

**Express Terms**

6 NYCRR Part 495 Sulfur Hexafluoride Standards and Reporting

(Statutory authority: Environmental Conservation Law, §§ 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, 75-0109)

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

**§ 495-1.1 Purpose**

(a) This Part adopts prohibitions and other controls for SF<sub>6</sub> and other greenhouse gases, including in equipment used in electrical power transmission and distribution.

(b) The purpose of this Part is to control greenhouse gas emissions as a component and driver of climate change, and to provide for the protection of the environment and natural resources of the State.

(c) It is the further purpose of this Part to implement recommendations from the Climate Action Council Scoping Plan finalized per section 75-0103 of the Environmental Conservation Law.

**§ 495-1.2 Applicability**

(a) This Subpart applies to any person who owns, installs, and/or uses gas-insulated equipment (GIE) that utilizes SF<sub>6</sub> or substitutes as an insulating medium.

(b) Annual reporting requirements shall also apply to owners of GIE with annual GIE emissions of covered insulating gas above 7,500 metric tons CO<sub>2</sub>e using a GWP<sub>20</sub>.

### § 495-1.3 Definitions

(a) For the purposes of this Part, the following definitions apply:

(1) ‘Active gas-insulated equipment or active GIE.’ GIE that is non-hermetically sealed and is connected through busbars or cables to an electrical power system; or that is fully charged, ready for service and being prepared for connection to an electrical power system. This does not include spare GIE.

(2) ‘Acquire.’ To take possession and/or ownership of an item or to obtain an item through lease. Equipment under temporary ownership or possession by the manufacturer during transport and equipment transported through New York that will never be used in New York are not considered “acquired.”

(3) ‘Authorized representative.’ A natural person authorized to represent a business entity or other organization.

(4) ‘Carbon dioxide equivalent or CO<sub>2</sub>e.’ The amount of carbon dioxide by mass that would produce the same global warming impact as the given mass of another greenhouse gas over a specific time frame. For the purposes of this Part, CO<sub>2</sub>e is calculated using GWP<sub>20</sub>.

(5) ‘Circuit breaker.’ A device designed to automatically interrupt high currents in order to protect electrical equipment from damage.

(6) ‘Covered gas container.’ A container containing or designed to contain covered insulating gas.

(7) ‘Covered insulating gas.’ An insulating gas with a GWP<sub>20</sub> greater than one. A substance is considered a covered insulating gas if the GWP<sub>20</sub> is unknown, but the substance may be reasonably anticipated to cause or contribute to anthropogenic climate change.

(8) ‘Covered insulating gas at activation.’ A value representing a baseline amount of covered insulating gas as recorded in the GIE inventory following procedures specified in section 495-1.6 of this Part and including a consideration of equity share, where the GIE is jointly owned.

(9) ‘Data year.’ Calendar year in which a GIE owner maintains a GIE inventory pursuant to section 495-1.6 of this Part.

(10) ‘Day.’ One calendar day.

(11) ‘Electrical power system.’ The combination of electrical generators (i.e., power plants), transmission and distribution lines, equipment, circuits, and transformers used to generate and transport electricity from the generator to consumption areas or to adjacent electrical power systems.

(12) ‘Emergency event.’ A situation arising from a sudden and unforeseen event including, but not limited to, an earthquake, fire, flood, or act of vandalism.

(13) ‘Failure.’ The sudden and unexpected, or imminent, failure of a GIE device that requires replacement of the device.

(14) ‘First reporting year.’ The earliest calendar year in which a GIE owner is subject to this Part.

(15) ‘Gas cart.’ Any device designed to transfer insulating gas into or out of GIE, with the gas coming from or going into a permanent or removable gas container or the gas cart itself. A gas cart may utilize gas containers, but gas containers do not fall within the definition of gas cart.

(16) ‘Gas container.’ A single vessel containing or designed to contain a gas used as an insulating gas in GIE. This includes pressurized cylinders, any container that can be removed from gas carts, or other containers, but does not include GIE or the gas cart itself.

(17) ‘Gas-insulated equipment or GIE or GIE device.’ Interchangeable terms that refer to any electrical power equipment, regardless of location and insulating medium (e.g., solid dielectric, vacuum, SF<sub>6</sub>, alternative gas), that provide insulating and/or interrupting (arc quenching) functions related to operation of electrical

power systems. GIE includes, but is not limited to, switchgear, switches, circuit switchers, coupling capacitor potential devices, gas-insulated substations, and circuit breakers. This definition includes hermetically sealed GIE and non-hermetically sealed GIE.

(18) ‘GIE characteristics.’ For GIE whose voltage capacity is 38 kV or less, this means the combination of attributes listed in section 495-1.4(b) of this Part or configuration, voltage capacity (kV), and short-circuit current rating (kA). For GIE whose voltage capacity is greater than 38 kV, this means the combination of attributes listed in section 495-1.4(c) of this Part or voltage capacity (kV) and short-circuit current rating (kA).

(19) ‘GIE owner.’ The entity who owns GIE that uses covered insulating gas. This does not include temporary ownership or possession by the manufacturer such as during transport for purposes of repair or installation. A GIE owner may be a limited liability company, subsidiary, parent company, or other entity that is an owner of the GIE that uses covered insulating gas.

(20) ‘GWP20.’ An assessment of the Global Warming Potential of greenhouse gases over an integrated twenty-year time frame as published in the IPCC Assessment Report.

(21) ‘Insulating gas.’ The gas used in GIE to provide dielectric insulation and/or to interrupt electrical currents.

(22) ‘IPCC Assessment Report.’ Table 7.SM.7 in Smith, C., Z.R.J. Nicholls, K. Armour, W. Collins, P. Forster, M. Meinshausen, M.D. Palmer, and M. Watanabe, 2021: The Earth’s Energy Budget, Climate Feedbacks, and Climate Sensitivity Supplementary Material. In *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. Masson-Delmotte, 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.), pp 16-27, available from Department of Environmental Conservation, Office of Climate Change, 625 Broadway, Albany, NY 12233-1030.

(23) 'Nameplate capacity.' The design capacity of the insulating gas specified by the manufacturer for optimal performance of a GIE device. Nameplate capacity may be found on the nameplate attached to the GIE device, may be stated within the manufacturer's official product specifications, or may be the value calculated by the GIE owner following the procedure specified in title 17 of the California Code of Regulations section 95357.2(c) incorporated by reference herein, per section 495-1.15 of this Part.

(24) 'Non-SF<sub>6</sub> GIE.' Gas-insulated equipment that does not contain SF<sub>6</sub> and is not configured to use SF<sub>6</sub>.

(25) 'Person.' Any individual, firm, association, organization, manufacturer, distributor, partnership, business entity, business trust, public or private corporation, limited liability company, company, state, or local governmental agency or public district, or any other legal entity whatsoever which is recognized by law as the subject of rights and duties.

(26) 'Purchase.' Executing an agreement between the buyer and the seller to acquire a product such that any reversal on behalf of the buyer or the seller could result in a breach of the agreement and/or trigger cancellation or termination charges.

(27) 'Replacement parts.' Interchangeable components used to repair a GIE device.

(28) 'SF<sub>6</sub> GIE.' GIE configured to use SF<sub>6</sub> as the insulating gas.

(29) 'Spare GIE.' GIE that has been acquired by the GIE owner and is intended for use by the GIE owner but is not being used as active GIE or being prepared for connection to the electrical power system (e.g., GIE that is in storage).

(30) 'Substitute.' Any chemical, substance, product substitute, or alternative manufacturing process, whether existing or new, that may be used or is intended for use as a replacement.

(31) 'Tare weight.' The weight of an empty gas container that when subtracted from the gross weight yields the amount of gas in the gas container.

(32) ‘Voltage Capacity.’ The maximum voltage within which the manufacturer specifies that a GIE device should operate. This value is often reflected on the GIE nameplate as ‘Rated Voltage.’

**§ 495-1.4 Sulfur Hexafluoride Phase-Out**

(a) Starting on the applicable phase-out dates and per the GIE characteristics jointly provided in section 495-1.4(b)-(c) of this Part, no person may acquire SF<sub>6</sub> GIE for use in New York State unless one of the following provisions apply:

(1) An SF<sub>6</sub> phase-out exemption was approved by the department or SF<sub>6</sub> GIE was acquired in response to a failure, pursuant to section 495-1.10 of this Part.

(2) The SF<sub>6</sub> GIE device was present in New York State and was either reported to the department pursuant to section 495-1.8(a) of this Part or was the property of a GIE owner registered per section 495-1.8(b) of this Part prior to the applicable phase-out date listed in section 495-1.4(b)-(c) of this Part.

(3) The SF<sub>6</sub> GIE manufacturer replaces a defective SF<sub>6</sub> GIE device under the terms of the manufacturer’s warranty.

(b) Table 1. Phase-out Dates for SF<sub>6</sub> GIE with Voltage Capacity ≤ 38 kV

| Configuration | Voltage Capacity (kV) | Short-Circuit Current Rating (kA) | Phase-Out Date  |
|---------------|-----------------------|-----------------------------------|-----------------|
| Aboveground   | <38                   | All                               | January 1, 2026 |
|               | 38                    | All                               | January 1, 2028 |
| Belowground   | <38                   | <25                               | January 1, 2026 |
|               |                       | >25                               | January 1, 2031 |

(c) Table 2. Phase-out Dates for SF<sub>6</sub> GIE with Voltage Capacity > 38 kV

| Voltage Capacity (kV) | Short-Circuit Current Rating (kA) | Phase-Out Date  |
|-----------------------|-----------------------------------|-----------------|
| 38 < kV ≤ 145         | <63                               | January 1, 2026 |
|                       | >63                               | January 1, 2028 |
| 145 < kV ≤ 245        | <63                               | January 1, 2027 |

|      |     |                 |
|------|-----|-----------------|
|      | >63 | January 1, 2031 |
| >245 | All | January 1, 2033 |

(d) Starting on the applicable phase-out dates provided in section 495-1.4(b)-(c) of this Part, no GIE owner may convert non-SF<sub>6</sub> GIE to SF<sub>6</sub> GIE.

(e) Replacement parts are not subject to the phase-out dates provided in section 495-1.4(b)-(c) of this Part.

(f) Any SF<sub>6</sub> GIE device purchased by the GIE Owner prior to the applicable phase-out date listed in sections 495-1.4(b)-(c) of this Part must be installed no later than 24 months after the date of purchase.

### § 495-1.5 GIE Emissions Limit

(a) Beginning January 1, 2028, a GIE owner’s annual GIE emissions or annual GIE emissions excluding emergency events, as calculated pursuant to section 495-1.7(a)-(b) of this Part and subject to department approval per section 495-1.8 of this Part, cannot exceed their emissions limit calculated as follows.

(b) Baseline System Capacity. GIE owners must calculate their baseline system capacity for each covered insulating gas for the first reporting year as follows.

$$C_{bl,j} = \sum_k^n \frac{(d_{k,j} \times C_{k,j})}{D}$$

where:

C<sub>bl,j</sub> is the baseline system capacity in pounds for covered insulating gas j in the first reporting year;

n is the number of GIE devices k that were active GIE insulated with covered insulating gas j at some point during the first reporting year;

d<sub>k,j</sub> is the number of days during the first reporting year that GIE device k with covered insulating gas j was in active service;

C<sub>k,j</sub> is the covered insulating gas at activation in pounds for covered insulating gas j of GIE device k; and



D is the number of days in the first reporting year.

(c) Baseline CO<sub>2</sub>e Capacity. GIE owners must calculate their baseline CO<sub>2</sub>e capacity for each covered insulating gas j for the first reporting year as follows:

$$CO_2e_{bl,j} = \sum_j^m \frac{GWP_j \times C_{bl,j}}{2204.62}$$

where:

CO<sub>2</sub>e<sub>bl,j</sub> is the baseline CO<sub>2</sub>e capacity for each covered insulating gas j expressed as metric tons CO<sub>2</sub>e in the first reporting year;

m is the number of covered insulating gases j;

GWP<sub>j</sub> is the GWP<sub>20</sub> of the covered insulating gas j;

C<sub>bl,j</sub> is the baseline system capacity calculated pursuant to section 495-1.5(b) of this Part; and

2204.62 is the number of pounds in a metric ton.

(d) Emissions Limit. GIE owners shall establish their emissions limit using the following formula:

$$Emissions\ Limit = \frac{AEF}{100} \times CO_2e_{bl,j}$$

where:

Emissions Limit is the GIE Owner's emissions limit in metric tons CO<sub>2</sub>e;

AEF is the appropriate annual emission factor from section 495-1.5(e) of this Part; and

CO<sub>2</sub>e<sub>bl,j</sub> is the baseline CO<sub>2</sub>e capacity as calculated pursuant to section 495-1.5(c) of this Part.

(e) The annual emissions factor (AEF) for years 2028 through 2034 shall be 1.0, and 0.95 for 2035 and each subsequent year.

(f) Combining of GIE Owners. Whenever multiple GIE owners combine to be under the same GIE owner, the GIE owner's new emissions limit will be the sum of the emission limits that would have been established for each GIE owner had the GIE owners not combined. All GIE owners who have combined must notify the department that the combination has occurred within 30 days of the effective date of the combination. The notification must include the date of the combination, the names and identification numbers (if assigned) of the GIE owners who combined, the name of the new GIE owner following the combination, the emission limits previously assigned to each GIE owner, the new GIE owner's emissions limit, the reason(s) for the change, a description of the relationship between the entities being combined (e.g., that they have a common parent organization), and the appropriate attestation statement from section 495-1.8(c) of this Part.

(g) Splitting of a GIE Owner. Whenever a GIE owner splits into multiple GIE owners, the emissions limit that would have been assigned to the original GIE owner must be split and assigned to the new GIE owners proportionally based on each new GIE owner's equity share of the original system's capacity at the time of the split, calculated pursuant to section 495-1.6 of this Part. All GIE owners who have split from a former GIE owner must notify the department that the split has occurred within 30 days of the effective date of the split. The notification must include the date of the split, the name and identification number (if assigned) of the GIE owner that split, the names of the new GIE owners following the split, the emissions limit previously assigned to the GIE owner that split, the new GIE owner's baseline CO<sub>2</sub>e capacity at the time of the split, the new GIE owner's emissions limit, the reason(s) for the change, a description of the relationship between the entities being split (e.g., that they have a common parent organization but are independent limited liability companies), and the appropriate attestation statement from section 495-1.8(c) of this Part.

(h) The department will evaluate compliance with the emissions limit through the reporting requirements described in section 495-1.8 of this Part.

### **§ 495-1.6 GIE and Insulating Gas Inventories**

(a) GIE Inventory. As of January 1, 2025, GIE owners must establish and maintain a current and complete GIE inventory of each GIE device that uses a covered insulating gas. The GIE inventory will include the following information:

(1) GIE device information, including the following for each GIE device in the inventory;

(i) manufacturer name and date of manufacture;

(ii) manufacturer serial number or a unique identification number if the inventory includes more than one GIE with the same manufacturer serial number;

(iii) date purchased, date acquired, and location information, including if it is under or above ground;

(iv) GIE type, seal type (hermetic or non-hermetic), nameplate capacity, voltage capacity (in kilovolts), short-circuit rating (kiloampere); and

(v) the name, GWP20, and amount (in pounds) of each covered insulating gas when the device was acquired, at activation, and for any additional dates on which it was added to the device. Measurement procedures should follow those used in 495-1.6(b) of this Part.

(2) Operational and ownership status:

(i) Dates as to when the GIE device was active or changed operational status during the data year and for hermetically sealed GIE, when the device was connected through busbars or cables to an electrical power system.

(ii) Dates and types of actions that result in GIE being added or removed from the GIE inventory in the data year such as due to a change in ownership status. A GIE shall be considered as “removed from regular use” if it has not been active for five consecutive years or it is made inactive so it can be removed from the GIE Owner’s GIE Inventory such as to be disposed of or transferred to a new owner. A GIE shall be considered “transferred while in use” when the GIE device is removed from a GIE owner’s inventory without being taken out of active service (e.g., transferred to a new GIE owner while remaining in place and continuing operation).

(iii) For each GIE device that is jointly owned, each GIE owner’s name as well as equity share and GIE Owner Share as estimated per section 95354(a)(7)(B) of title 17 of the California Code of Regulations incorporated by reference herein, per section 495-1.15 of this Part.

(3) Failures and Repair information:

(i) Name or description of any SF<sub>6</sub>-containing replacement parts installed during the data year and the SF<sub>6</sub> capacity and manufacturer serial number.

(ii) The date, time, and location of any failures that resulted in the addition of new SF<sub>6</sub> GIE after the phase-down date in section 495-1.4 of this Part pursuant to section 495-1.10(b) of this Part and an explanation of the cause of the failure, including, in cases of imminent failure, the circumstances that led the GIE owner to believe failure was imminent, and the timeframe within which the GIE owner expected the GIE device to fail.

(b) Insulating Gas Inventory. As of January 1, 2025, GIE owners must establish and maintain a current and complete inventory of all covered gas containers and gas carts that contain covered insulating gas as well as covered insulating gas transferred out of GIE devices. This includes GIE that is “removed from regular use” per section 495-1.6(a)(2)(ii) of this Part. The GIE owner is responsible for ensuring that gas, gas containers, and gas carts are accounted for and that measurement devices are calibrated consistent with the procedures established

in sections 95354(b)-(m) of title 17 of the California Code of Regulations incorporated by reference herein, per section 495-1.15 of this Part. The following information must be included in the inventory:

- (1) The unique identification information for each gas container or cart.
- (2) The name, GWP20, and amount in pounds of each covered insulating gas in each gas container or cart.
- (3) Dates and the amount of gas transferred into or out of GIE devices including when “removed from regular use”.
- (4) The methods used to determine weights and volumes pursuant to the procedures referred to in section 95354(b)-(m) of title 17 of the California Code of Regulations incorporated by reference herein, per section 495-1.15 of this Part.

#### § 495-1.7 Calculating Annual GIE Emissions

(a) GIE owners must use the following equation to calculate their annual GIE emissions.

$$CO2e_i = \sum_j^n \frac{GWP_j \times Emissions_{j,i}}{2204.62}$$

where:

CO2e<sub>i</sub> is the GIE owner’s annual GIE emissions or total covered insulating gas emissions in metric tons CO2e in data year i;

n is the number of covered insulating gases j;

GWP<sub>j</sub> is the GWP20 of covered insulating gas j;

Emissions<sub>j,i</sub> is the annual emissions in pounds of covered insulating gas j in data year i calculated pursuant to title 17 of the California Code of Regulations section 95354.1(a) incorporated by reference herein, per section 495-1.15 of this Part; and

2204.62 is the number of pounds in a metric ton.

(b) Annual GIE Emissions Excluding Emergency Events. GIE owners may calculate annual GIE emissions excluding emergency events pursuant to section 495-1.11 of this Part. This calculation is subject to review by the department per section 495-1.8 of this Part.

$$ExCO2e_i = CO2e_i - \sum_j^n \frac{GWP_j \times E.E. Emissions_{j,i}}{2204.62}$$

where:

ExCO2ei is the GIE owner's annual GIE emissions or total covered insulating gas emissions in data year i, excluding emissions from emergency events for data year i, in metric tons CO2e;

n is the number of covered insulating gases j;

GWPj is the global warming potential of covered insulating gas j released during one or more emergency events;

E.E. Emissionsj,i is the annual emissions of gas j in pounds from all emergency event exemptions during data year i; and

2204.62 is the number of pounds in a metric ton.

### **§ 495-1.8 Reporting Requirements**

(a) Annual GIE Emissions Report. Beginning in calendar year 2026, any GIE owner with annual GIE emissions calculated pursuant to section 495-1.7(a) of this Part exceeding 7,500 metric tons CO2e must submit an annual GIE emissions report. The report will be submitted in a format to be determined by the department by June 1 and cover the previous data year. A single report must be submitted by each GIE owner regardless of

whether their GIE are located in a single physical location or multiple non-contiguous locations within New York State. The report must contain all of the following information:

- (1) GIE owner's name, identification number (if assigned by the department), telephone number, and the physical address and mailing address of the GIE owner's headquarters.
- (2) Location in New York State of records and documents maintained pursuant to this subsection, if the location is different from the GIE owner's physical address.
- (3) Name, official title, email address, telephone number, and mailing address of the authorized representative.
- (4) The data year for which the information is submitted.
- (5) Certain information required to be recorded pursuant to section 495-1.6 of this Part, including:
  - (i) a current and complete GIE inventory;
  - (ii) the total amount in pounds of covered insulating gas transferred out of the GIE in the data year;
  - (iii) a current and complete inventory of all covered gas containers and gas carts that contain covered insulating gas.
- (6) Information related to emissions:
  - (i) the GIE owner's emissions limit, baseline system capacity, and baseline CO<sub>2</sub>e capacity as calculated pursuant to section 495-1.5 of this Part; and
  - (ii) annual GIE emissions and annual GIE emissions excluding emergency events for the data year as calculated pursuant to section 495-1.7 of this Part and including information on emergency events per section 495-1.11 of this Part, where applicable.
- (7) The appropriate attestation statement from section 495-1.8(c) of this Part.

(b) One-Time Emissions Registration. Beginning in calendar year 2026, any GIE owner with annual GIE emissions calculated pursuant to section 495-1.7(a) of this Part that does not exceed 7,500 metric tons CO<sub>2</sub>e must register with the department. This includes GIE owners that previously submitted an annual GIE emissions report per subdivision (a) of this section but for whom annual GIE emissions no longer exceed 7,500 metric tons CO<sub>2</sub>e. The registration will include GIE owner information per section 495-1.8(a)(1)-(4) of this Part, emissions information per section 495-1.8(a)(6) of this Part, and an appropriate attestation statement per section 495-1.8(c) of this Part that the GIE owner's emissions do not exceed the 7,500 metric tons CO<sub>2</sub>e threshold. The registration information provided must match the records retained by the GIE owner pursuant to section 495-1.9 of this Part.

(c) Attestations. Any statements and/or information, including reports, registrations, notifications, and exemption requests submitted to the department pursuant to this regulation must include an attestation statement, signed by the authorized representative. The attestation statement shall certify under penalty of perjury that they are a responsible official with authority to submit the documents, and that all information provided is true and accurate to the best of the authorized representative's knowledge, after conducting due diligence. Submissions without this certification will be automatically denied.

(d) Authorized Representative. Within 30 days of the authorized representative of a GIE owner being relieved of their duties, the GIE owner must appoint a new authorized representative and notify the department of the change. The notification must include the name, official title, mailing address, phone number, and email address of the new authorized representative.

(e) Retirement and Changes in Ownership. Any GIE owner who permanently relinquishes ownership of all GIE that uses any covered insulating gas must notify the department that they are no longer subject to this Part within 30 days of the date the GIE was relinquished. The notification must contain the following information:

- (1) GIE owner name, phone number, and physical address.



(2) Authorized representative's name, official title, mailing address, phone number, and email address.

(3) The final date that the person was a GIE owner.

(4) The method by which the GIE was relinquished. Specifically, the GIE owner must indicate whether the GIE was sold, transferred, disposed of, or other. "Other" may only be reported if the GIE was not relinquished by way of sale, transfer, or disposal and an explanation must be provided. Where disposed, report the location(s) where the GIE were disposed of, either expressed as a physical street address or latitude and longitude.

(5) Whenever GIE are transferred to a third party, the name and contact information of the new GIE Owner and authorized representative.

(6) The appropriate attestation statement from section 495-1.8(c) of this Part.

### **§ 495-1.9 Record Keeping**

(a) As of January 1, 2025, GIE owners must retain the following records for five years and upon request, provide these records to the department within 30 days of the request:

(1) all data, measurements, and documentation required pursuant to section 495-1.6 of this Part, including estimation methods used, where applicable; the location of each GIE, covered gas container, and covered gas cart expressed as a physical address or a latitude and longitude; and the tare weight of each gas container, which must be the same every year;

(2) any other records used to determine or that can verify the quantities reported under section 495-1.8 of this Part or to justify the acquisition of SF<sub>6</sub> GIE after the phase-out date pursuant to section 495-1.4(a)(2)-(4) of this Part. This may include documentation regarding the purchase and acquisition of any

covered insulating gas and/or GIE such as contracts, material invoices, manufacturer warranties, and receipts;

(3) all notifications, requests, and reports sent to the department pursuant to this Subpart, and any associated correspondence with the department;

(4) any written safety or reliability requirements cited in SF<sub>6</sub> phase-out exemption requests pursuant to section 495-1.10(a) of this Part; and

(5) for GIE Owners that utilize a nameplate capacity in the calculation of Baseline CO<sub>2</sub>e Capacity that has been adjusted from the manufacturer's nameplate capacity, all data and measurements used in that calculation or needed to justify the use of an adjusted nameplate capacity.

#### **§ 495-1.10 SF<sub>6</sub> Phase-Out Exemption and GIE Failure**

(a) Pursuant to section 495-1.4(a)(1) of this Part, a GIE owner who wishes to acquire SF<sub>6</sub> GIE after the applicable phase-out date indicated in sections 495-1.4(b)-(c) of this Part may submit, in a manner to be determined by the department, an SF<sub>6</sub> phase-out exemption request that, if approved, would allow the GIE owner to acquire the requested SF<sub>6</sub> GIE.

(1) Beginning September 1, 2026, a GIE owner may submit an SF<sub>6</sub> phase-out exemption request if, based on bids received, one of the following conditions are met:

(i) non-SF<sub>6</sub> GIE of the equipment type and GIE characteristics necessary for the particular project(s) or application(s) are unavailable from at least two suppliers;

(ii) available non-SF<sub>6</sub> GIE cannot meet the size requirements for the particular project(s) or application(s), taking into consideration the physical size of the GIE, the physical constraints of the project location(s), including required clearance;

(iii) available non-SF<sub>6</sub> GIE cannot be used for the specific project(s) or application(s) due to incompatibility with existing equipment, wiring, or connectors; or

(iv) available non-SF<sub>6</sub> GIE cannot meet required technical specifications and/or are not suitable based on the GIE owner's documented safety or reliability requirements.

(2) Multiple GIE. Whenever a GIE owner intends to apply for an exemption for multiple SF<sub>6</sub> GIE of the same equipment type and GIE characteristics, for which the justification is identical, the GIE owner may submit a single request to cover all associated SF<sub>6</sub> GIE. In this case, the GIE owner must specify the number of SF<sub>6</sub> GIE it is requesting to acquire under the exemption and list the locations where the SF<sub>6</sub> GIE would be installed but does not need to identify which specific SF<sub>6</sub> GIE device would be installed at each location.

(3) Required Information. The SF<sub>6</sub> phase-out exemption request must contain the following information. If the department determines that the information provided as part of the request is insufficient to serve as the basis for an exemption under this section, the department may request additional information and/or deny the request.

(i) GIE owner's name and identification number (if assigned).

(ii) Authorized representative's name, official title, mailing address, phone number, and email address.

(iii) A description of the specific project(s) to which the SF<sub>6</sub> phase-out exemption would apply including location(s); a description of the type of location(s) such as underground vaults with a certain configuration or all substations with a certain configuration; whether it is an existing or new facility; if it has been subject to a process that significantly changes the in-place infrastructure such as through overhaul or re-powering; and the number of each type of GIE device that would be installed in each location.

(iv) Whether or not the requested GIE would initially be Spare GIE.

(v) Description and quantity of SF<sub>6</sub> GIE to be exempted, including but not limited to the GIE characteristics per sections 495-1.4(b)-(c) of this Part, equipment type, seal type, manufacturer and model, and nameplate capacity.

(vi) Manufacturer information including the names of manufacturers that were contacted about the availability of non-SF<sub>6</sub> GIE that might be appropriate for use in the type of project(s) and the dates contact was initiated; manufacturers that submitted bids; and a description of the universe of entities eligible to bid based on the bidding process used by the GIE owner (e.g., public solicitation, qualified vendor list).

(vii) The appropriate attestation statement from section 495-1.8(c) of this Part, including that the requirements pursuant to section 495-1.10(a)(4) of this Part were met.

(viii) The section number under which the exemption is being submitted, or Part 495-1(a)(1)(i)-(iv), and the applicable justifications for the exemption pursuant to section 495-1.10(a)(4) of this Part.

(4) Applicable Justifications. The following justifications may be provided as follows:

(i) For exemptions submitted under section 495-1.10(a)(1)(i) of this Part, the specific GIE characteristics per section 495-1.4(b)-(c) of this Part that cannot be met by at least two suppliers.

(ii) For exemptions submitted under section 495-1.10(a)(1)(ii) of this Part, the complete dimensions of each space within which requested SF<sub>6</sub> GIE would reside; the complete dimensions of each available non-SF<sub>6</sub> GIE that meets the GIE characteristics per sections 495-1.4(b)-(c) of this Part identified by the equipment manufacturer(s); the complete dimensions of the SF<sub>6</sub> GIE; and a picture showing the space where the SF<sub>6</sub> GIE would be installed. If the dimensions of the non-SF<sub>6</sub> GIE are smaller than the dimensions of the space available, but the

device cannot be placed into the space for another reason (e.g., the space lacks the necessary clearance, another obstacle prevents transport of the device to the space), the justification should also include a description of the constraint that clearly demonstrates why the device cannot be placed in the available space.

(iii) For exemptions submitted under section 495-1.10(a)(1)(iii) of this Part, a list of available non-SF<sub>6</sub> GIE that meet the GIE characteristics per sections 495-1.4(b)-(c) of this Part identified by the equipment manufacturer(s) and a justification that clearly explains why each of the available non-SF<sub>6</sub> GIE identified are incompatible and how the SF<sub>6</sub> GIE described in section 495-1.10(a)(1)(iv) of this Part is compatible.

(iv) For exemptions submitted under section 495-1.10(a)(1)(iv) of this Part, a list of available non-SF<sub>6</sub> GIE that meets the GIE characteristics per sections 495-1.4(b)-(c) of this Part identified by the equipment manufacturer(s) and a justification that clearly explains why each of the available non-SF<sub>6</sub> GIE identified fail to meet the technical specifications and/or the GIE owner's documented safety or reliability requirements and how the SF<sub>6</sub> GIE described in section 495-1.10(a)(1)(iv) of this Part does meet the requirements. If failure rates or other indicators of reliability are used, specific details must be provided. If the GIE owner's justification cites a company-specific policy or procedure that available non-SF<sub>6</sub> GIE does not currently meet and that is within the control of the GIE owner (e.g., the company requires three years of testing for new equipment), the justification must also provide an explanation as to how the GIE owner will address the situation to enable the transition to non-SF<sub>6</sub> alternatives in a timely manner.

(5) Any information submitted that relies on documentation provided by an equipment manufacturer must be dated less than 180 days prior to the submission of the SF<sub>6</sub> phase-out exemption request.

(6) A GIE owner with an approved SF<sub>6</sub> phase-out exemption may acquire the specific SF<sub>6</sub> GIE described in the SF<sub>6</sub> phase-out exemption within 24 months of the department's approval of the request. If the SF<sub>6</sub> GIE is not acquired within the specified timeframe, the GIE owner must submit another SF<sub>6</sub> phase-out exemption request. SF<sub>6</sub> GIE acquired utilizing an SF<sub>6</sub> phase-out exemption must be placed into active service or removed from active service within 24 months of the approval of the exemption request.

(b) In the event of a failure of a GIE device in active service that, in the estimation of the GIE owner may only be resolved through the activation of a spare GIE or acquisition of SF<sub>6</sub> GIE that would otherwise require an SF<sub>6</sub> exemption, the GIE owner may acquire an SF<sub>6</sub> GIE device with the same GIE characteristics as the failed or spare GIE without prior approval from the department but must maintain a record as part of the GIE inventory pursuant to section 495-1.6 of this Part for the data year in which the failure occurred.

#### **§ 495-1.11 Emergency Event Reporting**

(a) A GIE owner may request emissions from an emergency event to be exempted from the calculation of the GIE owner's annual GIE emissions as calculated pursuant to section 495-1.7(b) of this Part if it is demonstrated to the department's satisfaction that the release of covered insulating gases:

(1) could not have been prevented by the exercise of prudence, diligence, and care; and

(2) was beyond the control of the GIE owner.

(b) The following information must be included in the GIE Inventory per section 495-1.6 of this Part for the data year in which the emergency event occurred. If the department determines that the information is insufficient to demonstrate that the criteria of section 495-1.11(a)(1) or (2) of this Part were met, the department may request additional information or determine that the criteria were not met.

(1) The GIE owner's name, physical address, mailing address, e-mail address, and telephone number.

- (2) A detailed description of the emergency event, including but not limited to the following:
  - (i) the nature of the event (e.g., earthquake, fire, flood, act of vandalism); and
  - (ii) the date, time, and location of the event that occurred.
- (3) The manufacturer serial number or unique identifier, of all GIE that was affected by the event as specified in section 495-1.6 of this Part.
- (4) The type and amount of each covered insulating gas released (in pounds).
- (5) A statement and supporting documentation that the release occurred as a result of an emergency event.
- (6) The appropriate attestation statement from section 495-1.8(c) of this Part.

#### **§ 495-1.12 Treatment of Confidential Information**

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

#### **§ 495-1.13 Enforcement**

Any person who violates any provision of or who fails to perform any duty imposed by this Part shall be liable for all applicable penalties or sanctions set forth in article 71 of the Environmental Conservation Law.

#### **§ 495-1.14 Severability**

Each part of this Part is deemed severable, and in the event that any part of this Part is held to be invalid, the remainder of this Part shall continue in full force and effect.

### § 495-1.15 Reference Material

This Part contains references to documents for information as to the standards to be met or guidelines and methodology to be used in meeting specific requirements. The availability of such documents is noted below, which correlates specific references in CFR (Code of Federal Regulations) or other sources. In addition, copies of referenced material are available for public inspection and copying at the Office of Climate Change in the Albany office of the Department of Environmental Conservation, or at the Albany office of the New York State Department of State.

| Reference Material   | Availability |
|--|--------------|
| Section 95357.2(c), Title 17 of the California Code of Regulations (Effective January 1, 2022)     | 495-1.15(a)  |
| Section 95354(a)(7)(B), Title 17 of the California Code of Regulations (Effective January 1, 2022) | 495-1.15(a)  |
| Section 95354(b)-(m), Title 17 of the California Code of Regulations (Effective January 1, 2022)   | 495-1.15(a)  |
| Section 95354.1(a), Title 17 of the California Code of Regulations (Effective January 1, 2022)     | 495-1.15(a)  |
| IPCC Assessment Report   | 495-1.15(b)  |
| 40 CFR §98.433(a) (Effective November 29, 2013)  | 495-1.15(c)  |

(a) Any volume of the California Code of Regulations (CCR) may also be obtained from the California Office of Administrative Law, <https://oal.ca.gov/>.

(b) Any report by the Intergovernmental Panel on Climate Change can also be obtained from the IPCC Secretariat, <https://www.ipcc.ch/>.



(c) Any volume of the Code of Federal Regulations (CFR) may also be obtained from the National Archives and Records Administration, <https://www.archives.gov/federal-register/cfr> or <https://www.ecfr.gov/>.

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

### **§ 495-2.1 Applicability**

(a) This Subpart applies to any person that sells, imports, leases, rents, manufactures, distributes for sale, offers for sale, makes available for sale or distribution, purchases or receives for sale or distribution, or attempts to purchase or receive for sale or distribution, installs or that owns, operates, or uses for commercial purposes or otherwise enters into commerce in the State of New York, SF<sub>6</sub> or equipment containing SF<sub>6</sub> in New York State.

(b) This Subpart also applies to any person that supplies regulated substances as defined in this Subpart, or equipment and products containing such regulated substances.

(c) The requirements contained in sections 495-1.12-14 of this Part also apply to this Subpart.

### **§ 495-2.2 Definitions**

(a) For the purpose of this Subpart, the definitions provided in section 495-1.3 of this Part apply.

(b) For the purpose of this Subpart, the following definitions also apply:

(1) 'Arc quenching medium.' The use of a material to interrupt an electrical arc.

(2) 'Bulk regulated substances.' Regulated substances of any amount in a container for the transportation or storage of that substance, such as cylinders, drums, ISO tanks, and small cans. A regulated substance that must first be transferred from a container to another container, vessel, or piece of equipment in order to realize its

intended use is a bulk substance. A regulated substance contained in a manufactured product such as an appliance or an aerosol can is not a bulk substance.

(3) 'Chamber cleaning.' The process of using fluorinated gases to remove excess materials from chemical vapor deposition chamber walls to prevent contamination of wafers to be processed.

(4) 'Chemical vapor deposition or CVD.' Deposition of thin films on wafers by placing the wafers in a mixture of gases, including nitrogen or other gas used as a carrier, which react at the surface of the wafers.

(5) 'Destroy.' To cause the expiration of a previously produced substance to the destruction efficiency actually achieved. Such destruction does not result in a commercially useful end product.

(6) 'Dielectric medium.' The use of a material that does not conduct electricity but can sustain an electric field, with electrical conductivity of less than a millionth ( $10^{-6}$ ) of a siemens.

(7) 'Distributor.' A person to whom a regulated substance is delivered or sold for purposes of export, subsequent sale or delivery in New York State, or any person who imports regulated substances from outside of New York State to distribute and/or sell in New York State, or any person who acts as an agent or broker in buying regulated substances for distribution or sale in New York State. Distributor does not include owners or operators of equipment who sell or transfer recovered substances to another entity for reclaim or destruction or persons who return products to the seller. Distributors may include wholesale purchasers who intend to resell, deliver, or otherwise supply regulated substances to facilities in New York State.

(8) 'Etching.' A chemical reactive process for selectively removing material on a wafer using fluorinated, ionized gases.

(9) 'Equipment calibration.' The process of establishing the relationship between a measuring device and the units of measure. This is done by comparing a device or the output of an instrument to a standard having known measurement characteristics.

(10) ‘Investment casting.’ The process of casting magnesium into a mold produced by surrounding, or investing, an expendable pattern with a refractory material. Also called precision casting or lost wax process.

(11) ‘Laboratory fume hood.’ A boxlike structure enclosing a source of potential air contamination, with one open or partially open side, into which air is moved for the purpose of containing and exhausting air contaminants, generally used for bench-scale laboratory operations but not necessarily involving the use of a bench or table.

(12) ‘Manufacture.’ To complete the manufacturing, production, or assembly processes of a substance, product, or piece of equipment such that it is ready for initial sale, distribution, use or operation.

(13) ‘Manufacturer or Producer.’ Any person that produces, manufactures, formulates, or otherwise creates a bulk regulated substance or products or equipment that contains regulated substances in its final form for distribution or use at or outside of a manufacturing or production facility. This does not include reuse or recycling of a substances or the creation and destruction of intermediate substances in a single process with no storage of the intermediate substances.

(14) ‘Product.’ An item or category of items manufactured from raw or recycled materials which performs a function or task and is functional upon completion of manufacturing. The term includes but is not limited to equipment that contains regulated substances or containers of regulated substances that is made available for immediate use rather than provided in bulk.

(15) ‘Reclaimer.’ Any person who accepts regulated substances for the purposes of reclaim and subsequent sale to a new owner.

(16) ‘Regulated substance.’ A substance that contains a fluorinated greenhouse gas and has a GWP<sub>20</sub> greater than 10. Regulated substances must be referred to using standard naming conventions such as from the IPCC Assessment Report, Chemical Abstracts Service, or International Union of Pure and Applied Chemistry. A

substance is considered a regulated substance if the GWP20 is unknown, but the substance may be reasonably anticipated to cause or contribute to anthropogenic climate change.

(17) 'Research.' Investigations conducted at a research facility.

(18) 'Research facility.' A physical location consisting of one or more buildings, such as a campus, which are all part of a single entity and whose primary purpose is to conduct research and/or provide education. The facility is under close supervision of technically trained personnel and is not engaged in the manufacture of products for sale in commerce or other off-site distribution. A research facility must be a U.S. government owned national laboratory or an accredited post-secondary institution that grants advanced academic degrees. Accreditation must be from a U.S. Department of Education approved accrediting agency.

(19) 'Sand casting' The process of producing a part by forming a mold from a sand mixture and pouring molten magnesium into the cavity in the mold.

(20) 'Supplier.' A producer, manufacturer, or distributor of any applicable substance or equipment.

(21) 'Tracer gas testing.' The process of marking air or other media with a gas or other substance, which is released into an enclosure, laboratory fume hood, room, building, or environment to detect, measure, monitor, or evaluate flow rate, leakage, or dispersion or dilution characteristics.

### **§ 495-2.3 Restrictions on Use, Sale, Possession, and Release of SF<sub>6</sub>**

(a) The following restrictions apply beginning on the dates specified in section 495-2.3(b) of this Part.

(1) No person shall manufacture, produce, distribute, sell, or otherwise transfer SF<sub>6</sub> or equipment pre-charged with SF<sub>6</sub> in New York State, except when the intended use is provided in section 495-2.4 of this Part.

(2) No person shall purchase or use SF<sub>6</sub> in New York State, except when the intended use is provided in section 495-2.4 of this Part.

(3) No person shall own or otherwise possess SF<sub>6</sub> in New York State after one year from the effective date of this Part, except when the intended use is provided in section 495-2.4 of this Part.

(4) No person shall intentionally emit SF<sub>6</sub> in New York State.

(b) Section 495-2.3(a) of this Part shall apply after the effective dates specified in the following table:

| Application   | Effective Date  |
|---|-----------------|
| (1) Tracer gas testing, magnesium sand casting, magnesium investment casting, or military applications. | January 1, 2027 |
| (2) All other applications.   | January 1, 2025 |

#### § 495-2.4 Acceptable Uses of SF<sub>6</sub>

(a) The requirements of section 495-2.3 of this Part do not apply to the following uses:

- (1) Use in chemical vapor deposition (CVD) chamber cleaning.
- (2) Use in etching.
- (3) Use as a dielectric medium including equipment containing SF<sub>6</sub> for use as a dielectric medium.
- (4) Use as an arc quenching medium including equipment containing SF<sub>6</sub> for use as an arc quenching medium.
- (5) Use in one-time testing per laboratory fume hood.
- (6) Medical uses, which includes only the following applications:
  - (i) injection or other entry of SF<sub>6</sub> into a human or animal body for the purpose of improving health; or
  - (ii) use of SF<sub>6</sub> in a diagnostic tool in order to either identify a disease or condition by its outward signs and symptoms or analyze the underlying physiological or biochemical cause(s) of a disease or condition; or

- (iii) use of SF<sub>6</sub> in a medical treatment process for a disease or other medical condition.
- (7) Use in testing nuclear power plant control room emergency ventilation systems.
- (8) Use in equipment calibration and in testing to find alternatives to SF<sub>6</sub> use.
- (9) Use in testing hyperspectral remote sensing systems to detect toxic gases in the infrared portion of the spectrum.
- (10) Use for research in a research facility.

### **§ 495-2.5 Suppliers of Regulated Substances and Products Containing Regulated Substances**

(a) General Registration. On or before January 1, 2025, any person who supplies (manufacturers, produces, or distributes) bulk regulated substances or products containing regulated substances intended for sale or use in New York State or who reclaims regulated substances collected in New York State must register with the department in a manner determined by the department. Any person who begins conducting business by supplying, manufacturing, producing, or distributing bulk regulated substances or products containing regulated substances intended for sale or use in New York State or by reclaiming regulated substances collected in New York State after January 1, 2025, must register with the department no later than 30 days after the start of their business operations. Such registration must include the following:

- (1) business name, mailing address, including address, city, state, and zip code;
- (2) name, title, phone number, and email address of an authorized representative; and
- (3) name and mailing address for each manufacturing, distribution, wholesale, destruction, or reclaim facility under the operational control of the person or business registered under this subdivision.

(b) Manufacturer Registration. In addition to the information required in subdivision (a) of this section, any person who manufactures for sale or entry into commerce in the State of New York products that contain a regulated substance must also provide the following information as part of their registration:

(1) A list of all products that are intended to contain regulated substances and are applicable to the manufacturer.

(2) A list of regulated substances that are being used or are intended to be used with products identified in paragraph (1) of this subdivision.

(3) Signature and certification by the authorized representative for the manufacturer which includes the statement, “I certify under penalty of law that the statements and information submitted in this document are to the best of my knowledge and belief true, accurate, and complete and I acknowledge the regulatory requirements of 6 NYCRR Part 495.”

(c) Annual Reporting. Beginning in calendar year 2026, each supplier and reclaimer indicated in subdivision (a) of this section must submit an annual report to the department on March 31st for the previous year in a manner to be determined by the department. The information provided must be reviewed against the records required under subdivision (d) of this section to ensure accurate transcription of chemical names, quantities, and units. The report must include:

(1) Total quantity in mass of regulated substances supplied to New York State in the calendar year. For substances contained within pre-charged products, the quantities shall be estimated using 40 CFR §98.433(a), which is incorporated by reference herein, per section 495-1.15 of this Part, where imported refers to units supplied to New York State. The quantity reported shall include the following information:

(i) total statewide annual aggregated weight in pounds of each type of regulated substance purchased or received for subsequent resale or delivery in New York State for any purpose other than reclamation or destruction; and

(ii) total statewide annual aggregated weight in pounds of each type of regulated substance sold, supplied, or distributed in New York State.

(2) Total quantity in mass of regulated substances collected in New York State that were reclaimed or destroyed in the calendar year, including the following:

(i) total statewide annual aggregated weight in pounds of each type of regulated substance collected in New York State that was reclaimed or supplied to another entity for purposes of reclamation; and

(ii) total statewide annual aggregated weight in pounds of each type of regulated substance collected in New York State that was destroyed or supplied to another entity for purposes of destruction in the calendar year.

(d) Record Keeping. As of the effective date of this regulation, suppliers and reclaimers indicated in subdivision (a) of this section must maintain for five years and make available within 90 days upon request by the department a copy of the following information, where applicable.

(1) Invoices of all regulated substances distributed or received through sale or transfer, indicating business names, business addresses, the date of sale or transfer, the quantity of each type of regulated substance sold or transferred, and the name and email address of an authorized representative for the supplier and recipient.

(2) A list of all known suppliers, purchasers, or other recipients for the previous five years, including business names, business address, and the name and email address of an authorized representative for each business.

(3) Facility information, including the mailing address and the name, title, and email address for an authorized representative for each manufacturing, distribution, wholesale, destruction, or reclaim facility under the operational control of the person or business registered under this subdivision.

(4) Any other records used to determine or that can verify the quantities reported under subdivision (c) of this section.