

Express Terms Summary

6 NYCRR Part 495, Sulfur Hexafluoride Standards and Reporting

The Department of Environmental Conservation (Department) adopts the new regulation, 6 NYCRR Part 495, Sulfur Hexafluoride Standards and Reporting. This regulation establishes prohibitions and other controls on the use of sulfur hexafluoride (SF₆), primarily in electrical power transmission and distribution equipment, as recommended by the New York State Climate Action Council Scoping Plan and in accordance with the requirements of the Climate Leadership and Community Protection Act.

Subpart 495-1 Requirements for Users of Gas-Insulated Equipment

Section 495-1.1 Purpose

Section 495-1.2 Applicability

Section 495-1.3 Definitions

Section 495-1.4 Sulfur Hexafluoride Phase-Out

Section 495-1.5 GIE Emissions Limit

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Subpart 495-2 Requirements for Users and Suppliers of Regulated Substances and Products Containing Regulated Substances

Section 495-2.1 Applicability

Section 495-2.2 Definitions

Section 495-2.3 Restrictions on Use, Sale, Possession, and Release of SF₆

Section 495-2.4 Acceptable Uses of SF₆

Section 495-2.5 Suppliers of Regulated Substances and Products Containing Regulated Substances

Section 495-1.1 Purpose

This section provides the purpose of the rulemaking, which includes the control of greenhouse gas emissions.

Section 495-1.2 Applicability

This section lists the regulated persons as those who own, install, and/or use SF₆ gas-insulating equipment (GIE) and additionally, for reporting requirements, those with a certain nameplate capacity.

Section 495-1.3 Definitions

This section lists the definitions to be used for this Subpart. “Covered Insulating Gas” is defined as an insulating gas with a 20 year Global Warming Potential (GWP₂₀) greater than one or a substance that contributes to climate change, thus capturing both SF₆ and targeted SF₆ substitutes.

Section 495-1.4 Sulfur Hexafluoride Phase-Out

This section provides a use phase-out schedule for SF₆ GIE except in certain identified instances.

Section 495-1.5 GIE Emissions Limit

This section imposes emission limits on GIE owners and provides the equations needed for each GIE owner to calculate their baseline system capacity, baseline CO₂e capacity, and emission limit.

Section 495-1.6 GIE and Insulating Gas Inventories

This section requires GIE owners to establish and maintain an annual inventory for each GIE device that uses covered insulating gas as well as an inventory of containers that contain covered insulating gas.

Section 495-1.7 Calculating GIE Emissions

This section provides the equations needed for each GIE owner to calculate their GIE emissions.

Section 495-1.8 Reporting Requirements

This section requires GIE owners with annual GIE emissions exceeding 7,500 metric tons CO₂e to submit an annual GIE emissions report, which includes information related to their GIE inventory and emissions limit calculation requirements. Additionally, this section includes an attestation requirement for all statements and/or information submitted to the Department.

Section 495-1.9 Recordkeeping

This section requires GIE owners to maintain specific records, including records pertaining to their GIE inventory and reporting requirements.

Section 495-1.10 SF₆ Phase-Out Exemption and Failure Notification

This section details an exemption request process for GIE owners who wish to acquire SF₆ GIE after the applicable phase-out dates and includes the information to be submitted to the Department and the applicable justifications.

This section also makes a use allowance in the event of a failure of a GIE device in active service provided that the GIE owner records and reports of such use.

Section 495-1.11 Emergency Event Reporting

This section details the process in which—including the information to be reported—a GIE owner may request that emissions from an emergency event are exempted from the calculation of their annual GIE emissions.

Section 495-1.12 Treatment of Confidential Information

This section notes that records containing trade secrets, confidential commercial information, or critical infrastructure information will be handled pursuant to section 616.7 of this Title.

Section 495-1.13 Enforcement

This section notes that all applicable penalties or sanctions set forth in Article 71 of the Environmental Conservation Law are available to the Department.

Section 495-1.14 Severability

This section establishes that the sections of the rule are severable.

Section 495-1.15 Reference Material

This section provides information on how to locate materials that have been incorporated by reference in this regulation.

Section 495-2.1 Applicability

This section lists the regulated persons as those that use or enter (or attempt to enter) into commerce in the State, SF₆ or equipment containing SF₆. Additionally, regulated persons also include those that supply “regulated substances” as defined in this Subpart, or equipment and products containing such regulated substances.

Section 495-2.2 Definitions

This section lists the definitions to be used for this Subpart, in addition to those provided in Subpart 495-1. “Regulated substance” is defined as a substance that contains a fluorinated greenhouse gas and has a GWP20 greater than 10 or a substance, if the GWP20 is unknown, that may be reasonably anticipated to contribute to climate change.

Section 495-2.3 Restrictions on Use, Sale, Possession, and Release of SF₆

This section imposes a general restriction on the manufacture, production, distribution, sale, purchase, or use of SF₆ in the State, except for specific uses identified in the next section. Except for these identified uses, this section also prohibits the ownership or possession of SF₆ in the State after the Subpart’s effective dates. These dates are provided and are based on the type of SF₆ application.

Section 495-2.4 Acceptable Uses of SF₆

This section details the 10 uses of SF₆ where the requirements of the previous section do not apply, such as use as a dielectric medium or research use in a research facility.

Section 495-2.5 Suppliers of Regulated Substances and Products Containing Regulated Substances

This section imposes general registration requirements on any supplier of bulk regulated substances or products containing regulated substances intended for sale or use in the State as well as on those who reclaim regulated

substances collected in the State. Manufacturers of products containing a regulated substance have an additional registration requirement. Furthermore, this section imposes annual reporting and record keeping requirements on suppliers and reclaimers.

Regulatory Impact Statement Summary

6 NYCRR Part 495, Sulfur Hexafluoride Standards and Reporting

1. Statutory Authority

The statutory authority to promulgate this rulemaking is found in the Environmental Conservation Law (ECL) at Sections 1-0101, 1-0303, 3-0301, 19-0103, 19-0105, 19-0107, 19-0301, 19-0303, 19-0305, 71-2103, 71-2105, 75-0101, 75-0105, 75-0107, and 75-0109. Furthermore, this rulemaking also addresses the Department's statutory responsibility pursuant to Section 7(2) of the Climate Act to achieve the statewide GHG emission limits outlined in ECL Section 75-0107 and 6 NYCRR Part 496. The Climate Act further requires the Department promulgate regulations to achieve the statewide GHG emission limits and align with recommendations from the Climate Action Council Scoping Plan (Scoping Plan). ECL Section 75-0109. As discussed in more detail in the Legislative Objectives below, this regulation reflects the findings and recommendations from the Scoping Plan.

2. Legislative Objectives

Fluorinated GHGs are among the most powerful forces of global climate change. The primary focus of this rule is SF₆, which is the most potent GHG currently known with a Global Warming Potential (GWP) 18,300-25,200 times that of carbon dioxide, according to the most recent Intergovernmental Panel on Climate Change Assessment Report.¹ It is also one of the longest-lived GHGs, persisting in the atmosphere for 1,000 years once emitted. All fluorinated GHGs have high GWP values, and some persist for hundreds, thousands, or even tens of thousands of years. This means that even if these GHGs are emitted at low volumes, they are accumulating in the atmosphere, and they will continue to impact the climate for centuries. In the case of SF₆, the abundance has increased more than 40% from 2011 to 2019.² Finally, because this gas persists in the

¹ Intergovernmental Panel on Climate Change. 2021. Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. [MassonDelmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. In Press: Cambridge University Press.

² *ibid*

atmosphere much longer than can be modelled, the costs to society from SF₆ emissions cannot be fully estimated (see Costs section).

The Climate Act directs the Department to promulgate regulations that, “reflect, in substantial part, the findings” of the Climate Action Council Scoping Plan (Scoping Plan)³ in order to achieve the Climate Act’s statewide GHG emission limits (promulgated as 6 NYCRR Part 496) and net zero goal. Recommendations regarding SF₆ emissions were identified in the Scoping Plan’s “Electricity” chapter. Specifically, Strategy E7, “Invest in Transmission and Distribution Infrastructure Upgrades” states, “DEC should adopt regulations to reduce SF₆ emissions and establish a timeline for phasing out new SF₆ equipment. New York should also collaborate with other U.S. Climate Alliance states to align policies across the country to drive a market shift toward SF₆ alternative technologies nationwide. This will help New York’s power grid remain one of the cleanest, lowest emission grids in the country.” Additionally, there are a number of recommendations regarding hydrofluorocarbons (HFCs) in the “Building” and “Waste” chapters. Some uses and supply of HFCs may be addressed in the reporting requirements in this rule. Finally, the recommendation in the “Industry” chapter, Strategy I5, “Establish Greenhouse Gas Registry and Reporting System”, states, “DEC should promulgate regulations to establish new or expand the existing GHG reporting requirements, which may be a component of another regulatory program... [and] DEC should evaluate existing online reporting systems such as those established by EPA and the California Air Resources Board.”

3. Needs and Benefits

The Department estimates that this regulation will address the relevant recommendations from the Scoping Plan and reduce emissions in line with the requirements of the Climate Act. Fluorinated GHGs are inconsistently covered by international, national, and state-level policies. Many but not all fluorinated GHGs are regulated under the Clean Air Act, such as hazardous substances or volatile organic compounds, and some are included in annual

³ Available at <https://climate.ny.gov>

reporting under the EPA’s mandatory GHG reporting program (GHGRP; 40 CFR Part 98). Subpart 495-1 broadly aligns with CARB’s Regulation for Reducing Sulfur Hexafluoride Emissions, with a few exceptions. The second Subpart of the regulation adopts provisions from a California regulation⁴ related to the general use of SF₆ as well as certain GHG reporting requirements in place at the federal level and in California. The Department adopts the same requirements as have been in place in California since 2009, with the primary goal of limiting the use of SF₆ as it is an extremely powerful pollutant.

This regulation addresses current emissions of SF₆, avoids increases in SF₆ emissions associated with ongoing adoption of new SF₆ GIE or in non-essential uses, and to avoid emissions of other fluorinated GHGs that may be used as substitutes for SF₆. The reporting requirements in the second Subpart of this rule are critical for the Department’s enforcement and for the assessment of annual statewide emissions under the Climate Act. The Department also expects that the collection and communication of fluorinated gas emissions will lead to voluntary emission reductions through improved leak management or through the adoption of sustainable alternatives.

Based on publicly available data, the Department has estimated SF₆ emissions in the State to be 7.36 metric tons per year, or 134,799 or 185,625 metric tons of carbon dioxide equivalent emissions if using the 20 or 100-year GWP, respectively.⁵ This is equivalent to the carbon dioxide emissions from combusting 6,877-9,471 gallons of gasoline per year.⁶ Absent this rule, these emissions are expected to increase through 2050, which would be inconsistent with the requirements of Climate Act.

4. Costs

This regulation may marginally increase the costs of GIE to electric utilities or other users and to suppliers of fluorinated GHGs, but it is designed to minimize costs by providing adequate time for new

⁴ Regulation for Reducing Sulfur Hexafluoride Emissions, Subarticle 3, sections 95340-95346, of title 17 of the California Code of Regulations.

⁵ DEC 2022 Statewide GHG Emissions Report, converted to CO₂e using IPCC’s AR6 values, op cit

⁶ EPA Carbon Footprint Calculator, assuming 19.6lbsCO₂/gal <https://www3.epa.gov/carbon-footprint-calculator> (last visited October 31, 2023).

alternatives to reach price parity. In the case of GIE owners, including State and municipally owned utilities, the regulation does not directly impose costs on these entities or require that they replace existing equipment. Instead, GIE owners may incur an incremental additional cost to an otherwise planned equipment replacement or expansion and this may be passed on to ratepayers. In the extensive cost modeling conducted by CARB,⁷ they found that total cost savings for non-SF₆ equipment would grow to nearly match costs by the final year of the model, or 2036. Because these cost savings (or avoided costs) would then continue every year through the lifetime of the non-SF₆ GIE, the transition away from SF₆ will save money for the utilities and ratepayers. Notably, the avoided costs include the costs of complying with the regulation. This potential cost saving is higher in the proposed regulation as entities are not required to report if GIE emissions fall below 7,500 MTCO_{2e}. That said, the Department expects that the costs of reporting under either Subpart of this rule are minimal, as the information is already collected and reported to EPA. There are no additional costs anticipated to the Department for implementing this regulation.

The societal benefits from the mitigation of SF₆ and other fluorinated GHG emissions far outweigh those from participating in reporting programs or from the adoption of alternative technologies. These costs are also externalized; the users of SF₆ do not pay these costs, they are incurred on the public. The Department recently issued an update to the State's Value of Carbon guidance to enable State agencies to estimate the societal damages of SF₆ emissions alongside the other GHGs. The total cumulative, or net present value, of emissions 2024-2050 would result in damages costing \$326.62 million to \$3.69 billion dollars, or \$889.58 million dollars at the central 2% discount rate. Avoiding these emissions in the future would represent a significant benefit.

5. Paperwork

⁷ As summarized in CARB 2020 Final Statement of Reasons. op cit.

This rule will impose minimal additional paperwork on regulated entities, but it is not expected to be unduly burdensome as the majority of records are already subject to federal requirements. Stakeholders demonstrated in outreach meetings that much of this information is tracked and readily available.

6. Local Government Mandates

This rule will not create any mandates for local governments as compared to other entities. Municipally owned electric utilities are not affected by reporting requirements of the regulation as their emissions are below the threshold of 7,500 MTCO₂e due to their relatively small SF₆ capacity.

7. Duplication

This regulation does not conflict with any other existing federal or State regulations or statutes. This action is designed to align with federal policy, other non-overlapping State regulations, and international treaties to ensure consistency with a global phasedown of the regulated substances as much as practicable.

8. Alternatives

The Department considers a no action alternatives infeasible because of the requirements of the Climate Act. Model regulations in other jurisdictions were provided to stakeholders as an alternative and the Department considered feedback on these alternatives in developing this regulation.

9. Federal Standards

This regulation adopts federal minimum standards where applicable such as by adopting either the exact same standards as EPA, standards that are in line with the federal law, or standards in line with other US Climate Alliance states. Additionally, information to be collected are designed to align with records that are maintained per EPA regulations and voluntary programs.

10. Compliance Schedule

Notwithstanding the following compliance schedule, pursuant to ECL Article 19, Part 495 will be effective 30 days after filing the Notice of Adoption with the Department of State. This regulation adopts a compliance schedule under Subpart 495-1 for owners of GIE to maintain an annualized inventory of equipment and insulating gas starting in 2027, for owners with annual GHG emissions above 7,500 MTCO₂e to report on this inventory starting one year later, and then for the phase-down in the availability of SF₆ GIE based on certain characteristics through 2033. Furthermore, starting in 2030, GIE owners must maintain total GIE emissions below an emissions limit that is determined by the owner's baseline capacity. Under Subpart 495-2, the State restricts the use of SF₆ to certain essential uses and establishes a registration requirement on suppliers (manufacturers, producers, and distributors) of fluorinated greenhouse gases, both starting the effective date of the Part. In 2026, these suppliers will begin reporting annually on total volumes supplied to the State.

Summary of the Assessment of Public Comments for
6 NYCRR Part 495, Sulfur Hexafluoride Standards and Reporting
Comments received from January 10, 2024 through March 21, 2024

In January 2024, the New York State Department of Environmental Conservation (Department or DEC) proposed regulations pertaining to standards and reporting for sulfur hexafluoride. The proposed regulation includes a program to phasedown the use of sulfur hexafluoride (SF₆) in gas insulated equipment used by the electricity sector, an emissions limit for gas insulated equipment owners, limitations on the use of SF₆, and reporting requirements for certain users and suppliers of SF₆ and other fluorinated greenhouse gases. The goal of this rule is to implement recommendations of the Climate Action Council Scoping Plan necessary to achieve the required statewide GHG emission limits and net zero goal. Notice of the proposed rulemaking appeared in the January 10, 2024 State Register as well as in the DEC's Environmental Notice Bulletin. Public comments were accepted from January 10, 2024 through March 21, 2024. Virtual public hearings were held on March 14, 2024 at 2:00pm and 6:00pm. This Assessment of Public Comments responds to all substantive comments received during the public comment period, including written comments as well as oral statements made at the two virtual public hearings. Comments were compiled, reviewed, and categorized based on their content.

The Department received comments from utilities, energy project developers, original equipment manufacturers (OEMs), trade organizations, environmental advocacy groups, and individuals. Most letters were generally supportive of the regulation and acknowledged the potency of SF₆ as a greenhouse gas (GHG). Utilities and their trade organizations generally proposed edits to delay provisions of the regulation, such as the phase-out timeline and implementation of the 1% emissions limit, and minimize administrative burden, such as reduced reporting and fewer approval processes. The most frequent comment in letters from OEMs and environmental advocacy groups was a proposal to prohibit the use of all fluorinated gases (F-gases) in regulated equipment.

The significance of SF₆ as a GHG and its impact on New York State climate goals and requirements was a utility and trade group comment, suggesting that SF₆ emissions were a small proportion of total emissions and have a minimal impact. As discussed in the Regulatory Impact Statement (RIS), SF₆ is an important GHG to regulate in New York State due to its high GWP and long atmospheric lifetime. Furthermore, all emission sources must be addressed in order to achieve the emission reductions required for compliance with 6 NYCRR Part 496 Statewide Greenhouse Gas Emission Limits.

Several commenters supported harmonization with other state, federal, and international regulations such as California's Gas Insulated Equipment regulation and the European Union's F-Gas regulation. Harmonization with existing regulations was a goal of this regulation. As noted on page 7 of the RIS, the Scoping Plan recommends that New York "collaborate with other U.S. Climate Alliance states to align policies across the country to drive a market shift toward SF₆ alternative technologies nationwide." California is a U.S. Climate Alliance state and the Department greatly aligned the rule with California's regulations. Utilities and their trade group promoted alignment with the EPA's Part 98 reporting, which requires less data and a higher threshold. The information required by this regulation and the lower threshold therein enable the Department to ensure compliance and to capture the majority of New York State SF₆ emission sources.

Cost of compliance was a concern of utilities and their trade groups. Several OEM and environmental advocacy groups commented that non-SF₆ equipment provided lifetime cost savings in comparison with traditional equipment, and these savings were greatly increased if accounting for net benefits to society is included. Utilities provided details on total costs associated with planned project upgrades, but did not provide details on the marginal costs associated with compliance.

Several revisions were made to the regulation in response to comments received. The first compliance dates were aligned and revised one year later than proposed, to January 1, 2027. Additionally, the date for compliance with the 1% emissions limit was revised from 2028 to 2030 to allow gas-insulated equipment (GIE) owners additional time to comply. Rather than impose a step-down approach as utilized in California and Massachusetts GIE regulations, the date was moved back to provide additional flexibility for GIE owners. To address comments concerning annual variability including, cold temperatures, maintenance cycles, and equipment power loadings, compliance with the 1% emissions limit will be based on a rolling 3-year emissions average, as opposed to annual emissions as in the proposed regulation. Lastly, in response to comments regarding long lead times in GIE acquisition several changes were made to accommodate these timeframes. The proposed regulation set time constraints for installation on non-compliant GIE based on purchase date. Revisions were made to remove lead times from these time constraints by specifying “order” date for purchasing constraints, and “delivery” date for installation constraints.

Notice of Adoption Statement

12(B)The edits made to the Express Terms do not require any changes to the JIS.

Notice of Adoption Statement

11(B)The edits made to the Express Terms do not require any changes to the RAFA.

Notice of Adoption Statement

10(B)The edits made to the Express Terms do not require any changes to the RFA.