

USA - Massachusetts Limits on Emissions from Electricity Generators

General Information

ETS Description

The Massachusetts Limits on Emissions from Electricity Generators (regulation “310 CMR 7.74”) began operating in 2018. It covers around 8% of the state’s CO₂ emissions, all from the power sector. Under this regulation, covered entities must surrender allowances for all of their covered emissions.

Since 2021, 100% of allowances have been allocated in quarterly auctions. Since 2022, future vintage allowances have also been sold in the regular auctions. The revenues raised are used to further reduce GHG emissions, as well as to fund adaptation programs and projects targeting communities adversely impacted by air pollution. A third party monitors the market to identify indications of anti-competitive behavior.

The program complements RGGI: electricity generators in the state must comply (i.e., hold and surrender allowances) with both RGGI and the Massachusetts program. The program was implemented in response to a 2016 ruling from the state’s Supreme Court to ensure that Massachusetts achieves its mandatory mitigation targets.

ETS Status

in force

Jurisdictions

Massachusetts

Year in Review

Prices for auctioned allowances have decreased recently, with the price of a 2024 vintage allowance dropping from around USD 6 per tCO₂ in December 2022 to around USD 3/t in September 2023.

The market monitor puts the fluctuations down to changes in demand for allowances over the year in line with the compliance cycle, and a wide range of price expectations among regulated entities. The lower prices toward the end of 2023 could indicate that regulated entities needed relatively few additional allowances to meet compliance obligations for 2023, and allowances were being purchased to use for compliance in 2024, or to be traded on the secondary market.

Sectoral coverage

Power

Revenue usage

Climate mitigation

Pursuit of other development objectives, such as education and health

Emissions & Targets

Overall GHG Emissions excl. LULUCF (MtCO₂e)

63.9 MtCO₂e (2020)

GHG reduction targets

By 2030: 50% GHG emissions reduction below the 1990 level (An Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy)

By 2040: 75% GHG emissions reduction below the 1990 level (An Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy)

By 2050: Net-zero GHG emissions. Positive emissions will be compensated with removals, and positive emissions in 2050 are not to be greater than 85% below the 1990 level. (An Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy)

Current Allowance Price (per t/CO₂e)

Weighted average auction price (vintage 2023): USD 8.77

Weighted average auction price (all vintages in 2023 auctions): USD 6.35

Size & Phases

Covered emissions (2020)

9.00%

Verified ETS Emissions

5.50MtCO₂e

GHGs covered

CO₂ only

Cap or total emissions limit

A cap limits the total emissions allowed in the system. The cap declines annually by 223,876 tCO₂ until it reaches 1.8 MtCO₂ by 2050.

ANNUAL CAPS:

2019: 8.7 MtCO₂

2020: 8.5 MtCO₂

2021: 8.3 MtCO₂

2022: 8.1 MtCO₂

2023: 7.8 MtCO₂

2024: 7.6 MtCO₂

Sectors and thresholds

Large electricity generators subject to RGGI, with an installed capacity of or greater than 25 MW.

Point of regulation

Point source (power)

Type of entities

Installations (i.e. Electricity generating facilities)

Number of entities

24 (2023)

Allowance Allocation & Revenue

Allowance allocation

AUCTIONING: From 2019, allowances were partially auctioned, with 25% sold in 2019 and 50% in 2020. Full auctioning began in 2021. Currently, auctions take place on a quarterly basis. The results are included in market monitoring reports posted on the program’s web page. From 2022, MassDEP offers future vintage allowances at every auction. MassDEP auctioned a total of 6,206,437 vintage 2023 allowances (783,568 in the 2022 auctions and 5,422,869 in the 2023 auctions).

FREE ALLOCATION: Before 2021, non-auctioned allowances were freely allocated through grandparenting based on historical (2013-2015) generation.

Auctioning share

100%

Total Revenue

USD 166.6 million since the beginning of the program

USD 41.4 million in 2023

2023

Use of Revenues

Auction proceeds are collected in a separate account and used for climate mitigation and for the pursuit of other objectives such as climate adaptation programs and projects targeting communities adversely impacted by air pollution.

Flexibility & Linking

Offset credits

The use of offsets is not allowed.

Banking and borrowing

Banking is allowed, but restrictions apply to ensure that emissions in a given year do not exceed the previous year’s cap. To achieve this, the number of allowances auctioned is adjusted downward each year to compensate for banked allowances.

Borrowing is not allowed, but “emergency deferred compliance” is possible. This provision allows an electricity generating facility to defer, for one year, compliance for part or all of the emissions emitted during an emergency. Allowances for those emissions must be surrendered on a two-for-one basis in the following year. An emergency is defined as “a period during when the regional transmission organization has issued an alert that an abnormal condition affecting the reliability of the power system exists or is anticipated in Massachusetts”.

Links with other Systems

The Massachusetts ETS is not linked with any other system.

Compliance

Compliance mechanism

Covered entities must surrender one allowance per tCO₂e emitted for all their covered emissions.

Compliance Period

One year

Monitoring, Reporting, Verification (MRV)

REPORTING FREQUENCY: Covered entities must report the CO₂ emissions for the previous calendar year by the start of March.

VERIFICATION: Emissions must match reports to RGGI and the US Environmental Protection Agency. Documents (i.e., emissions reports and compliance certification reports) must be certified by a designated representative identified by the facility, and MassDEP may choose to conduct audits.

Enforcement

If MassDEP finds that an entity is in violation of compliance, this will be presumed to constitute “a significant impact to public health, welfare, safety or the environment”. In addition to penalties, the covered entity must submit three allowances for each metric tonne of non-compliance.

Market Regulation

Market Stability Provisions

AUCTION RESERVE PRICE: Auctions have a reserve price of USD 0.50 per allowance.

Market Design

MARKET PARTICIPATION: Compliance entities only.

MARKET TYPES:

Primary: The allowance auctions use a sealed bid, uniform price auction format. No bidder can purchase more than 33% of the allowances offered for sale in any one auction. Auctions are managed by Enel X.

Secondary: Compliance entities may transfer allowances to other compliance entities at any time except during the month of March. The Massachusetts Carbon Allowance Registry is used to track the ownership of allowances. Potomac Economics monitors the conduct of market participants in the auctions and in the secondary market to identify indications of anti-competitive conduct.

LEGAL STATUS OF ALLOWANCES: Allowances constitute a “limited authorization to emit one metric ton of CO₂” to comply with the regulation. They are not property rights.

Other Information

Institutions involved

Executive Office of Energy and Environmental Affairs: Cabinet-level office that oversees MassDEP.

Massachusetts Department of Environmental Protection: Regulatory agency implementing the Massachusetts Limits on Emissions from Electricity Generators (regulation “310 CMR 7.74”).

Potomac Economics: Current market monitor. Monitors the conduct of market participants in the auctions and in the secondary market to identify indications of anti-competitive conduct.

Enel X: Manages the auctions.

APX: Maintains allowance tracking software platform.

Regulatory Framework

[Electricity Generator Emissions Limits \(310 CMR 7.74\)](#)

Evaluation / ETS review

The first program review was conducted in 2021, with a review planned every ten years thereafter.

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