

USA - Regional Greenhouse Gas Initiative (RGGI)

General Information

ETS Description

The Regional Greenhouse Gas Initiative (RGGI) launched in 2009 and is the first mandatory GHG ETS in the United States. It started operating with ten states (Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont). RGGI's development was based on the "2005 RGGI Memorandum of Understanding" (MOU) and on the "2006 RGGI Model Rule". Through statutes or regulations based on the Model Rule, each state then established individual CO₂ budget trading programs. New Jersey withdrew from RGGI at the end of the first phase, or "control period" (see

'Compliance' section), in December 2011 and later rejoined in 2020. Pennsylvania formally joined RGGI in 2022 but was prevented from participating in auctions or enforcing compliance due to court injunctions, and it formally withdrew in 2025. Virginia joined RGGI in 2021 but left in 2023. In February 2026, Governor Abigail Spanberger signed a budget bill (House Bill 29) requiring the Virginia Department of Environmental Quality (DEQ) to file regulations to rejoin RGGI within 90 days.

RGGI covers power sector emissions in participating states. In 2022, it covered around 14% of the aggregate participating states' emissions; in 2024, 222 facilities were covered by the state regulations. The aggregate cap will decrease by about 8.5 million tons per year between 2027 and 2033, which is about 10.5% of the 2025 budget. It will decline by about 2.4 million tons per year from 2034 to 2037, which is about 3% of the 2025 budget.

Under the ETS, covered entities must surrender allowances for all their covered emissions. Entities obtain most of their allowances through regular auctions, while some states have "set-aside" accounts from which they may transfer a limited number of allowances to entities' compliance accounts.

RGGI has undergone three review processes that updated the Model Rule and enshrined tighter caps and adjustments to system design.

ETS Status

in force

Jurisdictions

Connecticut
Delaware
Maine
Maryland
Massachusetts
New Hampshire
New Jersey
New York
Rhode Island
Vermont

Year in Review

In July 2025, the ten participating RGGI states released the results of the Third Program Review, which had been initiated in summer

2021. The review introduced a package of reforms to take effect from 2027, including a tightened emissions cap (reduced to about 69.8 million short tons CO₂ in 2027, declining by an average of about 8.5 million short tons CO₂ annually from 2027 to 2033, and by about 2.4 million short tons annually from 2034 to 2037), an expanded two-tier cost containment reserve (CCR) of about 11.75 million allowances per tier with trigger prices of USD 19.50 and USD 29.25 respectively in 2027, an increased minimum reserve price (rising to USD 9.00 in 2027 with 7% annual increases thereafter), and a phase-out of new offset credits from 2027 onwards. Each participating state has committed to amend its regulations to meet the updated Model Rule requirements by January 2027.

Virginia repealed its CO₂ Budget Trading Program following executive action started by the state's administration in 2022 and thus stopped participating in RGGI in December 2023. However, in February 2026, Governor Abigail Spanberger signed House Bill 29 mandating the implementation of regulations to rejoin within 90 days.

In November 2025, Pennsylvania formally ended its participation in RGGI following the passing of its fiscal code bill (House Bill 416) which included the repeal. Governor Josh Shapiro signed it into law but has called on the State Legislature to advance his energy plan, which would create Pennsylvania's own state-level program.

Sectoral coverage

Power

Revenue usage

Climate mitigation

Low-carbon innovation

Assistance for individuals, households, and businesses

Emissions & Targets

Overall GHG Emissions excl. LULUCF (MtCO₂e)

717.7 MtCO₂e (2022)^[1]

[1] This value includes Virginia but not Pennsylvania. Values presented here are taken from the "Inventory of U.S. Greenhouse Gas Emissions and Sinks by State" by the Environmental Protection Agency (EPA, available [here](#)), aggregated for the RGGI states. While each state publishes official inventory data and the values published by the EPA should not be viewed as official state data, the EPA estimates are presented here to ensure the methodological consistency of data collection and aggregation for inventory categories across RGGI states, as well as to ensure a common reporting year in the data. There may be differences between the EPA estimates and the official state inventories.

GHG reduction targets

By 2037: Regional power sector emissions cap reduced to just under 10 million short tons CO₂, representing a 60% to 87% reduction^[1] compared to the 2025 cap (depending on cost containment reserve activation) ("2025 Model Rule")

[1] The range in this reduction is dependent on if one or both tiers of the CCR were to be released.

Current Allowance Price (per t/CO₂e)

Average auction price (2025): USD 19.52

Size & Phases

Covered emissions (2022)

14.00%

Verified ETS Emissions

98.10MtCO₂e

GHGs covered

CO₂

Phases

PHASE 1: Three years (2009 to 2011)

PHASE 2: Three years (2012 to 2014)

PHASE 3: Three years (2015 to 2017)

PHASE 4: Three years (2018 to 2020)

PHASE 5: Three years (2021 to 2023)

PHASE 6: Three years (2024 to 2026)

Cap or total emissions limit

An absolute cap limits the total emissions allowed in the system and is fixed ex-ante. A cap trajectory until 2030 has been set.

Phases in RGGI are also known as “control periods”.

PHASE 1: 564 million short tons CO₂ or 512 MtCO₂ (188 million short tons CO₂ or 171 MtCO₂ per year)

PHASE 2: 413 million short tons CO₂ or 374 MtCO₂

2012 and 2013: 165 million short tons CO₂ or 150 MtCO₂ per year

2014: 83 million short tons CO₂ or 75 MtCO₂

PHASE 3: 194 million short tons CO₂ or 176 MtCO₂

2015: 67 million short tons CO₂ or 61 MtCO₂

2016: 65 million short tons CO₂ or 59 MtCO₂

2017: 62 million short tons CO₂ or 57 MtCO₂

PHASE 4: 193 million short tons CO₂ or 175 MtCO₂

2018: 60 million short tons CO₂ or 55 MtCO₂

2019: 58 million short tons CO₂ or 53 MtCO₂

2020: 74 million short tons CO₂ or 67 MtCO₂

PHASE 5: 291 million short tons CO₂ or 264 MtCO₂

2021: 101 million short tons CO₂ or 91 MtCO₂

2022: 97 million short tons CO₂ or 88 MtCO₂

2023: 93 million short tons CO₂ or 85 MtCO₂

PHASE 6:^[1]

2024: 69 million short tons CO₂ or 63 MtCO₂

By 2012, verified emissions under RGGI were more than 40% below the cap, so the states tightened the cap in 2014. There was a 2.5% annual reduction factor from 2015 through 2018. The revised regulations extended the 2.5% annual reduction factor through 2020.

The RGGI states further adjusted the caps between 2014 and 2020 to account for banked allowances from the first and second phases. The annual reduction factor between 2021 and 2030 as set out in the “2017 Model Rule” is ~3% of the 2020 cap.

The caps above include New Jersey from 2020 and Virginia from 2021, but the latter only until 2023.

The cap will decline by about 8.5 million tons per year between 2027 and 2033, and about 2.4 million tons per year between 2034 and 2037.

[1] These values do not include Pennsylvania nor Virginia.

Sectors and thresholds

SECTORS: Fossil fuel electric generating units (i.e., fossil fuel-fired stationary boilers, combustion turbines, or combined cycle systems). Sources include governmental, institutional, commercial, or industrial structures, installations, plants, buildings, or facilities that emit or have the potential to emit any air pollutant that include one or more units.

INCLUSION THRESHOLDS: Most RGGI states cover units with capacity equal to or greater than 25 MW.

In New York, since January 2021, the program applies to power plants that have nameplate capacity equal to or above 15 MW and reside at a covered generating unit or near two or more units of the same source.

Point of regulation

Point source (power sector)

Type of entities

Installations/facilities (Units that serve an electricity generator with the nameplate capacity defined in the regulation)

Number of entities

222 entities (2024)

Allowance Allocation & Revenue

Allowance allocation

Auctioning: CO₂ allowances issued by each RGGI state are distributed through quarterly auctions. States hold a limited amount in “set-aside” accounts and distribute them according to state-specific regulations.

Of the 66.6 million 2025 allowances (after the adjustment for banked allowances), 91% were sold at auction. The remainder were either transferred from state set-aside accounts, retired, or remained in set-aside accounts. No offset allowances were awarded. Additionally, 8.1 million allowances were sold from the cost containment reserve (see ‘Market Stability Provisions’ section).

Auctioning share

91%

Total Revenue

USD 10.1 billion since the beginning of the program

USD 1.5 billion in 2025

2025

Use of Revenues

Revenues from the quarterly auctions are returned to the RGGI states and have been primarily invested in the following consumer benefit programs: energy efficiency, direct bill assistance, beneficial electrification, GHG abatement, and clean and renewable energy. A report released in July 2024 found that the direct lifetime benefits of RGGI investments made in 2022 are projected to avoid 7.5 million short tons of CO₂ (6.8 MtCO₂) and return approximately USD 1.8 billion in lifetime energy bill savings to 246,000 households and over 2,600 businesses that participated in programs funded by RGGI proceeds.

The distribution of RGGI investments in 2022 was: energy efficiency (49%); direct bill assistance (21%); beneficial electrification^[1] (14%); clean and renewable energy (7%); and GHG abatement and climate change adaptation^[2] (3%).

[1] Programs implementing or facilitating replacement of fossil fuel use with electric power.

[2] Diverse programs, including the promotion of technology, research, and development programs, climate change policy research, coastal resilience, and flood preparedness programs.

Flexibility & Linking

Offset credits

The use of offsets is allowed. However, beginning in 2027, RGGI offset allowances will no longer be awarded.

53,506 offset allowances have been awarded during RGGI's time of operation, all of which were from a 2017 landfill methane capture and destruction project.

QUALITATIVE LIMIT: Currently, the program allows offset credits from three offset types located in RGGI states:

1. landfill methane capture and destruction;
2. sequestration of carbon due to reforestation, improved forest management, or avoided conversion; and
3. avoidance of methane emissions from agricultural manure management operations.

Some states have discontinued specific offset protocols, but all accept offset allowances issued by any participating state. To date, only one offset project (landfill methane capture and destruction) has been approved under RGGI.

QUANTITATIVE LIMIT: 3.3% of an entity's liability may be covered by offset credits. This share will remain unchanged between 2021 and 2030. These limits on offset usage will still apply to already awarded offsets even after they cease to be awarded in 2027.

Between the first and the fourth control periods (2009 to 2020), no CO₂ offset allowances were deducted. As of the 2022 interim compliance summary report, no CO₂ offset allowances had been deducted in the fifth control period (2021 to 2023).

Banking and borrowing

Banking is allowed without restrictions. Current regulations include provisions to adjust the cap to address the aggregate bank, so that allowances available for auction are reduced by the number of allowances not used for compliance in previous control periods (see also 'Cap' section above). The RGGI states are currently implementing the third adjustment for banked allowances, which runs until 2025. As part of the RGGI review process, the states are considering whether to address or adjust for banked allowances into the future if a bank of surplus allowances remains in circulation after 2025.

Borrowing is not allowed.

Links with other Systems

RGGI is a cooperative effort between participating states. Each state establishes an individual CO₂ budget trading program based on the RGGI Model Rule. Covered sources in each participating state can surrender allowances issued by any participating state for compliance and participating states use joint auctions.

Other carbon pricing instruments in the jurisdiction

State-level ETS: Massachusetts Limits on Emissions from Electricity Generators.

State-level ETSs are also being considered or developed in the following RGGI states: Maryland, New York, Vermont

Domestic crediting mechanism: RGGI Crediting Mechanism

Compliance

Compliance mechanism

Covered entities must surrender one compliance unit (allowance or offset credit) per short ton of CO₂ emitted for all their covered emissions.

Compliance Period

Three years.

Compliance is evaluated at the end of each three-year phase (control period). From the third phase, covered entities must surrender allowances corresponding to 50% of their verified emissions in each of the first two years of a phase. They must cover 100% of the remaining allowances at the end of the three-year phase.

Monitoring, Reporting, Verification (MRV)

FRAMEWORK: Emissions data are recorded in the US EPA's Clean Air Markets Division database in accordance with state CO₂ budget trading program regulations and agency regulations. Provisions are based on the US EPA monitoring provisions. Data are then automatically transferred to the electronic platform of the RGGI CO₂ Allowance Tracking System (COATS), which is publicly accessible.

MONITORING: Operators must comply with all monitoring and recordkeeping requirements laid out in the Model Rule.

REPORTING: CO₂ monitoring reports must be submitted quarterly.

VERIFICATION: Emission data reports and their underlying data are required to undergo periodic quality assurance and quality control procedures in accordance with US EPA regulations.

Penalties and enforcement

In cases of excess emissions (i.e., if entities do not surrender all required allowances by the deadline), allowances equivalent to three times the amount of excess emissions must be surrendered. Furthermore, covered entities may also be subject to specific penalties imposed by the RGGI state where it is located.

Market Regulation

Market Stability Provisions

AUCTION PRICE FLOOR

Instrument type: Price-based instrument

Functioning: Auctions have a price floor of USD 2.62 per short ton in 2025, increasing by 2.5% per year (to reflect inflation). The price floor will rise to USD 9.00 in 2027, increasing by 7% per year thereafter.

COST CONTAINMENT RESERVE (CCR)

Instrument type: Price-based instrument

Functioning: Since 2014, RGGI has operated with a CCR, consisting of a number of allowances in addition to the cap held in reserve and only released to the market if certain trigger prices are reached. Beginning in 2021, allowances provided within the CCR are equal to 10% of the regional cap. The trigger price is USD 17.03 in 2025 and increases by 7% per year. It had previously increased by 2.5% annually between 2017 and 2020, from a starting value of USD 10.

From 2027, the CCR will be enlarged to about 11.75 million allowances per year (up from 10 million in the previous single-tier structure) and split into two price tiers, each with its own trigger price. In 2027, the trigger prices of the two tiers will be set at USD 19.50 and USD 29.25 respectively, before rising incrementally to USD 38.36 and USD 57.53 by 2037.

The CCR was triggered in 2014 and 2015, when all 15 million allowances it contained were sold. The CCR was also triggered in the last quarterly auction of 2021, where 3.9 million of the available 11.9 million allowances were sold. It was triggered again in the final auction of 2023, with 5.6 million of the 11.2 million CCR units on offer sold. The CCR was also triggered in March 2024, when all 8.4 million allowances it contained were sold.

EMISSIONS CONTAINMENT RESERVE (ECR)

Instrument type: Price-based instrument

Functioning: In 2021, RGGI started implementing an ECR, which withholds allowances from auction if certain trigger prices are reached, up to an annual withholding limit of 10% of the emission budgets (i.e., the share of each state in the regional cap) of participating states. Allowances withheld will not be re-offered for sale, effectively adjusting the cap downward. In 2025, the trigger price is USD 7.86,

increasing by 7% per year. Maine and New Hampshire are not participating in the ECR.

Beginning in 2027, the ECR will be removed and replaced with the increased minimum reserve price outlined above.

Market Design

MARKET PARTICIPATION: Compliance entities, non-compliance entities (domestic and international), and individuals can participate if they provide a financial security.

MARKET TYPES:

Primary: Most CO₂ allowances issued by each RGGI state are distributed through quarterly regional auctions. The RGGI COATS records and tracks data for each state's CO₂ budget trading program, including the transfer of allowances offered for sale by the states and purchased by the winning qualified bidders in the quarterly auctions. Auctions are open to all parties with financial security, with a maximum bid of 25% of the volume on offer per sale. There is no allowance holding limit. Auctions are managed by Enel X.

Secondary: The secondary market for RGGI CO₂ allowances comprises the trading of physical allowances and financial derivatives, including futures, forwards, call options, and put options. RGGI COATS facilitates participation in the secondary market and enables the public to view and download RGGI data and CO₂ allowance market activity reports. Financial derivatives are traded on the ICE platform.

Potomac Economics, an independent market monitor, monitors the performance and efficiency of the RGGI CO₂ allowance auctions and the secondary CO₂ allowance market.

LEGAL STATUS OF ALLOWANCES: The RGGI Model Rule specifies that allowances are limited authorizations by the participating state's regulatory agencies to emit up to one short ton of CO₂.

Other Information

Institutions involved

Statutory and/or regulatory authority of each RGGI state: Each state implements the program under its particular statutory authority.

Environmental and energy agencies for each RGGI state: Agencies implementing the respective CO₂ budget trading programs.

RGGI Inc.: Non-profit cooperative supporting RGGI's development and implementation. This includes engaging contractors for various tasks such as allowance and emissions tracking, market monitoring, and management of the auctions.

Potomac Economics: 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.

Regulatory Framework

[2017 RGGI Model Rule](#)

[2017 RGGI Model Rule Updates \(Summary\)](#)

[2025 Model Rule](#)

[RGGI States' Statutes & Regulations](#)

[RGGI Program Design](#)

Evaluation / ETS review

The RGGI participating states periodically review the ETS to consider program successes, impacts, and design elements. The first program review process (known as the 2012 Program Review) was completed in early 2013. A second review process was completed in 2017, resulting in the 2017 Model Rule. Program reviews were accompanied by stakeholder meetings and the submission of comments from interested parties.

The RGGI states announced the results of the Third Program Review in July 2025, resulting in the 2025 Model Rule, with agreement to begin a Fourth Program Review no later than 2028.

As of 2024, CO₂ emissions from power plants in the ten fully participating states have fallen to 43% below a 2006 to 2008 baseline since RGGI's inception, a faster decline than the US as a whole.^[1]

^[1] This reference excludes Virginia emissions.

Disclaimer

Copyright © 2022 by International Carbon Action Partnership (ICAP). All rights reserved. The content provided by the ICAP ETS map is protected by copyright. You are authorized to view, download, print and distribute the copyrighted content from this website subject to the following condition: Any reproduction, in full or in part, must credit the International Carbon Action Partnership (ICAP) must include a copyright notice. If you have any questions please contact infoicapcarbonaction [dot] com (info[at]icapcarbonaction[dot]com).

In line with ICAP's mandate, the ICAP ETS map exclusively covers cap-and-trade systems for greenhouse gas emissions. Information displayed on the map is regularly updated by ICAP Secretariat staff based on official and public information as far as possible and subject to annual peer review by government representatives from the covered systems. Although the information contained in the map is assembled with utmost care, ICAP cannot be held liable for the timeliness, correctness and completeness of the information provided. Please refer to the imprint on the website of the International Carbon Action Partnership regarding links to external websites, liability and privacy policy.