QUARTERLY REPORT ON THE ELECTRICITY GENERATOR EMISSIONS LIMITS PROGRAM (310 CMR 7.74): FOURTH QUARTER 2025

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A. Introduction and Summary

The Massachusetts Department of Environmental Protection ("MassDEP") implemented its program to limit CO2 emissions from electricity generators in January 2018. This report provides background on key aspects of the program, a summary of market activity through the compliance deadline for 2025, an overview of emissions and allowance holdings patterns, and a discussion of the results of our market power screens.

- *CO_2 Emissions versus the Annual Caps*: Emissions have risen while the annual caps have fallen over the last two years, leading to a steep decline in the number of allowances banked after each year.
  - ✓ In 2023, the cap was 7.84 million allowances compared to 5.62 million metric tons of emissions. The cap is not scheduled to fall below this level until 2034.
  - ✓ In 2024, the cap was 7.61 million allowances compared to 6.28 million metric tons of emissions. The cap is not scheduled to fall below this level until 2030.
  - ✓ In 2025, the cap is 7.39 million allowances compared to 6.90 million metric tons of emissions. The cap is scheduled to fall below this level in 2028.
- *Load, Generation, and Emissions Trends*: Emissions from covered generation have fallen compared to 2018, while 2025 emissions were higher than 2023 and 2024.
  - ✓ Generation from covered units increased by 10 percent in 2025 from the previous year.
- *CO_2 Allowance Prices and Trading Activity*: Trading activity was limited in 2025 and early 2026 as regulated entities relied on banked allowances and auctions to satisfy most or all of projected compliance obligations for 2025. Prices have increased considerably since Auction 2025-2 in March 2025.
  - ✓ Prices averaged $21.09 per metric ton for 110,000 allowance transfers in 2026 ahead of the 2025 compliance deadline.
  - ✓ The vast majority of allowance purchases were made through the auctions rather than the secondary market. The eight auctions for 2025 vintage allowances cleared:
    - 369,396 allowances for $1.75/metric ton in Auction 2024-1 in Dec. 2023.
    - 369,396 allowances for $1.75/metric ton in Auction 2024-2 in Mar. 2024.
    - 369,396 allowances for $1.25/metric ton in Auction 2024-3 in Jun. 2024.

- 369,396 allowances for $5.50/metric ton in Auction 2024-4 in Sep. 2024.
- 738,792 allowances for $6.06/metric ton in Auction 2025-1 in Dec. 2024.
- 738,792 allowances for $9.30/metric ton in Auction 2025-2 in Mar. 2025.
- 1,550,944 allowances for $12.00/metric ton in Auction 2025-3 in Jun. 2025.
- 1,550,943 allowances for $15.03/metric ton in Auction 2025-4 in Sep. 2025.

✓ The six offerings of 2026 vintage cleared:

- 358,202 allowances for $4.99/metric ton in Auction 2025-1 in Dec. 2024.
- 358,202 allowances for $6.06/metric ton in Auction 2025-2 in Mar. 2025.
- 358,202 allowances for $8/metric ton in Auction 2025-3 in Jun. 2025.
- 358,202 allowances for $12/metric ton in Auction 2025-4 in Sep. 2025.
- 716,404 allowances for $22/metric ton in Auction 2026-1 in Dec. 2025.
- 716,404 allowances for $30/metric ton in Auction 2026-2 in Mar. 2026.

✓ The clearing price spread between current-vintage and future-vintage allowances widened significantly between the March 2025 and March 2026 auctions.

We evaluate information on the holdings and demand for allowances to identify firms that may have acquired a position that raises competitive concerns. In the current study period, we find no evidence of anti-competitive conduct in the secondary market for allowances, and we find that firms have generally sought to acquire or sell allowances consistent with their expected needs for 2025 and 2026.

B. Background

Regulation 310 CMR 7.74 created a cap-and-trade program to reduce carbon dioxide emissions from electricity generating facilities located in Massachusetts beginning in 2018.[1] Cap-and-trade programs work by setting an aggregate emissions limit for a particular class of emitters and requiring them to acquire a number of allowances sufficient to cover their emissions. Firms that hold allowances can decide whether it is more profitable to use them to cover their emissions or to sell them to an emitter that can use them more efficiently.

Covered compliance entities and emissions are consistent with the Regional Greenhouse Gas Initiative (RGGI) regulation, implemented as 310 CMR 7.70 in Massachusetts. Under 310 CMR 7.74, compliance periods are annual. The Massachusetts Carbon Allowance Registry ("Registry") is used to track the ownership of allowances. Once an allowance is allocated or purchased in the auction, it can be resold in the secondary market. Participation in the market for allowances is limited to regulated electricity generating facilities.

The secondary market is important for several reasons. First, it gives firms an ability to obtain allowances at any time, while the auctions are relatively infrequent. Second, it provides firms a way to protect themselves against unexpected swings in future prices. Third, it provides price signals that assist firms in deciding how much electricity to produce and in making investment decisions that are affected by the costs of compliance.

The market for Massachusetts allowances has several key elements, which are discussed in this section: the emissions cap, allocations, auctions, banking, program participation, and compliance.

[1] https://www.mass.gov/guides/electricity-generator-emissions-limits-310-cmr-774

Annual Emissions Cap

The program's annual emissions cap was set at 9,149,979 metric tons for 2018, which was the first year of program implementation. The annual cap fell to 8,731,175 metric tons in 2019, and it declines by 223,876 metric tons in each subsequent year, eventually reaching 1,791,019 metric tons in 2050.[2] The 2025 cap is 7,387,919, and the 2026 cap is 7,164,043.

Allowance Allocations

One hundred percent of the 2018 vintage allowances were allocated to individual generators, including new facilities. Starting with the 2019 compliance year, the MassDEP began to transition from allocating allowances directly to using auctions as the primary mechanism for distributing allowances.[3] For the 2019 and 2020 compliance years, the MassDEP distributed a number of allowances equal to 75 and 50 percent of the cap through direct allocation. As of the 2021 compliance year, all allowances are distributed by auction, subject to the banking adjustment described below.

Banking of Allowances

In August 2018, the MassDEP adopted changes to the provisions for banked allowances (i.e., allowances held by covered entities after the compliance deadline for a given year) stating that if the number of banked allowances after a particular year exceeds 223,875, the number of allowances distributed in the subsequent year will be adjusted downward by the difference between the number of banked allowances and 223,875. As the cap declines by 223,876 metric tons each year, this approach ensures that each year's emissions are less than the previous year's cap.

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2 310 CMR 7.74(5)(a)

3 In this report, the term "allowance" refers to allowances that can be used to comply with 310 CMR 7.74 only. These allowances cannot be used to comply with requirements of the Regional Greenhouse Gas Initiative, which is implemented in Massachusetts pursuant to a different regulation, 310 CMR 7.70.

For instance, after 2022 compliance obligations were satisfied, 1,853,109 allowances were held in facility accounts on April 1st, 2023. Thus, the number of allowances to be distributed for the 2023 compliance year was adjusted down by 1,629,234 (which equals the 1,853,109 allowances held after 2022 minus the limit of 223,875 allowances). Consequently, the adjusted emissions cap for the 2023 compliance year was 8,059,546 metric tons (including 1,853,109 banked allowances and 6,206,437 vintage 2023 allowances sold in auctions 2022-3 through 2023-4).

The same calculation was used to determine the adjusted emissions cap for 2026 and the number of 2026 allowances to be sold in Auctions 2026-3 and 2026-4. In 2025, the post-compliance holdings amount was 707,077, so the number of allowances to be auctioned for the 2026 compliance year was adjusted down by 483,202 (which equals the 707,077 allowances held after 2025 minus the limit of 223,875 allowances)

Allowance Auctions

Twenty percent of the 2026 vintage allowances were auctioned in Auction 2025-1 through 2025-4. The MassDEP plans to distribute the rest of allowances for the 2026 compliance year through four quarterly auctions:

- On December 10, 2025: 10 percent of the total 2026 unadjusted emissions limit was offered (716,404 allowances).
- On March 18, 2026: 10 percent of the total 2026 unadjusted emissions limit was offered (716,404 allowances).
- In June 2026: 50 percent of the allowances remaining after the 2025 banking adjustment was performed (1,907,613 allowances).
- In September 2026: All remaining 2026 allowances will be offered for sale (1,907,612 allowances).

In addition to 2026 vintage allowances, 5 percent of the 2027 annual cap (which equals 347,008 allowances for the 2027 vintage) are being offered in each of the four auctions listed above.

Participants in the Program

Participation in the program, including the auctions, is restricted to the owners and operators of covered facilities. The term "regulated entity" is used in the Registry to refer to the highest level of facility ownership, and in the case of shared ownership groups together several facilities.[4] A list of facilities and associated regulated entities is available to the public at https://macar.apx.com/ (select "Reports").

Compliance

On March 1st of each year, every generating facility's Registry account is required to hold sufficient allowances to satisfy obligations from the prior calendar year. Facilities that do not hold sufficient allowances may qualify for "emergency deferred compliance." Under emergency deferred compliance, the compliance obligations from emissions that occurred during a MLCCP#2 designated period can be deferred to the following year.[5] However, those emissions are required to be offset on a two for one basis in the following year.[6] For example, if a facility deferred 1,000 allowances for 2021 compliance, they are required to hold a number of allowances for 2022 compliance equal to their 2022 emissions plus 2,000 additional allowances for their emergency deferred compliance from the previous year. This provision is intended to provide generators with additional flexibility when they may be needed for system reliability, while still discouraging generators from exceeding the cap in a given year. Thus, it is unlikely that facilities will use this option under normal circumstances.

By April 1st, the Department will deduct allowances from each generating facility's registry account; first to address any deferred obligations, then to meet the facility's obligations

[4] For example, Medway Station and Mystic receive allocations separately, but they are both owned by Exelon, so for tracking and market monitoring purposes their demand is aggregated.

[5] These are periods when ISO New England has triggered "Master Local Control Center Procedure No.2"

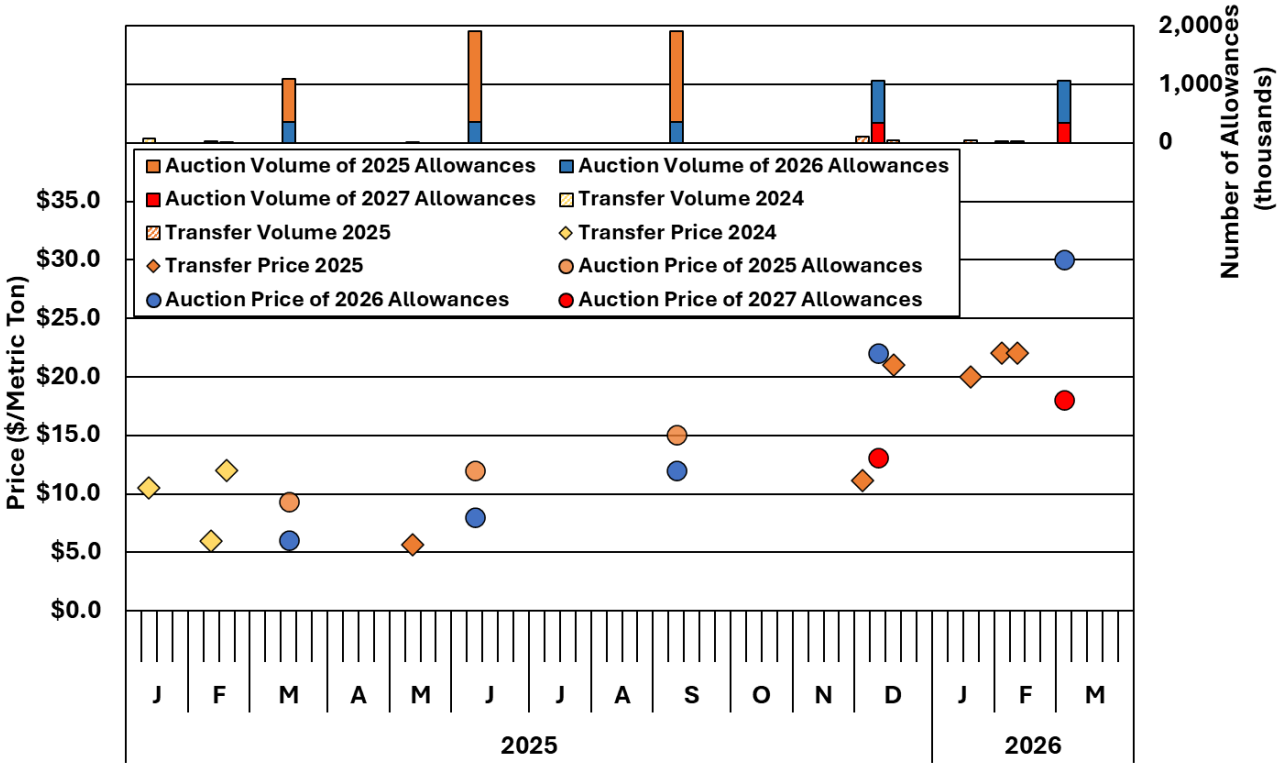
[6] 310 CMR 7.74(6)(d)

from the previous calendar year. For 2025, allowance deductions were carried out successfully and all facilities met their obligations without the use of emergency deferred compliance. The Registry tracks current holdings, allowance transfers, and allocations, as well as ownership and representation of each facility or regulated entity.

C. Summary of Prices and Traded Volumes

This section evaluates the available information regarding the purchase of allowances in the auctions and transfers in the secondary market for allowances. Figure 1 displays the weekly volumes of allowance transfers and weighted average prices as well as auction results.

Figure 1: Allowance Prices and Volumes[7]



For allowances usable for 2025 compliance, there were three priced transfers between unaffiliated regulated entities in 2025 and five in the first quarter of 2026 before the March 1st compliance deadline. Most of the transfers were for small volumes with only one 100k

[7] Figure 2 shows transfers reported to the registry by the end of March 2026, but since there is no prompt reporting requirement, other transactions may have occurred that have not yet been reported.

allowances transfer. For these eight transactions, the average transfer price was $17 for 265,800 allowances.

Figure 1 indicates relatively liquid conditions in the secondary market for allowances usable for 2025 compliance in advance of the compliance deadline. While the number of transfers was small, most regulated entities participated in transfers that all cleared at prices similar to the most recent auction clearing price. Transfer prices for 2025 allowances generally increased with clearing prices in the preceding auction, although these transfers involved relatively low volumes.

Auction clearing prices for 2025 allowances increased in each of the 2025 auctions, rising from $9.30 per metric ton in the March 2025 auction to $12.00 in June and $15.03 in September. Over the same period, 2026 allowance prices also increased from $6.06 in March 2025 to $8.00 in June and $12.00 in September.

In auctions where both 2025 and 2026 vintage allowances were sold, 2025 allowances cleared at a substantial (21 to 53 percent) premium over 2026 allowances. The number of surplus allowances banked after the 2025 compliance deadline fell from previous years but was still substantial at nearly 10 percent of the 2025 cap. The price premium on current year allowances tends to increase as the number of banked allowances decreases. After 2026 allowances became the current vintage, the spread between current- and future-vintage auction clearing prices widened substantially, with 2026 allowances clearing well above 2027 allowances in the December 2025 and March 2026 auctions.

D. Emissions, Allowance Holdings, and Annual Caps

In this section we review patterns of emissions, annual emission caps, and allowance holdings to assess the fundamentals of supply and demand. Table 1 and Figure 2 evaluate emissions and electricity supply over the last three years. Figure 3 compares allowance holdings to emissions by regulated entity, while Figure 4 compares annual emissions with the emission caps in each year.

CO_2 Emission Patterns

Table 1 summarizes electricity supply and emissions through 2025 compared to 2023 and 2024. Data is provided for regulated facilities by type: combined cycle units running on liquefied natural gas ("LNG"), all other combined cycle units ("CC"), gas/oil-fired steam turbines ("ST"), and combustion turbine peaking units ("CT"). The table shows the supply of electricity from other non-regulated sources, including: nuclear generation, other non-program units such as renewables and waste burners, and net generation from the commercial and industrial sectors ("C&I").

Table 1: Electricity Supply[8] and Emissions[9]

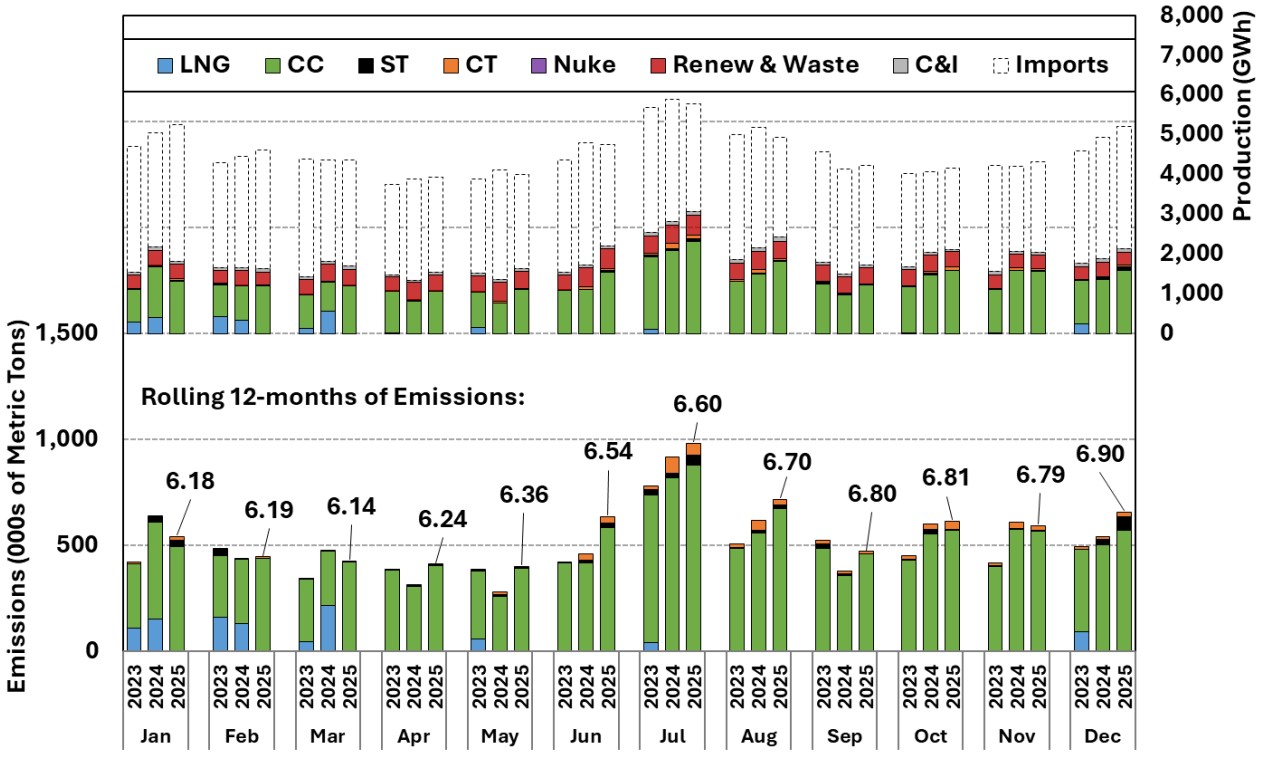
Year	Generation By Type, January-December (TWh)							
	LNG	CC	ST	CT	Renew & Waste	C&I	Imports	Total
2023	1.3	13.2	0.14	0.23	4.6	0.88	33.1	53.5
2024	1.3	14.5	0.24	0.53	5.0	0.92	32.6	55.1
2025	-	17.5	0.28	0.49	4.8	0.92	31.6	55.6
	Carbon Dioxide Emissions, January-December (Million Metric Tons)							
2023	0.5	4.9	0.09	0.12	-	-	-	5.62
2024	0.5	5.4	0.15	0.27	-	-	-	6.28
2025	-	6.5	0.20	0.25	-	-	-	6.90

[8] Generation is based on EIA Form 923 data and Real-Time Load from the ISO-NE website. Form 923 data for 2025 is not final, so values for 2025 may change in future reports.

[9] The only LNG-fueled generating facility among the covered facilities was retired in June 2024.

Figure 2 summarizes the same categories of information as Table 1 but on a monthly basis. The figure also reports emissions for entities subject to the cap under 310 CMR 7.74.

Figure 2: Monthly Electricity Supply and Emissions, 2023-2025



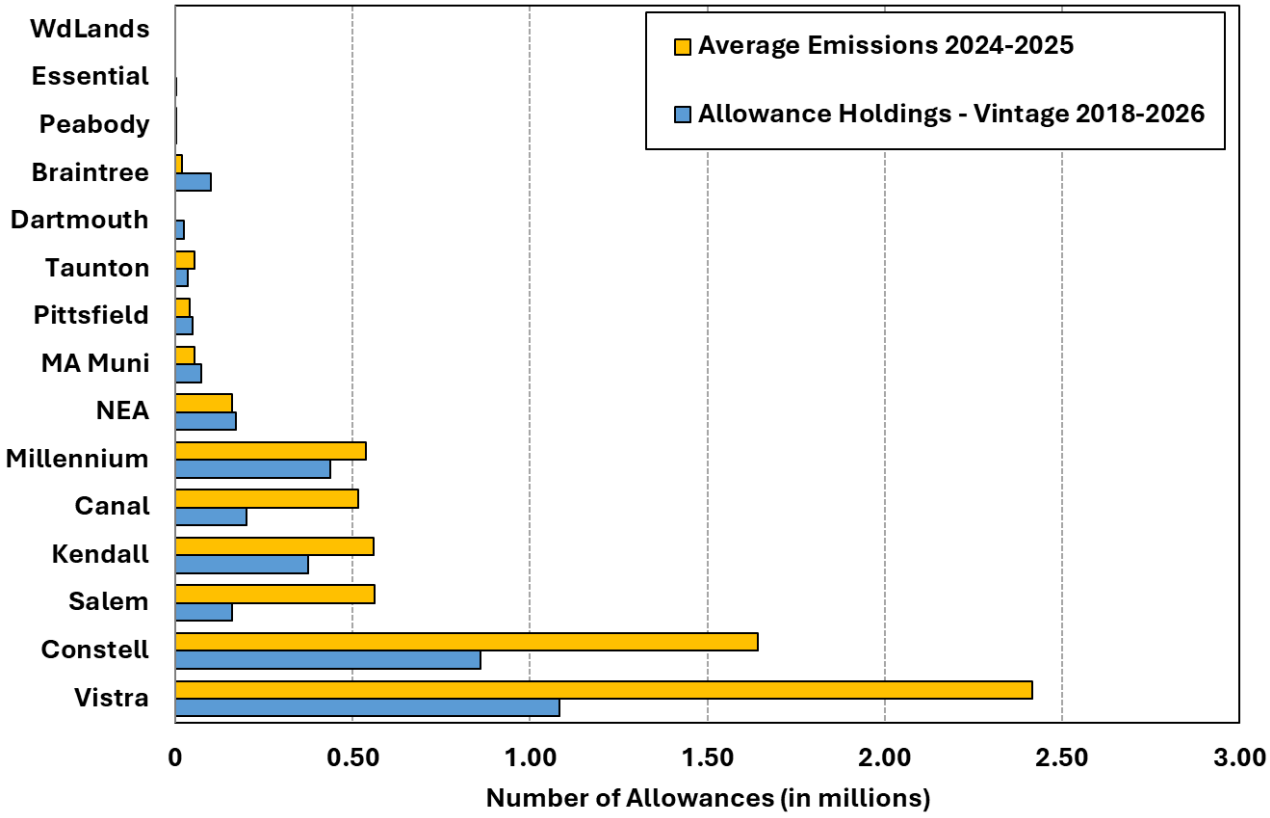
In 2025, emissions increased to 6.90 million metric tons from 6.28 million metric tons in 2024. This increase was driven primarily by changes in the generation mix and load growth. Total load increased from 55.1 TWh to 55.6 TWh, and combined cycle generation rose substantially, from 14.5 TWh to 17.5 TWh, increasing associated emissions from 5.4 million metric tons to 6.5 million metric tons. Imports declined from 32.6 TWh to 31.6 TWh. Emissions from steam turbines and combustion turbines were nearly unchanged overall.

Allowance Holdings by Regulated Entity

Figure 3 shows, for each regulated entity, the average annual emissions over 2024 and 2025 compared to its estimated holdings of allowances that are usable for 2026 compliance, including allowances purchased in the December 2025 and March 2026

auctions. This is composed of the sum of allowances banked from previous years and its vintage 2026 allowance holdings.

Figure 3: Allowance Holdings for 2026 and Emissions by Regulated Entity [10]



The figure indicates that a few regulated entities already possess a sufficient quantity of allowances to fulfill their compliance obligations, assuming that 2026 emissions are consistent with the average annual emissions observed in 2024 and 2025. It is important to note that several generating units, including the Mystic units and the West Springfield unit, were retired in 2024. These retirements will reduce the future emissions of the Regulated Entities that owned them. Similarly, two new zero-emission resources, Vinyard Wind and New England Clean Energy Connect, were not operating in 2024 or 2025. These

[10] Holdings and allocations are shown as of April 6, 2026.

additions will reduce the need for generation from regulated entities in 2026. Regulated entities whose historic annual emissions exceed the number of allowances currently held for 2026 will require approximately 3.3 million additional allowances if their emissions are comparable to 2024 and 2025. These entities will be able to satisfy their compliance obligations through some combination of:

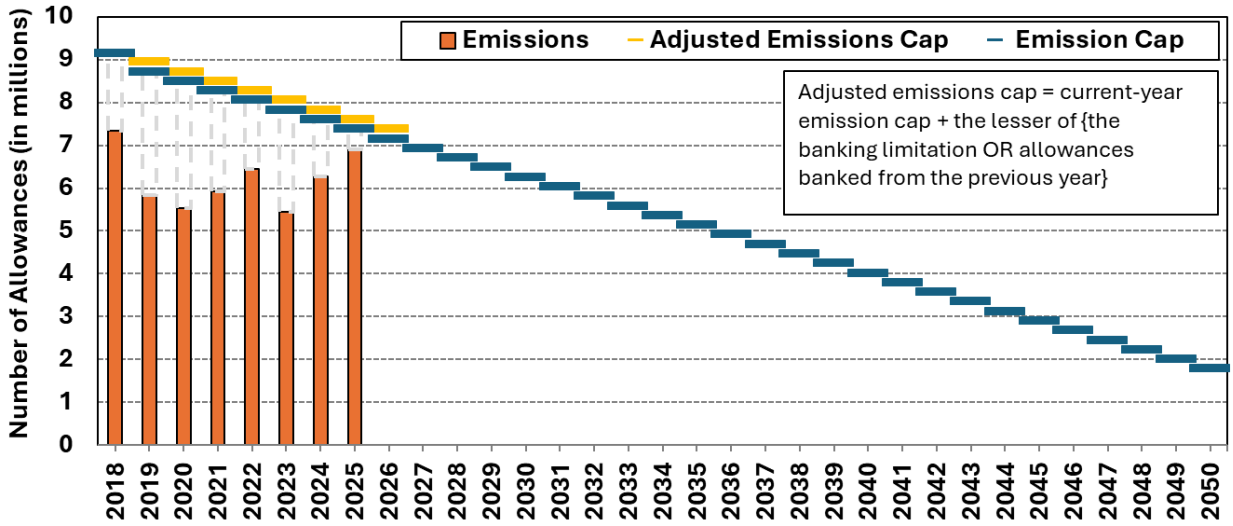
- Allowance purchases in the remaining two auctions for 2026 vintage allowances (in which 3,815,255 allowances will be offered, more than 50% of the total supply of allowances available for 2026 compliance),
- Allowance purchases in the secondary market – For example, in the three months prior to the 2025 compliance deadline, more than half of the regulated entities participated in transfers of allowances, and nearly all facilities held excess allowances that could have been offered for sale if there had been additional demand.
- Reduced emissions relative to recent patterns of operation – Two new sources of zero-emission generation are available in 2026. There is relatively little transmission congestion into Massachusetts from neighboring states, which could allow additional electricity imports if fossil-fuel generators in Massachusetts reduce generation further.
- Emergency deferred compliance – Emissions that occurred during an extended MLCC #2 event from 9:00 AM on January 25 until 9:00 PM on February 11 may be covered with vintage 2027 allowances (at a 2:1 discount).

Thus, it appears that regulated entities will have options for satisfying their 2026 compliance obligations.

Annual Emissions and Caps

Figure 4 shows the annual emission cap for each year from 2018 to 2050. It also shows actual emissions in each year through 2025 and the adjusted emissions cap for each compliance year from 2019 to 2026. Because of the number of banked allowances after each year exceeded 223,875, the adjusted cap in each year has been equal to the annual cap plus 223,875.

Figure 4: Emissions, Allowance Supply, and Annual Caps (2018–2050)



Emissions rose while the annual caps fell from 2023 to 2025, leading to a steep decline in the number of allowances banked after each year. In 2025, the cap was 7.39 million allowances compared to 6.90 million metric tons of emissions, resulting in just 707,077 being banked after the 2025 compliance deadline.

E. Discussion of Market Monitoring

As the Massachusetts Carbon Allowance Program Market Monitor, we monitor trading and holdings amongst regulated entities in order to identify anticompetitive conduct. This section discusses two types of anti-competitive conduct for which we monitor in the secondary market. In the current period we find no evidence of anti-competitive conduct.

In any commodity market, one potential concern is that a firm could hoard a substantial share of the supply of a commodity to influence prices or to prevent a competitor from obtaining production inputs. Hence, we screen information on the holdings of CO2 allowances and the demand for allowances to identify firms that might acquire a position that raises competitive concerns.

Another potential concern is that a firm expecting to purchase CO2 allowances in the auction might sell a large number of allowances below the competitive level. Such a firm might profit from buying a larger number of CO2 allowances in the auction at a discount if the bidding in the auction were influenced by the depressed transfer price. For this to be a profitable strategy, the firm would need to be able to substantially depress the current price with a relatively small amount of sales—an amount smaller than the amount of CO2 allowances it planned to buy in the auction. Firms that are looking for an opportunity to sell excess allowances or to purchase CO2 allowances for their future compliance needs to limit the effectiveness of a strategy to depress prices below the competitive level.