⁴ Annually, beginning July 1, 2023, the State Treasurer will transfer revenues available in the Climate Investment Account (CIA) that are not already appropriated in the account to administer the program. Per RCW 70A.65.250, 75% will be transferred to the Climate Commitment Account (Fund 26C) and 25% will be transferred to the Natural Climate Solutions Account (Fund 26D). State Treasurer transfers are not reflected in the revenue estimates above (revenue is shown in CIA).



Please note, as the Washington’s cap-and-invest program’s allowance market is still new, there remains a high level of uncertainty in any estimates of auction proceeds into the future. While the updated projections above represent Ecology’s best estimate of potential revenues, actual auction proceeds could be higher or lower, depending on the actual price that allowances sell for at each auction (the settlement price¹).

State-owned allowance supply available for auction is also variable—in part based on updated allowance allocation to industry and electric utilities. When allocation to utilities goes up, then fewer state-owned allowances are available to auction and less revenue is generated for the state.

Because of these inherent uncertainties, we strongly recommend caution when relying on these forecasted projections to appropriate funds from the associated accounts. Historically, the early years of emissions trading systems such as Washington’s are the most variable in allowance prices, and therefore in revenue.

Summary of Changes Between December 2024 Forecast and Previous Forecasts

The June 2024 forecast and November 2023 forecast used similar methodology, which projected future allowance prices based on a rolling average of the previous auction settlement prices in each jurisdiction, and then deriving the average prices from those averages as the baseline for future, inflation-adjusted allowance price increases.

The December forecast uses a different methodology, which is explained in the following section (Forecasting Methodology for Estimating Revenue Proceeds). In addition to the methodology change, several factors have contributed to the change in forecasted revenue over what was forecasted in June 2024.

- Washington actual settlement price updates: The actual average current vintage settlement price over Washington’s first three quarterly auctions (Auctions 5-7) in 2024 was \$28.52. This was a departure from Auction 1 through Auction 4 in 2023, where the average price was \$54.86. The most recent auction, Auction #8, settled at \$40.26.
- Joint California/Québec price updates: The actual average settlement prices for the four joint California/Québec auctions in 2024 was \$35.21. At the time of the June 2024 forecast, the average of the previous four auctions was \$38.16; and at the time of the November 2023 forecast, \$33.03.
- Washington state-owned allowance supply: This forecast reflects a net reduction of state-owned allowances of more than 2.7 million, compared to the June 2024 forecast. This change is driven by a number of factors impacting allowance supply, including the schedule for no-cost allowance allocation to utilities for 2023-2026 that was updated in October 2024, and adjustments based on retail electric load forecasts that were published in late November 2024.

¹ The terms “allowance price” and “settlement price” are sometimes used interchangeably. Ecology refers to settlement price, or allowance settlement price, as the *actual* price per allowance as determined by an auction. Allowance price may also refer to the settlement price, but in the context of this forecast, “allowance price” is generally used to refer to a forecasted, average, or projected price.



Below is an explanation of the allowance supply changes compared to the June 2024 forecast for each affected table found in Appendix A. The total number of allowances change from the previous forecast refers to the total change in Calendar Years 2023-2030.

- **Table 12:**

- The total allocation of free allowances to Energy-Intensive Trade-Exposed Entities (EITEs) **decreased** by 366,118 allowances, which increased the number of state-owned allowances available for sale at auction (Table 17).
 - This decreased allocation includes a downward adjustment of 154,904 allowances for calendar year (CY) 2025, resulting from the true-up process. In the true-up process, allowances from the 2025 allowance budget are allocated to entities in instances when their initial 2023 allocation was insufficient to cover their actual emissions. Consequently, the number of allowances available for EITEs in 2025 is reduced by approximately 154,904 allowances.

Previously, the 2025 allocation was calculated as the average of the 2023 and 2024 allocations. The allocation for 2026 is now based on the average of the 2024 and 2025 allocations. Allocations for 2027 through 2030 have been adjusted downward compared to the June 2024 forecast. [Read more about EITE allocation here.](#)

- **Table 13:**

- An additional 2,513,803 allowances are allocated to electric utilities compared to June 2024 forecast, which **decreases** the number of state-owned allowances available for auction (Table 17).
 - In this forecast, electric utilities allocation totals decrease in 2025 and 2026 by over 1.2 million, compared to the June 2024 forecast, but then increase by over 3.7 million in 2027 through 2030.

Allocation is based on each utility's forecast of retail load and expected resource supply to meet that retail load. That projection is multiplied by the applicable greenhouse gas emissions factors, and is a best estimate of the most likely electricity resource mix. This forecast incorporates the annually updated [BPA ACS emissions factor](#), updated energy assumptions, and utility-specific calculations. [Read more about electric utility allocation here.](#)

- **Table 15:**

- Previous forecasts included *estimates* for potential offset usage. After the 11/1/24 compliance event, Ecology has *actual* information for total number of offsets used for compliance for 2023 emissions as 26,280 offset credits, which was much lower than the estimated 958,988 used in the June 2024 forecast. The result is an **increased** number (932,708) of state-owned allowances eligible to be offered in current vintage auctions during CY 2025.

- **Table 17:** Current vintage allowances to be sold in CY 2025 and CY 2026 increased by 2,418,940 allowances, then decreased by 5,515,441 in CY 2027 through 2030, for an overall net **decrease** of 2,726,501 fewer state-owned allowances, compared to the June 2024 forecast.



This overall decrease in state-owned supply along with moderating auction settlement prices contribute to a lower revenue estimate in the baseline forecast compared to the previous forecast, specifically driven by lower revenue estimates in FY 2027-29.

Forecasting Methodology for Estimating Revenue Proceeds

The June 2024 forecast used the average of the most recent four auctions for each jurisdiction and estimated current vintage allowance settlement prices in future auctions by increasing prices at a rate of 5% plus the prior year's inflation for providing the official (baseline) forecast. As stated in that June 2024 forecast, it was Ecology's intent to use this same methodology in subsequent forecasts. However, given the significant change in settlement prices for Auction #5, #6, and #7 compared to the trend of Washington's first four auctions, Ecology, in consultation with the Office of Financial Management (OFM), determined that using the same methodology would result in an unrealistically low forecast.

The settlement price for Washington allowances fell sharply in calendar year 2024 after the introduction of Initiative 2117 (I-2117), with the price in the first three quarterly auctions (Auction #5, #6, and #7) all falling under \$30 per allowance – compared to the first four auctions in Washington where prices were all above \$48 per allowance. After I-2117 was not passed by voters in November 2024, secondary market prices for Washington allowances increased, and the current vintage allowance settlement price for Auction #8, held on December 6, 2024, was \$40.26.

Therefore, to improve the accuracy of revenue estimates for the upcoming auctions, Ecology adjusted the methodology and inputs used for estimating the auction prices in Washington. Instead of using the previous four auctions to estimate current vintage allowance settlement price inputs for Washington's market, Ecology opted to use a forward-looking forecast methodology, based on observed conditions in the secondary market.

This approach used the market price for agreements entered into in December 2024 that have an execution or delivery date of December 2025 ('December 2025 contract delivery'). Trading for transfers of allowances in December 2025 are frequent (compared to trading at other times of the year), making them a reliable source of data on the value of allowances obtained by covered entities throughout 2025 including Auction #9 in March 2025, Auction #10 in June 2025, and Auction #11 in September 2025.² By discounting the December 2025 prices back to earlier quarterly auction dates, the methodology leverages consistent market data while maintaining coherence with historical correlations between present values and settlement prices.

The methodology for estimating the price inputs from the California/Québec joint market remains the same in this forecast as it did in June 2024 (used the average of the most recent four auctions for that jurisdiction). But without the adjusted forward-looking approach for estimating the Washington market inputs, the forecast would have estimated prices in the low-to-mid-\$30-range (starting at \$33.34) for the baseline forecast, which would have been below both the results of quarterly Auction #8, and recent secondary market prices. In other words, the forecast would have projected a price meaningfully below the price at which allowances are—and have been—available at any time since early November when I-2117 was not passed.

² Ecology used an implied discount rate to estimate 2025 auction settlement prices from the price of allowances delivered in December 2025 that were observed on the secondary market.



Please note: While the forecasting methodology for estimating the settlement prices for Washington’s jurisdiction have been updated for this forecast, as described above, Ecology remains open to the possibility of further adjustments in future forecasts as market conditions evolve and we collect new information, which might suggest changes for enhanced forecast accuracy and reliability.

As Ecology did in both November 2023 and June 2024, this forecast continues to provide low bounding and high bounding scenarios for additional context. The forecast estimates revenue proceeds from the allowance auctions over a five-year period. For example, the current forecasted estimates above cover fiscal years 2025-2029. This rolling five-year period will advance forward a fiscal year with each June forecast (e.g., the next June 2025 forecast will cover fiscal years 2026-2030). Each baseline forecast will provide estimated revenue from the allowance auctions, which will accrue to the state treasury, and therefore be available for appropriation by the Legislature.

Generally, revenue is estimated by multiplying the allowance supply available per auction by an estimated settlement price per allowance.

Allowance Settlement Price Calculation

The starting price for the baseline forecast, along with the low bounding and high bounding scenarios, are as follows:

- **Low Bounding Scenario:** Based on estimated allowance auction supply multiplied by an average of the previous four quarterly auction current vintage settlement prices in the combined California /Québec market, where historical allowance prices have been lower, with few exceptions, than those seen in the Washington market.
- **High Bounding Scenario:** Based on estimated allowance auction supply multiplied by an average of the most recent auction result (December 2024 Auction #8), and the next three projected auction settlement prices for March, June, and September 2025. The December 2025 settlement price is projected based on the average of the previous four auctions, including the three auctions that are using the forward-looking settlement prices.
- **Baseline Forecast:** Based on Washington’s estimated allowance auction supply multiplied by an auction settlement price that is the mid-point between the low and high scenarios.
 - For example, the average current vintage allowance price in the combined California/Québec market used for this December 2024 forecast was \$35.21 in the low bounding scenario and the average current vintage allowance price in the Washington market was \$47.49 in the high bounding scenario. The average of the two—**\$41.35**—sets estimated allowance price for the current baseline forecast. This price is increased by an inflationary factor in successive auctions (starting with Auction #9).

For both the baseline forecast, and bounding scenarios, Ecology calculates potential current and future vintage allowance prices and adjust for the rate of inflation. The supply of allowances for each auction is based on the decreasing annual budget of available state-owned allowances, dividing evenly across each of the four auctions. Future vintage allowances are offered three years prior to their vintage year and any unsold future vintage allowances will be reintroduced to the current supply in the year that matches their vintage.



If the settlement price at a quarterly auction is above the first tier of the APCR, the forecast or scenario's allowance supply will include cost containment allowances from the APCR. In addition, as to the forecast and both bounding scenarios, the auction floor price and APCR tier prices will increase by an inflationary factor each year. Therefore, prices will increase in all three instances year-over-year, but the two factors that will change the price between each will be:

1. The average actual or forecasted allowance price, and
2. Whether or not the forecasted current vintage settlement price will trigger APCR auctions that introduce additional allowances which are sold at fixed tier prices, as defined by rule.

Note: Ecology is required by rule to offer an APCR auction each year before the annual compliance deadline. APCR allowances can be used to meet compliance obligations for any year, including previous years. Ecology assumes in this forecast that even though an APCR auction will be offered immediately before each annual compliance deadline, no revenue is expected to result from these required APCR auctions.³

Rationale for Baseline Forecast Approach

Choosing an allowance price for the baseline forecast that is the mid-point between the two market prices is a prudent approach, dampening the impact of large shifts in Washington cap-and-invest allowance prices given that Washington's cap-and-invest program is still a relatively new market. The baseline forecast allowance price for both current and future vintages is the combined average of actual allowance settlement prices in the California/Québec joint market and the Washington market as of December 13, 2024.

Update on Linkage

The CCA directs Ecology to evaluate whether to link Washington's cap-and-invest market with other jurisdictions and provides specific criteria that must be met before linking. On September 23, 2024, all three governments issued a second joint statement expressing mutual interest and collaboration in forming a shared carbon market through linkage.

Ecology continues to work with California and Québec to determine what a combined market might look like, what issues need to be resolved, and what timeline would make sense for all three parties. Read more about the latest on [Cap-and-Invest program linkage here](#).

We expect allowance prices in each of these markets to converge as a final decision on program linkage nears. However, whether that convergence is closer to the price in the California/Québec joint market, or the Washington market, remains unclear.

Current and Future Vintage Prices

Ecology will separately calculate proceeds from the future and current vintage auctions because future vintage auctions may consistently sell at a different price.

- Current vintage proceeds in year X =

³ The price of APCR allowances is above the auction market price at all times in all scenarios in this forecast. Only entities that do not have a sufficient number of compliance instruments in their compliance account, and were not able to purchase allowances at auction on the secondary market, or reduce their emissions, would be willing to pay the higher price for APCR allowances to avoid an additional compliance obligation for a lack of compliance instruments at the compliance event. See more about compliance requirements in chapter 3 of [Cap-and-Invest Program Compliance and Enforcement Guidelines \(wa.gov\)](#).



(Current vintage price in year X as set forth below) * (Current vintage supply in year X)

- Future vintage proceeds in year X =
(Future vintage price in year X as set forth below) * (Future vintage supply in year X)

Allowance Price Calculation

The following three tables provide the sources for the 2024 prices used in the baseline revenue forecast, as well as the low bounding and high bounding scenarios.

Table 1: Official (Baseline) Revenue Forecast: Average of Low and High Scenarios

Auction Name	Current Vintage Price	Future Vintage Price
CA/QC Joint Average	\$35.21	\$34.82
WA Average	\$47.49	\$35.99
Average for Current Forecast	\$41.35	\$35.40

Table 2: Low Bounding Scenario: California/Québec Price Average

Auction Name	Current Vintage Price	Future Vintage Price
February 2024 Joint Auction #38	\$41.67	\$41.00
May 2024 Joint Auction #39	\$37.02	\$38.35
August 2024 Joint Auction #40	\$30.24	\$29.75
November 2024 Joint Auction #41	\$31.91	\$30.16
Average for Current Forecast	\$35.21	\$34.82

Source: [Summary of California Auction Settlement Prices and Results \(ca.gov\)](#)

Table 3: High Bounding Scenario: Washington Price Average

Auction Name	Current Vintage Price	Future Vintage Price
December 2024 Auction #8	\$40.26	\$26.00
March 2025 Auction #9 (estimate)	\$49.45	
June 2025 Auction #10 (estimate)	\$49.90	\$45.97
September 2025 Auction #11 (estimate)	\$50.35	
Average for Current Forecast	\$47.49	\$35.99

Source: [Auctions and market website - Washington State Department of Ecology](#).

Estimates for 2025 auctions based on secondary market futures contracts as of 12/13/2024.

Escalating the Forecast Price for the Rate of Inflation and 5% Real

Under the cap-and-invest regulation, the allowance price floor, price ceiling, and allowance price containment reserve tiers (auction price levels) all increase at one hundred and 5% plus inflation (escalation factor). The forecast escalates each allowance price scenario from Table 1 through Table 3 using the same escalation factor. Because historical inflation—and future inflation forecasts—change for each calendar year (Table 4), the escalation factor is different for each calendar year.



The escalation factor is applied to the allowance prices within each forecast on a quarterly basis. Allowance prices are escalated every three months for quarterly current vintage auctions, and every six months for the future vintage auctions that are held twice per year. E.g., at the annual level for calendar year 2026, the annual escalation factor for the auction price levels is 107.1%: 105% plus a 2.1% projected inflation by the November 2024 S&P Global forecast for CPI-U.⁴ Each quarter’s current vintage allowance price is increased at an escalation rate such that at the end of calendar year 2026, the December 2026 current vintage allowance price is 7.1% (107.1% minus 100%) higher than the December 2025 current vintage allowance price.⁵

The current vintage auction is held once per quarter, so we will average four auctions each year. The future auction is held twice per year, so we will average the most-recent two future auction prices.

- Current vintage price in year X = (scenario initial price) * (annual escalation factor) ^ (# of yrs.)
- Future vintage price in year X = (scenario initial price) * (annual escalation factor) ^ (# of yrs.)

To match the method used to calculate the auction price levels (price floor, ceiling, and APCR tiers) in the cap-and-invest program, Ecology uses the prior year’s CPI forecast in calculating the next year’s escalation factor.⁶ Values in Table 4 for Calendar Year 2023 and 2024 are actual figures, while the figures in out years are forecasted using the method described above.

Table 4: Annual Inflation Factor by Calendar Year

Calendar Year	Annual U.S. Consumer Price Index
2023	4.2%
2024	3.2%
2025	2.6%
2026	2.1%
2027	2.4%
2028	2.4%
2029	2.0%

⁴ November 2024 S&P Global baseline 10-year forecast shared by the Washington State Economic Revenue Forecast Council.

⁵ Because of compounding, the escalation per quarter is not equal to one quarter of the annual escalation factor (in this example, the quarterly allowance escalation factor is not one fourth of 107.1%). Instead, the compounding rate per quarter is:

$$(1 + \text{annual rate} + 5\%)^{1/4}$$

$$= (\text{escalation factor})^{1/4}$$

This can be cross checked by multiplying each quarterly formula four times, i.e., raising it to the fourth power:

$$((\text{escalation factor})^{1/4})^4$$

$$= ((\text{escalation factor})^{4/4})$$

$$= (\text{escalation factor})^1$$

$$= \text{escalation factor}$$

⁶ The cap-and-invest program uses actual CPI-U inflation measure, so uses the most-recently available CPI-U in setting the new auction price levels. For example, in setting the 2024 auction price levels before the 2024 auctions, the most-recent CPI-U information was from 2023.



Estimating Allowance Supply

The cap-and-invest program creates an ‘allowance budget’ equal to the emissions cap for each year. The CCA directs Ecology to auction allowances from the current ‘budget’ as well as from the budgets of future years. Below is a high-level summary of how we will calculate the current vintage supply and future vintage supply to be offered at auctions for each fiscal year.

- **Current Vintage Supply** = Total Allowance Budget – Minus:
 - APCR, Emissions Containment Reserve, and Voluntary Renewable Electricity Reserve set asides (a combined 7.33% of each yearly budget).
 - Allowance allocation to Emissions Intensive Trade Exposed (EITE) industrial market participants, electricity, and natural gas (roughly 55% of yearly budget in 2023).
 - Offsets under the cap (less than 3% reduction in allowance supply that first occurs in calendar year 2025).
 - Prior sales of future vintage allowances (4.9 million allowances from 2026 vintage were sold in 2023, 10% of 2026 supply. 2026 is the first year when current vintage allowances available at auction will have been reduced by the prior sale of 2026 vintage allowances).
- **Future Vintage Supply** = Total Allowance Budget from three years in the future * 10%⁷.

For a more detailed breakdown of the amounts and assumptions behind the allowance budgets used in this forecast, please see *Appendix A*.

December 2024 Baseline Forecast and Bounding Scenarios

These tables provide revenue estimates for the baseline forecast and bounding scenarios for fiscal years 2025-2029. The state fiscal year runs from July 1 through the following June 30.

Table 5: Official (Baseline) Revenue Forecast: Midpoint of CA/QC and WA Price Average

Fiscal Year	Forecasted Proceeds
2025	\$956,086,000
2026	\$876,372,000
2027	\$766,584,000
2028	\$676,196,000
2029	\$571,823,000
Grand Total (FY25 to FY29)	\$3,847,061,000

⁷ Per rule, Chapter 173-446-365 WAC, Ecology will hold two auctions of future vintages each year, including in each auction 5% of the annual allowance budget of the vintage year 3 years in the future. In 2023, 10% of vintage 2026 allowances will be sold.



Table 6: Low Bounding Scenario: California/Québec Price Average

Fiscal Year	Forecasted Proceeds
2025	\$893,641,000
2026	\$760,690,000
2027	\$666,241,000
2028	\$593,270,000
2029	\$505,176,000
Grand Total (FY25 to FY29)	\$3,419,018,000

Table 7: High Bounding Scenario: Washington Price Average

Fiscal Year	Forecasted Proceeds
2025	\$1,038,280,000
2026	\$1,018,254,000
2027	\$891,171,000
2028	\$792,535,000
2029	\$672,816,000
Grand Total (FY25 to FY29)	\$4,413,056,000

None of the scenarios above include revenue from APCR auctions that would be triggered by quarterly auction settlement prices above the Tier 1 APCR price (\$60.43 in auction year 2025). APCR auctions would still be offered once a year before each compliance period, per rule, but at allowance that would exceed quarterly auction settlement prices. The likelihood of entities purchasing APCR allowances at a price premium is assumed to be minimal, so no additional revenue from APCR auctions is assumed in any of the forecast scenarios.

For a more detailed breakdown of each fiscal year for the baseline forecast and bounding scenarios, see *Appendix B*.



Appendix A – Allowance Supply

The following tables provide a breakdown of the assumptions behind the allowance totals necessary to calculate auction supply by calendar year. These tables are shown from calendar year (CY) 2023 to 2030, or the first two compliance periods of the program. Because future vintage auction supply relies on the allowance budget three years in the future, Table 8 extends to 2033.

Table 8: Total Allowance Supply

CY	Total Allowances (MT CO2e)
2023	63,288,565
2024	58,524,909
2025	53,761,254
2026	48,997,598
2027	44,459,735
2028	39,679,085
2029	34,898,434
2030	30,117,784
2031	29,693,713
2032	28,449,643
2033	27,205,573

Source: Total program allowance budgets (WAC 173-446-210) and program applicability (WAC 173-446-030).

Table 9: Allowance Price Containment Reserve (APCR) Allowances

CY	Allowances
2023	3,164,428
2024	2,926,245
2025	2,688,063
2026	2,449,880
2027	2,222,987
2028	1,983,954
2029	1,744,922
2030	1,505,889

Source: Ecology placed 5% of the total allowance supply (Table 8) into the APCR at the beginning of the program in January 2023. These allowances are available at APCR auctions. For APCR auctions triggered by 2025 quarterly auction prices, the trigger price for the APCR is \$60.43 (WAC 173-446-370).

APCR Assumption: Under all scenarios in 2025 and forward, the APCR trigger price is not met by forecasted quarterly auction current vintage allowance settlement prices. Two APCR auctions were triggered in 2023, and 6,054,000 allowances sold, and one APCR auction was held prior to the 2024 compliance deadline, selling 1,022,000 APCR allowances*.

*Matches the updated APCR auction supply guidance through 2026 (govdelivery.com)



Table 10: Emissions Containment Reserve (ECR) Allowances

CY	Allowances
2023	1,265,771
2024	1,170,498
2025	1,075,225
2026	979,952
2027	-
2028	-
2029	-
2030	-

Source: Ecology reserved 2% of the total allowance supply (Table 8) for the first compliance period—2023 through 2026—into the emissions containment reserve (ECR) consistent with WAC 173-446-375. Ecology did not place any allowances from the second compliance period into the ECR.

ECR Assumption: ECR allowances are unavailable for auction unless certain conditions are met—the expansion of existing facilities, or entry of new covered participants in the program. For purposes of this forecast, Ecology conservatively assumes the conditions *will not be met* and therefore assumes ECR auctions will not occur.

Table 11: Voluntary Renewable Energy (VRE) Account Allowances

CY	Allowances
2023	208,852
2024	193,132
2025	177,412
2026	161,692
2027	-
2028	-
2029	-
2030	-

Source: Ecology reserved 0.33% of the total allowance supply (Table 8) for the first compliance period—2023 through 2026—in the Voluntary Renewable Energy account (VRE) consistent with WAC 173-446-230(3). Ecology did not place any allowances from the second compliance period into the VRE. The VRE is intended to retire allowances in proportion to voluntary renewable energy credits purchased over and above existing requirements.

Rationale for excluding from auction total: Because VRE allowances will be directly retired rather than sold at auction, the VRE is deducted from the volume of allowances estimated for auction. WAC 173-446-230(3).



Table 12: Emissions Intensive, Trade Exposed (EITE) Allowances

CY	Allowances
2023	9,193,458
2024	9,330,137
2025	9,106,894
2026	9,218,516
2027	8,941,961
2028	8,941,961
2029	8,941,961
2030	8,941,961

Source: Initial EITE allocation for 2023 EITE production (Allowance Allocation to Emissions-Intensive, Trade-Exposed Industries for the First Compliance Period).

Assumptions: EITE industrial allowance allocation is intended to protect against emissions leakage, or the relocation of Washington State businesses to other locations without carbon regulations. Washington State allocates allowances to EITEs primarily through an allocation that scales with production, i.e., if production goes up then allocation goes up, and if production goes down then allocation declines as well. CY 2024 allocation reflects a revision to the estimated production in 2023. 2025 value reflects the latest allocation, as of 10/24/24, including "true-up". The 2026 value is based on the average of 2024 and 2025. Starting with the second compliance period, in 2027, EITE allocation is reduced by 3% consistent with WAC 173-446-220(2)(a).

Table 13: Electric Utility Allowances

CY	Allowances
2023	17,489,792
2024	16,395,535
2025	15,287,526
2026	10,302,447
2027	10,113,231
2028	9,924,014
2029	8,708,478
2030	7,492,941

Source: [Allowance Allocation to Electric Utilities for the First Compliance Period \(Revised\)](#).

Assumption: Electric Utilities are allocated allowances consistent with WAC 173-446-230. The allowance allocation in Table 13 equals allowance allocation transferred for 2023 and 2024 allocation, and forecasted allowance allocation for 2025 and 2026. Electric utility allocation is phased out over time as the Clean Energy Transformation Act decarbonizes the electric sector. Because there are no forecasts for 2027 allocation at this time, and no set reduction schedule for electric utilities, allocation projections may be substantially adjusted in future years.



Table 14: Natural Gas Allowances

CY	Allowances
2023	8,059,631
2024	7,452,993
2025	6,846,354
2026	6,239,715
2027	5,633,076
2028	5,026,437
2029	4,419,799
2030	3,813,160

Source: Allowance Allocation to Natural Gas Utilities.

Assumption: The Climate Commitment Act requires that the Department of Ecology provide allowances at no cost to eligible natural gas utilities. This requirement is designed to help protect consumers from potential rate increases that could result from utilities’ participation in the cap-and-invest program. Natural gas allowance allocation is calculated using a 2015-2019 ‘baseline’ of natural gas emissions. The utilities were allocated 93% of the baseline in 2023 (7% less than the full baseline), with allocation declining by an additional 7% each year thereafter. WAC 173-446-240.

Table 14A: Natural Gas Allowances Held for Compliance

CY	Allowances
2023	1,863,232
2024	3,188,531
2025	1,711,589
2026	1,247,943
2027	844,962
2028	502,644
2029	220,990
2030	-

Assumption: Natural Gas utilities have required minimum consignment for each year, starting with 65% of allocation in 2023, 70% in 2024, 75% in 2025 and so on until 100% consignment in 2030. They may choose at any time to consign up to 100% of allowances to auction (WAC 173-446-300(2)(b)(ii)(A)), though Ecology’s forecast assumes that all allowances not required to be sent to auction are retained for compliance. The total value held for compliance is assumed to be Allocation minus required consignment (Table 14 minus Table 14B).



Table 14B: Natural Gas Allowances Consigned (sold) at Auction

CY	Allowances
2023	6,196,399
2024	4,264,462
2025	5,134,765
2026	4,991,772
2027	4,788,114
2028	4,523,793
2029	4,198,809
2030	3,813,160

Assumption: Natural Gas utilities have required minimum consignment for each year, starting with 65% of allocation (see Table 14) in 2023, 70% in 2024, 75% in 2025, and so on. They may choose at any time to consign up to 100% of allowances to auction (WAC 173-446-300(2)(b)(ii)(A)).

Table 15: Offset Usage

CY	Offset Usage
2023	-
2024	-
2025	26,280
2026	855,281
2027	762,784
2028	776,553
2029	695,447
2030	564,875

Assumption: Offsets are important to calculate auction allowance supply because offsets are "under the cap", i.e., offsets used to meet compliance obligations.

Because offset usage is under the cap, the allowance budget is reduced by the number of offsets used in each compliance event for two years' prior emissions obligation. E.g., entities used 26,280 offsets for compliance at first annual compliance event on 11/1/24. That number is subtracted from the 2025 allowance budget, reducing the state-owned allowances eligible to be auctioned by 26,280. At the 2025 compliance event, actual offset usage will be known, and the 2026 budget will be reduced by that amount.

The offset totals are 3% of the emissions budget that represents sectors assumed to want to purchase offsets. This is based on the total program allowance budget (Table 8), reduced by the following allowance accounts and allocation totals that represent sectors and emissions that have a compliance obligation primarily met through no cost allowance allocation:

- The Allowance Price Containment Reserve (Table 9), which represents 5% of the annual allowance budget for each calendar year through 2030.
- The Emissions Containment Reserve (Table 10) is conservatively assumed to be withheld because entities do not trigger ECR allowance allocation or ECR auctions. Under this assumption, ECR allowances do not represent emissions obligations.
- The VRE account (Table 11) is assumed to be used directly for compliance and does not represent emissions obligations within the program.



- The industrial EITE sector (Table 12) is assumed to receive allowance allocation equal to emissions obligation for the first four years of the program and does not use offsets to meet its compliance obligations.
- The electric sector (Table 13) is assumed to receive allowance allocation equal to its compliance obligation and does not use offsets to meet its compliance obligations.

Table 15A: Total Current Vintage After Non-Consigned Free Allowances, Reserves, and Direct Allocation

CY	Allowances
2023	30,103,032
2024	25,320,831
2025	23,714,545
2026	19,762,466
2027	17,718,228
2028	14,195,878
2029	11,639,185
2030	9,021,828

Note: Table 15A represents the supply of allowances available for auction starting with total annual budgets defined in rule and then subtracting allowances deposited into reserve accounts, allowances freely allocated to EITEs and Electricity Utilities, and held for compliance by natural gas utilities. The values in Table 15 are subtracted from Table 15A to determine total allowances available for current vintage auctions each year (Table 15B). The drop in 2026 and later years is partially the result of the sale of future vintage allowances in earlier years.

Table 15B: Allowances to Current Vintage Auction, Net of Offsets Under the Cap

CY	Allowances
2023	30,103,032
2024	25,320,831
2025	23,688,265
2026	18,907,185
2027	16,955,444
2028	13,419,325
2029	10,943,738
2030	8,456,953

Note: Table 15B is the difference between Table 15A and Table 15, representing the total allowances available for current vintage auction each year, after accounting for the actual or anticipated use of offsets, which are "under the cap," starting in 2025.



Table 16: State-Owned Future Vintage Auctioned Allowances

CY	Allowances
2023	4,899,760
2024	3,539,833
2025	3,967,909
2026	3,489,843
2027	3,011,778
2028	2,969,371
2029	2,844,964
2030	2,720,557

Source: Ecology auctions 10% of the total allowance budget (Table 8) each year per WAC 173-446-365.

Assumptions: Future vintage allowances are taken from the allowance budget three years in the future. E.g., 4,899,760 allowances are 10% of the 2026 budget (48,997,598 allowances) not 10% of the 2023 budget (63,288,565 allowances). For CY 2024 the value includes a combination of actual and forecasted future allowances sold, a reduction of 906,142 from the previous forecast (4,445,974). 1,317,000 of the possible 2,200,000 vintage 2027 allowances were sold in Auction 6. The November 2023 forecast estimated that 2,222,987 would be offered and sold. The unsold 2027 vintage allowances are added to the CY2027 current vintage allowance supply (Table 17) to be offered next in 2027. The rest of the tables assume all future vintage allowances offered will be sold.

Table 17: State-Owned Current Vintage Auctioned Allowances

CY	Allowances
2023	23,870,129
2024	21,092,871
2025	18,553,500
2026	13,915,413
2027	12,167,330
2028	8,895,532
2029	6,744,929
2030	4,643,793

Assumption: These allowance totals are equal to the total allowance budget (Table 8) reduced by all the other allowance totals in Tables 9 through 15B. Starting with calendar year 2026, the allowance totals are further reduced by future vintage auctions of allowances (Table 16) from the 2026 allowance budget that occurred in calendar year 2023. See the assumptions in Table 16.



Appendix B – Detailed Breakdown by Fiscal Year of the Baseline Forecast and Bounding Scenarios

The following tables are an event-by-event breakdown of each fiscal year for each of the three scenarios. The dates listed for each year are subject to change and only made official each December when Ecology releases a list of anticipated auction dates for the following calendar year events. While current auctions will be held quarterly, specific dates are included to provide some indication of when in the fiscal year those events occur and when funds would be received by the state (approximately 4 weeks post-auction). Ecology offers the entire supply of current vintage allowances across four quarterly auctions in a calendar year.

The first column contains abbreviations for individual auction event types. These are:

- A #_: This is an abbreviation for a regularly scheduled quarterly auction. If the auction has allowances in the future vintage column, then it is an auction with both current and future vintage supply. Quarterly Auction #1 and #2 occurred in FY 2023 and are not included below.
- APCR #_: These are Allowance Price Containment Reserve Auctions.
- APCR XYY: APCR Auctions offered prior to the annual (YY) compliance deadline
- ECR: Emissions Containment Reserve auctions. Ecology assumes that no ECR auctions will be held for purposes of this forecast. If this changes in future forecasts, ECR allowance totals would be included in the 'Current Vintage' column.

Baseline Forecast: Average of Low and High Bounding Scenarios

2024 Detailed View (Actual FY 2024)

Event Name	Fiscal Year 2025	Current Vintage/ Tier 1 Allowances	Future Vintage Allowances	APCR Allowances	Current / APCR Tier 1 Price	Future / APCR Tier 2 Price	Auction Proceeds
APCR #1	8/9/2023			1,054,000	\$51.90	\$66.68	\$62,491,660
A #3	8/30/2023	5,657,651			\$63.03		\$356,601,743
APCR #2	11/8/2023			5,000,000	\$51.90	\$66.68	\$259,500,000
A #4	12/6/2023	3,442,255	2,449,760		\$51.89	\$45.00	\$288,857,805
APCR	2/14/2024				\$51.90	\$66.68	-
A #5	3/6/2024	5,260,000			\$25.76	-	\$135,497,600
APCR	5/8/2024				\$56.16	\$72.15	-
A #6	6/5/2024	5,260,000	1,317,000		\$29.92	\$24.02	\$189,013,540
Total		19,619,906	3,766,760	6,054,000			\$1,291,962,347



2025 Detailed View (Baseline Forecast)

Event Name	Fiscal Year 2025	Current Vintage/ Tier 1 Allowances	Future Vintage Allowances	APCR Allowances	Current / APCR Tier 1 Price	Future / APCR Tier 2 Price	Auction Proceeds
APCR	8/7/2024				\$56.16	\$72.15	-
A #7	9/4/2024	5,260,000			\$29.88	-	\$157,169,000
APCR #3	10/2/2024	1,022,000			\$56.16	\$72.15	\$57,396,000
ECR	September				\$41.73	-	-
APCR	11/6/2024				\$56.16	\$72.15	-
A #8	12/4/2024	5,312,871	2,222,832		\$40.26	\$26.00	\$271,690,000
APCR	2/19/2025				\$56.16	\$72.15	
A #9	3/5/2025	4,638,375			\$42.11		\$195,322,000
APCR	5/21/2025				\$60.43	\$77.63	-
A #10	6/4/2025	4,638,375	1,983,954		\$42.89	\$38.09	\$274,509,000
Total		20,871,621	4,206,786	-			\$956,086,000

2026 Detailed View (Baseline Forecast)

Event Name	Fiscal Year 2026	Current Vintage/ Tier 1 Allowances	Future Vintage Allowances	APCR Allowances	Current / APCR Tier 1 Price	Future / APCR Tier 2 Price	Auction Proceeds
APCR	8/6/2025				\$60.43	\$77.63	-
A #11	9/3/2025	4,638,375			\$43.68		\$202,604,000
ECR	September				\$43.68		-
APCR X25	10/1/2025				\$60.43	\$77.63	-
APCR	11/12/2025				\$60.43	\$77.63	-
A #12	12/3/2025	4,638,375	1,983,954		\$44.49	\$39.51	\$284,747,000
APCR	2/18/2026				\$60.43	\$83.17	-
A #13	3/4/2026	3,478,854			\$45.26		\$157,453,000
APCR	5/20/2026				\$64.74	\$83.17	-
A #14	6/3/2026	3,478,853	1,744,921		\$46.05	\$40.90	\$231,568,000
Total		16,234,457	3,728,875	-			\$876,372,000



2027 Detailed View (Baseline Forecast)

Event Name	Fiscal Year 2027	Current Vintage/ Tier 1 Allowances	Future Vintage Allowances	APCR Allowances	Current / APCR Tier 1 Price	Future / APCR Tier 2 Price	Auction Proceeds
APCR	8/5/2026				\$64.74	\$83.17	-
A #15	9/2/2026	3,478,853			\$46.85		\$162,984,000
ECR	September				\$46.85		-
APCR X26	9/30/2026				\$64.74	\$83.17	\$0
APCR	11/18/2026				\$64.74	\$83.17	-
A #16	12/2/2026	3,478,853	1,744,922		\$47.66	\$42.33	\$239,665,000
APCR	2/17/2027				\$64.74	\$83.17	-
A #17	3/3/2027	3,041,832			\$48.52		\$147,590,000
APCR	5/19/2027				\$69.55	\$89.35	-
A #18	6/2/2027	3,041,832	1,505,889		\$49.40	\$43.88	\$216,345,000
Total		13,041,370	3,250,811	-			\$766,584,000

2028 Detailed View (Baseline Forecast)

Event Name	Fiscal Year 2028	Current Vintage/ Tier 1 Allowances	Future Vintage Allowances	APCR Allowances	Current / APCR Tier 1 Price	Future / APCR Tier 2 Price	Auction Proceeds
APCR	8/4/2027				\$69.55	\$89.35	-
A #19	9/1/2027	3,041,833			\$50.30	-	\$153,004,000
APCR X27	9/29/2027				\$69.55	\$89.35	-
Price Ceiling Sale	10/27/2027				\$109.91	-	-
APCR	11/10/2027				\$69.55	\$89.35	-
A #20	12/1/2027	3,041,833	1,505,889		\$51.21	\$43.84	\$221,790,000
APCR	2/16/2028				\$69.55	\$89.35	-
A #21	3/1/2028	2,223,883			\$52.13	-	\$115,931,000
APCR	5/24/2028				\$74.68	\$95.94	-
A #22	6/7/2028	2,223,883	1,484,685		\$53.07	\$45.43	\$185,471,000
Total		10,531,432	2,990,574	-			\$676,196,000



2029 Detailed View (Baseline Forecast)

Event Name	Fiscal Year 2029	Current Vintage/ Tier 1 Allowances	Future Vintage Allowances	APCR Allowances	Current / APCR Tier 1 Price	Future / APCR Tier 2 Price	Auction Proceeds
APCR	8/9/2028				\$74.68	\$95.94	-
A #23	9/6/2028	2,223,883			\$54.02	-	\$120,134,000
ECR	September				\$54.02	-	-
APCR X28	10/25/2028				\$74.68	\$95.94	-
APCR	11/15/2028				\$74.68	\$95.94	-
A #24	12/6/2028	2,223,883	1,484,686		\$54.99	\$47.08	\$192,190,000
APCR	2/21/2029				\$74.68	\$95.94	-
A #25	3/7/2029	1,686,232			\$55.93	\$47.88	\$94,311,000
APCR	5/23/2029				\$79.90	\$102.65	-
A #26	6/6/2029	1,686,233	1,422,482		\$56.88	\$48.70	\$165,188,000
Total		7,820,231	2,907,168	-			\$571,823,000

Low Bounding Scenario: California / Québec Price

2024 Detailed View (Actual FY 2024)

Event Name	Fiscal Year 2025	Current Vintage/ Tier 1 Allowances	Future Vintage Allowances	APCR Allowances	Current / APCR Tier 1 Price	Future / APCR Tier 2 Price	Auction Proceeds
APCR #1	8/9/2023			1,054,000	\$51.90	\$66.68	\$62,491,660
A #3	8/30/2023	5,657,651			\$63.03	-	\$356,601,743
APCR #2	11/8/2023			5,000,000	\$51.90	\$66.68	\$259,500,000
A #4	12/6/2023	3,442,255	2,449,760		\$51.89	\$45.00	\$288,857,805
APCR	2/14/2024				\$51.90	\$66.68	-
A #5	3/6/2024	5,260,000			\$25.76	-	\$135,497,600
APCR	5/8/2024				\$56.16	\$72.15	-
A #6	6/5/2024	5,260,000	1,317,000		\$29.92	\$24.02	\$189,013,540
Total		19,619,906	3,766,760	6,054,000			\$1,291,962,347



2025 Detailed View (Low Scenario)

Event Name	Fiscal Year 2025	Current Vintage/ Tier 1 Allowances	Future Vintage Allowances	APCR Allowances	Current / APCR Tier 1 Price	Future / APCR Tier 2 Price	Auction Proceeds
APCR	8/7/2024				\$56.16	\$72.15	-
A #7	9/4/2024	5,260,000			\$29.88	-	\$157,169,000
APCR #3	10/2/2024	1,022,000			\$56.16	\$72.15	\$57,396,000
ECR	September					-	-
APCR	11/6/2024				\$56.16	\$72.15	-
A #8	12/4/2024	5,312,871	2,222,832		\$40.26	\$26.00	\$271,690,000
APCR	2/19/2025				\$56.16	\$72.15	-
A #9	3/5/2025	4,638,375			\$35.86	-	\$166,332,000
APCR	5/21/2025				\$60.43	\$77.63	-
A #10	6/4/2025	4,638,375	1,983,954		\$36.52	\$36.12	\$241,054,000
Total		20,871,621	4,206,786	-			\$893,641,000

2026 Detailed View (Low Scenario)

Event Name	Fiscal Year 2026	Current Vintage/ Tier 1 Allowances	Future Vintage Allowances	APCR Allowances	Current / APCR Tier 1 Price	Future / APCR Tier 2 Price	Auction Proceeds
APCR	8/6/2025				\$60.43	\$77.63	-
A #11	9/3/2025	4,638,375			\$37.19	-	\$172,501,000
ECR	September				\$37.19	-	-
APCR X25	10/1/2025				\$60.43	\$77.63	-
APCR	11/12/2025				\$60.43	\$77.63	-
A #12	12/3/2025	4,638,375	1,983,954		\$37.88	\$37.47	\$250,040,000
APCR	2/18/2026				\$60.43	\$83.17	-
A #13	3/4/2026	3,478,854			\$38.54	-	\$134,075,000
APCR	5/20/2026				\$64.74	\$83.17	-
A #14	6/3/2026	3,478,853	1,744,921		\$39.21	\$38.78	\$204,074,000
Total		16,234,457	3,728,875	-			\$760,690,000



2027 Detailed View (Low Scenario)

Event Name	Fiscal Year 2027	Current Vintage/ Tier 1 Allowances	Future Vintage Allowances	APCR Allowances	Current / APCR Tier 1 Price	Future / APCR Tier 2 Price	Auction Proceeds
APCR	8/5/2026				\$64.74	\$83.17	-
A #15	9/2/2026	3,478,853			\$39.89	-	\$138,771,000
ECR	September				\$39.89	-	-
APCR X26	9/30/2026				\$64.74	\$83.17	-
APCR	11/18/2026				\$64.74	\$83.17	-
A #16	12/2/2026	3,478,853	1,744,922		\$40.58	\$40.14	\$211,213,000
APCR	2/17/2027				\$64.74	\$83.17	-
A #17	3/3/2027	3,041,832			\$41.31	-	\$125,658,000
APCR	5/19/2027				\$69.55	\$89.35	-
A #18	6/2/2027	3,041,832	1,505,889		\$42.06	\$41.61	\$190,599,000
Total		13,041,370	3,250,811	-			\$666,241,000

2028 Detailed View (Low Scenario)

Event Name	Fiscal Year 2028	Current Vintage/ Tier 1 Allowances	Future Vintage Allowances	APCR Allowances	Current / APCR Tier 1 Price	Future / APCR Tier 2 Price	Auction Proceeds
APCR	8/4/2027				\$69.55	\$89.35	-
A #19	9/1/2027	3,041,833			\$42.82	-	\$130,251,000
APCR X27	9/29/2027				\$69.55	\$89.35	-
Price Ceiling Sale	10/27/2027				\$109.91	-	-
APCR	11/10/2027				\$69.55	\$89.35	-
A #20	12/1/2027	3,041,833	1,505,889		\$43.59	\$43.13	\$197,542,000
APCR	2/16/2028				\$69.55	\$89.35	-
A #21	3/1/2028	2,223,883			\$44.37	-	\$98,674,000
APCR	5/24/2028				\$74.68	\$95.94	-
A #22	6/7/2028	2,223,883	1,484,685		\$45.17	\$44.69	\$166,803,000
Total		10,531,432	2,990,574	-			\$593,270,000



2029 Detailed View (Low Scenario)

Event Name	Fiscal Year 2029	Current Vintage/ Tier 1 Allowances	Future Vintage Allowances	APCR Allowances	Current / APCR Tier 1 Price	Future / APCR Tier 2 Price	Auction Proceeds
APCR	8/9/2028				\$74.68	\$95.94	-
A #23	9/6/2028	2,223,883			\$45.98	-	\$102,254,000
ECR	September				\$45.98	-	-
APCR X28	10/25/2028				\$74.68	\$95.94	-
APCR	11/15/2028				\$74.68	\$95.94	-
A #24	12/6/2028	2,223,883	1,484,686		\$46.81	\$46.31	\$172,856,000
APCR	2/21/2029				\$74.68	\$95.94	-
A #25	3/7/2029	1,686,232			\$47.61	\$47.10	\$80,282,000
APCR	5/23/2029				\$79.90	\$102.65	-
A #26	6/6/2029	1,686,233	1,422,482		\$48.42	\$47.90	\$149,784,000
Total		7,820,231	2,907,168	-			\$505,176,000

High Bounding Scenario: Average and Estimates of Washington’s Prices

2024 Detailed View (Actual FY 2024)

Event Name	Fiscal Year 2024	Current Vintage/ Tier 1 Allowances	Future Vintage Allowances	APCR Allowances	Current / APCR Tier 1 Price	Future / APCR Tier 2 Price	Auction Proceeds
APCR #1	8/9/2023			1,054,000	\$51.90	\$66.68	\$62,491,660
A #3	8/30/2023	5,657,651			\$63.03	-	\$356,601,743
APCR #2	11/8/2023			5,000,000	\$51.90	\$66.68	\$259,500,000
A #4	12/6/2023	3,442,255	2,449,760		\$51.89	\$45.00	\$288,857,805
APCR	2/14/2024				\$56.16	\$72.15	-
A #5	3/6/2024	5,260,000			\$49.45	-	\$135,497,600
APCR	5/8/2024				\$60.43	\$77.63	-
A #6	6/5/2024	5,260,000	1,317,000		\$49.90	\$45.97	\$189,013,540
Total		19,619,906	3,766,760	6,054,000			\$1,291,962,347



2025 Detailed View (High Scenario)

Event Name	Fiscal Year 2025	Current Vintage/ Tier 1 Allowances	Future Vintage Allowances	APCR Allowances	Current / APCR Tier 1 Price	Future / APCR Tier 2 Price	Auction Proceeds
APCR	8/7/2024				\$56.16	\$72.15	-
A #7	9/4/2024	5,260,000			\$29.88	-	\$157,169,000
APCR #3	10/2/2024	1,022,000			\$56.16	\$72.15	\$57,396,000
ECR	September						-
APCR	11/6/2024				\$56.16	\$72.15	-
A #8	12/4/2024	5,312,871	2,222,832		\$40.26	\$26.00	\$271,690,000
APCR	2/19/2025				\$56.16	\$72.15	-
A #9	3/5/2025	4,638,375			\$49.45	-	\$229,368,000
APCR	5/21/2025				\$60.43	\$77.63	-
A #10	6/4/2025	4,638,375	1,983,954		\$49.90	\$45.97	\$322,657,000
Total		20,871,621	4,206,786	-			\$1,038,280,000

2026 Detailed View (High Scenario)

Event Name	Fiscal Year 2026	Current Vintage/ Tier 1 Allowances	Future Vintage Allowances	APCR Allowances	Current / APCR Tier 1 Price	Future / APCR Tier 2 Price	Auction Proceeds
APCR	8/6/2025				\$60.43	\$77.63	-
A #11	9/3/2025	4,638,375			\$50.35	-	\$233,542,000
ECR	September				\$50.35	-	-
APCR X25	10/1/2025				\$60.43	\$77.63	-
APCR	11/12/2025				\$60.43	\$77.63	-
A #12	12/3/2025	4,638,375	1,983,954		\$51.28	\$47.68	\$332,451,000
APCR	2/18/2026				\$60.43	\$77.63	-
A #13	3/4/2026	3,478,854			\$52.17	-	\$181,492,000
APCR	5/20/2026				\$64.74	\$83.17	-
A #14	6/3/2026	3,478,853	1,744,921		\$53.08	\$49.35	\$270,769,000
Total		16,234,457	3,728,875	-			\$1,018,254,000



2027 Detailed View (High Scenario)

Event Name	Fiscal Year 2027	Current Vintage/ Tier 1 Allowances	Future Vintage Allowances	APCR Allowances	Current / APCR Tier 1 Price	Future / APCR Tier 2 Price	Auction Proceeds
APCR	8/5/2026				\$64.74	\$83.17	-
A #15	9/2/2026	3,478,853			\$54.00	-	\$187,858,000
ECR	September				\$53.81	-	-
APCR X26	9/30/2026				\$64.74	\$83.17	-
APCR	11/18/2026				\$64.74	\$83.17	-
A #16	12/2/2026	3,478,853	1,744,922		\$54.94	\$51.08	\$280,259,000
APCR	2/17/2027				\$64.74	\$83.17	-
A #17	3/3/2027	3,041,832			\$55.93	-	\$170,130,000
APCR	5/19/2027				\$69.55	\$89.35	-
A #18	6/2/2027	3,041,832	1,505,889		\$56.94	\$52.94	\$252,924,000
Total		13,041,370	3,250,811	-			\$891,171,000

2028 Detailed View (High Scenario)

Event Name	Fiscal Year 2028	Current Vintage/ Tier 1 Allowances	Future Vintage Allowances	APCR Allowances	Current / APCR Tier 1 Price	Future / APCR Tier 2 Price	Auction Proceeds
APCR	8/4/2027				\$69.55	\$89.35	-
A #19	9/1/2027	3,041,833			\$57.97	-	\$176,335,000
APCR X27	9/29/2027				\$69.55	\$89.35	-
Price Ceiling Sale	10/27/2027				\$109.91	-	-
APCR	11/10/2027				\$69.55	\$89.35	-
A #20	12/1/2027	3,041,833	1,505,889		\$59.02	\$54.87	\$262,157,000
APCR	2/16/2028				\$69.55	\$89.35	-
A #21	3/1/2028	2,223,883			\$60.08	-	\$133,611,000
APCR	5/24/2028				\$74.68	\$95.94	-
A #22	6/7/2028	2,223,883	1,484,685		\$61.16	\$56.86	\$220,432,000
Total		10,531,432	2,990,574	-			\$792,535,000



2029 Detailed View (High Scenario)

vent Name	Fiscal Year 2029	Current Vintage/ Tier 1 Allowances	Future Vintage Allowances	APCR Allowances	Current / APCR Tier 1 Price	Future / APCR Tier 2 Price	Auction Proceeds
APCR	8/9/2028				\$74.68	\$95.94	-
A #23	9/6/2028	2,223,883			\$62.26	-	\$138,459,000
ECR	September				\$62.06	-	-
APCR X28	10/25/2028				\$74.68	\$95.94	-
APCR	11/15/2028				\$74.68	\$95.94	-
A #24	12/6/2028	2,223,883	1,484,686		\$63.38	\$58.92	\$228,427,000
APCR	2/21/2029				\$74.68	\$95.94	-
A #25	3/7/2029	1,686,232			\$64.46	\$59.92	\$108,695,000
APCR	5/23/2029				\$79.90	\$102.65	-
A #26	6/6/2029	1,686,233	1,422,482		\$65.56	\$60.94	\$197,235,000
Total		7,820,231	2,907,168	-			\$672,816,000