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## **ENVIRONMENTAL PROTECTION**

### **AIR QUALITY, ENERGY, AND SUSTAINABILITY**

#### **Greenhouse Gas Monitoring and Reporting**

**Proposed New Rules: N.J.A.C. 7:27E**

**Proposed Amendments: N.J.A.C. 7:27-21.2, 21.3, and 21.5; and 7:27A-3.2, 3.5, and 3.10**

Authorized By: Shawn M. LaTourette, Acting Commissioner, Department of Environmental Protection.

Authority: N.J.S.A. 13:1B-3, 13:1D-9, 26:2C-1 et seq., and 26:2C-37 et seq., specifically, 26:2C-41.

Calendar Reference: See Summary below for explanation of exception to calendar requirement.

DEP Docket Number: 06-21-05.

Proposal Number: PRN 2021-058.

A public hearing concerning this notice of proposal will be held on July 22, 2021, at 1:00 P.M. The public hearing will be conducted virtually through the Department of Environmental Protection's (Department) video conferencing software, Microsoft Teams. A link to the virtual public hearing with telephone call-in option will be provided on the Department's website at <https://www.nj.gov/dep/rules/notices.html>.

Submit comments by August 20, 2021, electronically at <http://www.nj.gov/dep/rules/comments>. Each comment should be identified by the applicable N.J.A.C. citation, with the commenter's name and affiliation following the comment. The

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Department encourages electronic submittal of comments. Alternatively, written comments may be submitted on paper to:

Alice A. Previte, Esq.

Attention: DEP Docket Number 06-21-05

Office of Legal Affairs

Department of Environmental Protection

401 East State Street, 7th floor

Mail Code 401-04L

PO Box 402

Trenton, N.J. 08625-0402

If you are interested in providing oral testimony or submitting written comments at the virtual public hearing, please email the Department at [ghgmrr@dep.nj.gov](mailto:ghgmrr@dep.nj.gov), no later than 5:00 P.M. on July 20, 2021, with your contact information (name, organization, telephone number, and email address). You must provide a valid email address, so the Department can send you an email confirming receipt of your interest to testify orally at the hearing and provide you with a separate option for a telephone call-in line if you do not have access to a computer or mobile device that can connect to Microsoft Teams. This hearing will be recorded. It is requested (but not required) that anyone providing oral testimony at the public hearing provide a copy of any prepared remarks to the Department through email.

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The proposed new rules and amendments will become operative 60 days after their adoption (see N.J.S.A. 26:2C-8). The notice of proposal may be viewed or downloaded from the Department's website at <http://www.nj.gov/dep/rules>.

The agency proposal follows:

### **Summary**

Since the Department has provided a 60-day comment period on this notice of proposal this notice is excepted from the rulemaking calendar requirement pursuant to N.J.A.C. 1:30-3.3(a)5.

The Department is proposing new rules and amendments as part of a comprehensive strategy to implement the provisions of the Global Warming Response Act (GWRA), N.J.S.A. 26:2C-37 et seq. The GWRA requires New Jersey to reduce greenhouse gas emissions and short-lived climate pollutants. Specifically, greenhouse gas emissions must be reduced to 80 percent less than the 2006 level of Statewide greenhouse gas emissions by 2050 (80x50 goal). As part of an overall strategy to meet the 80x50 goal, Governor Murphy issued Executive Order No. 100 (2020) (EO No. 100), which, in accordance with the GWRA, directs the Department to, among other things, establish a greenhouse gas monitoring and reporting program to identify all significant sources of Statewide greenhouse gas emissions and monitor progress towards the 80x50 goal. See also N.J.S.A. 26:2C-41. In response to EO No. 100, Commissioner Catherine McCabe issued Administrative Order 2020-01 (AO No. 1), which directs the Department to propose rules that establish a greenhouse gas monitoring and reporting program and reduce

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emissions of CO<sub>2</sub> and short-lived climate pollutants, as well as identify the rules and programs that should be updated to better respond to the challenges presented by climate change.

As discussed in more detail below, the Department has published a greenhouse gas inventory report since 2008. For the inventory, the Department utilizes data from existing Federal and State information sources. Although many sources already report information pursuant to various Federal and State legislation, rules, and/or regulations, the Department has identified operations that emit methane (CH<sub>4</sub>) and halogenated gases, and which do not currently report these emissions. Accordingly, the Department now proposes to amend its emission statement rules to add a reporting threshold for methane, so that all sources that emit, or have the potential to emit, methane equal to, or more than, 100 tons per year, will have to report those emissions. The Department also proposes new rules to require natural gas public utilities (“gas utilities” or “gas public utilities”) to submit a report with information about their distribution pipelines, including leaks and maintenance events that emit methane, the primary component of natural gas. Lastly, the Department proposes new rules to track emissions of halogenated gases from facilities with large, stationary, non-residential refrigeration systems.

Both the emissions inventory and the proposed reporting program are important parts of the State’s efforts to mitigate climate change, which begin with reliable emissions data. This rulemaking is one aspect of the Department’s climate change mitigation program. If the Department determines that additional monitoring and reporting is required to further inform

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the State's greenhouse gas emissions inventory to monitor progress towards the 80x50 goal, the Department will conduct additional rulemaking, as appropriate.

The Department held a stakeholder meeting on February 21, 2020, to discuss this proposed rulemaking. The public information meeting materials are available on the Department's website at <https://www.nj.gov/dep/njpac/>.

This Summary is organized by topic; consequently, some provisions of the new rules and amendments, such as the definitions at proposed N.J.A.C. 7:27E-1.2, may be discussed in several places throughout the Summary.

### **Global Warming Response Act**

In 2007, New Jersey's Legislature passed the GWRA, which recognizes that climate change, primarily caused by emissions of heat-trapping greenhouse gases, poses a threat to the earth's ecosystems and environment. See N.J.S.A. 26:2C-38. Additionally, the Legislature recognized that reducing emissions of greenhouse gases is not only possible, but necessary, to prevent further detrimental impacts on human, animal, and plant life. In 2019, the Legislature amended the GWRA to acknowledge the role that short-lived climate pollutants play in climate change and to require the State to include short-lived climate pollutants in its comprehensive strategy to reduce greenhouse gas emissions. See P.L. 2019, c. 197.

The GWRA requires that Statewide greenhouse gas emissions be reduced to 80 percent less than the 2006 level by 2050 (80x50 goal). To determine the State's baseline emissions profile from which to calculate the 80x50 goal and track the State's progress in meeting the

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greenhouse gas emissions reduction goal, the GWRA required the Department to establish a Statewide greenhouse gas emissions inventory. N.J.S.A. 26:2C-40. The Department published the initial inventory in November 2008, and has released inventory updates periodically since then. The inventory reports include Statewide greenhouse gas emissions data from significant sources and annual changes in emissions levels. The most recent inventory, published in 2019, is the Department's Statewide Greenhouse Gas Emissions Inventory for 2018 (2018 Inventory), available at <https://www.nj.gov/dep/ages/docs/nj-ghg-inventory-report-2018.pdf>.

The GWRA, at N.J.S.A. 26:2C-41, requires the Department to adopt rules to establish a greenhouse gas monitoring and reporting program to require reporting of greenhouse gas emissions, including short-lived climate pollutants, from significant sources, so that the Department can monitor progress toward the 80x50 goal. Significant sources include manufacturers and distributors of fossil fuels, such as oil refineries, oil storage facilities, natural gas pipelines, fuel wholesale and retail distributors, gas public utilities, electric generating entities, and other entities that the Department determines are significant emitters of greenhouse gases. N.J.S.A. 26:2C-41.

As discussed in more detail below, the Department, through its Statewide emissions inventory, has been tracking most significant sources of greenhouse gas emissions, as these sources are already required to report to State and Federal agencies, from which the Department obtains the emissions data. Therefore, the Department is not proposing to require these sources to again report their emissions as part of its proposed monitoring and reporting program. The Department has, however, identified significant sources of methane and

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halogenated gases, which are potent greenhouse gases and short-lived climate pollutants, where additional information would enhance the Department's inventory reporting. The Department is, therefore, proposing to require these sources to monitor and report their emissions, as explained below.

### **The Statewide greenhouse gas emissions inventory**

The Department has detailed the methods it used to derive the emissions estimates for New Jersey's Greenhouse Gas Inventory in the report "New Jersey Greenhouse Gas Inventory and Reference Case Projections 1990 – 2020" (Inventory and Projections), published November 2008 and available at

[https://www.nj.gov/dep/ages/docs/Greenhouse%20Gas%20Inventory%201990-](https://www.nj.gov/dep/ages/docs/Greenhouse%20Gas%20Inventory%201990-2020_2008.pdf)

[2020\\_2008.pdf](https://www.nj.gov/dep/ages/docs/Greenhouse%20Gas%20Inventory%201990-2020_2008.pdf). The Department described any modifications in methodologies from the Inventory and Projections in the appendix to each of the subsequent New Jersey Greenhouse Gas Emissions Inventories. See 2011 Edition, 2012 Edition, 2014 Edition, 2017 Edition, and 2019 Edition, available at <https://www.nj.gov/dep/ages/ghginventorvarchive.html>.

The Department reports greenhouse gas emissions in metric tons (MT) of carbon dioxide equivalent (CO<sub>2</sub>e). "Carbon dioxide equivalent" or "CO<sub>2</sub>e" is "a term for describing different greenhouse gases in a common unit. For any quantity and type of greenhouse gas, CO<sub>2</sub>e signifies the amount of carbon dioxide (CO<sub>2</sub>) that would have the equivalent global warming impact, based on their relative global warming potential (GWP)." New Jersey Department of Environmental Protection, New Jersey's Global Warming Response Act 80x50 Report, October 15, 2020, Executive Summary, p. v, Fn 1,

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<https://www.nj.gov/dep/climatechange/docs/nj-gwra-80x50-report-2020.pdf> (2050 Report).

GWP is a measure of how much energy the emissions of one ton of a gas will absorb over a given period of time, relative to the emissions of one ton of carbon dioxide (CO<sub>2</sub>). As explained in the 2050 Report, in order to determine the equivalent quantity of CO<sub>2</sub>e “[f]or a given gas, the mass is multiplied by its Global Warming Potential (GWP), a factor representing how many times stronger the gas is in terms of warming compared to carbon dioxide.” 2050 Report at 4, n.2. In addition to having different warming potentials, “[d]ifferent gases persist in the atmosphere for different lengths of time, so GWP values have specific time frames associated with them; when adding CO<sub>2</sub>e values together in a unified inventory, all gases must be measured across the same time duration.” *Id.*

The Intergovernmental Panel on Climate Change (IPCC) has published GWP values for different greenhouse gases based on a 20-year and a 100-year time horizon. As noted in the 2050 Report, the United States Environmental Protection Agency (EPA) and many institutions and organizations utilize the 100-year GWP values in the IPCC’s 2007 Fourth Assessment Report. *Id.*; see IPCC, 2007: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (AR4), Chapter 2, pp. 212-13, Table 2.14. (2007), <https://www.ipcc.ch/site/assets/uploads/2018/02/ar4-wg1-chapter2-1.pdf>. Although the IPCC published its Fifth Assessment Report with GWP values, the Department used the AR4 100-year GWP values for its 2018 Statewide Greenhouse Gas Emissions Inventory Report and the 2050 Report. The Department used these GWP values to maintain consistency with prior New

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Jersey Greenhouse Gas Emission Inventories and EPA national inventories when calculating CO<sub>2</sub>e emissions. 2050 Report at 4, n.2; see IPCC, 2013: Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (September 2013)(AR5), Chapter 8, pp. 731-37, Appendix 8.A, [https://archive.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5\\_Chapter08\\_FINAL.pdf](https://archive.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_Chapter08_FINAL.pdf).

In assembling the Greenhouse Gas Inventory Report, the Department obtains emissions data from various resources. Electric generation units, oil refineries, bulk storage facilities, and other large commercial (for example, hospitals and universities) and industrial entities (for example, manufacturing facilities) in New Jersey submit their greenhouse gas emissions through an annual Emission Statement to the Department, pursuant to N.J.A.C. 7:27-21. Further, the United States Department of Energy's Energy Information Administration (EIA) publishes state-specific annual fuel sales to the residential, commercial, and industrial sectors, and for non-road equipment, which the Department uses to calculate Statewide emissions from these categories. Fuel sales by manufacturers and distributors of fossil fuels are required to be reported pursuant to the Federal Energy Administration Act of 1974, PubL 93-275. With respect to on-road transportation, in 2018, New Jersey switched methodologies, electing to use the EPA's Motor Vehicle Emissions Simulator (MOVES) model to calculate emissions for its most recent greenhouse gas inventories (2016 through 2018). MOVES uses vehicle miles traveled information compiled by the New Jersey Department of Transportation (NJDOT) that is required to be submitted by Federal law to calculate detailed assessments of greenhouse gas emissions,

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on-road black carbon, and conventional air pollutants. For estimates prior to 2016, New Jersey used fuel consumption data from the EIA to estimate on-road emissions.

The Department also utilizes emission accounting tools and models, such as the EPA's State Inventory Tool (USEPA SIT) and the United States Climate Alliance (USCA) Short-Lived Climate Pollutants (SLCP) Tool to calculate estimated emissions of halogenated gas, the majority of which are hydrofluorocarbons (HFCs) used as refrigerants, and methane. The USEPA SIT calculates estimated New Jersey methane emissions from the natural gas transmission and distribution system located within the State's borders by using emission factors assigned to miles of transmission line, number of compressor stations, miles of distribution line, and number of service lines. New Jersey's emission inventory accounts for the likelihood of natural gas leaks by assigning a higher emission factor to cast iron and unprotected steel lines compared to protected steel and plastic lines. To calculate estimated emissions of HFCs, the Department uses the USCA SLCP tool, which uses a number of variables as proxies to estimate emissions from various sources.

### **Greenhouse gas monitoring and reporting program**

As explained above, the Department has been utilizing data submitted to State and Federal agencies for the State's inventory of greenhouse gas emissions from significant sources, which enables the Department to substantially monitor progress toward achieving the 80x50 goal. N.J.S.A. 26:2C-41. However, reporting gaps exist for methane emissions, which make up more than half of the State's short-lived climate pollutant inventory, and for halogenated gases,

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which make up the majority of the State's remaining short-lived climate pollutant emissions inventory. The Department is, therefore, proposing new rules and amendments to address these gaps.

The Department is proposing to amend the emission statement rules, N.J.A.C. 7:27-21, to require sources of methane with a potential to emit 100 tons or more annually to report their emissions. The Department is also proposing new N.J.A.C. 7:27E to include additional methane reporting requirements for gas public utilities, as well as reporting requirements for users of halogenated gases. Most halogenated gases are hydrofluorocarbons (HFCs) with high GWP and are primarily used as refrigerants. The applicability of this new chapter is set forth at N.J.A.C. 7:27E-1.1.

Specifically, at new N.J.A.C. 7:27E-3, the Department proposes to require gas utilities to submit an annual report on replacement of mains and service lines in the State and to quantify maintenance venting events, referred to as blowdown events, which contribute to the State's methane emissions. At N.J.A.C. 7:27E-2, the Department is proposing registration, recordkeeping, and reporting requirements for facilities with a refrigeration system requiring 50 pounds or more of a high-GWP refrigerant, so that the Department can calculate emissions from maintenance of and leaks from these sources.

Though separate from N.J.A.C. 7:27, the general provisions of proposed new N.J.A.C. 7:27E are modeled after, or refer to, the general provisions at N.J.A.C. 7:27. Specifically, proposed new N.J.A.C. 7:27E-1.4, Confidentiality, refers to the procedures at N.J.A.C. 7:27-1.6 through 1.30, which govern the protection of confidential information submitted to the

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Department. Proposed new N.J.A.C. 7:27E-1.5, Right to enter, sets forth the scope of the Department's authority to enter and inspect facilities subject to N.J.A.C. 7:27E. The Department proposes new N.J.A.C. 7:27E-1.6, Severability, which is comparable to existing N.J.A.C. 7:27-1.37. Proposed new N.J.A.C. 7:27E-1.7, Civil administrative penalties and requests for administrative hearings, indicates that the penalties for violations of proposed new N.J.A.C. 7:27E, as well as the administrative procedure for requesting an adjudicatory hearing, are set forth at proposed amended N.J.A.C. 7:27A, Air Administrative Procedures and Penalties.

#### **Emission Statements, N.J.A.C. 7:27-21**

The New Jersey Emission Statement Program establishes a periodic, comprehensive inventory of air pollution from stationary sources in the State, as required by the Clean Air Act, 42 U.S.C. § 7511a(a)(3)(B). The Department's existing emission statements rules at N.J.A.C. 7:27-21 apply to a facility if the facility emits, or has the potential to emit, directly or indirectly, to the outdoor atmosphere, any of the air contaminants listed in the rules, in an amount greater than, or equal to, the corresponding reporting threshold. Under the existing rules, a facility is required to report methane emissions if the facility's potential to emit volatile organic compounds (VOC) is equal to, or greater than, 25 tons per year, or if the facility's potential to emit any of the listed air contaminants is equal to, or greater than, the reporting threshold. See N.J.A.C. 7:27-21.3(b)2. The Department proposes to amend N.J.A.C. 7:27-21.2(a) to add a methane reporting threshold of 100 tons per year, consistent with the operating permit threshold for methane. See N.J.A.C. 7:27-22.2(a)2. The Department proposes to amend

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N.J.A.C. 7:27-21.3(b)2 to remove methane from the list of contaminants for which emissions information is required; proposed amended N.J.A.C. 7:27-22.2, Table 1, expressly includes methane, making its inclusion at paragraph (b)1 unnecessary.

The Department anticipates that facilities subject to the proposed amended Emission Statements Rules will include landfills and sewage treatment facilities, natural gas compressor stations, and other natural gas facilities. At the time of this rulemaking, according to the Department's available information, the Department estimates there are at least 26 facilities in New Jersey that meet the threshold for methane of 100 tons per year and are, therefore, major sources with an operating permit pursuant to N.J.A.C. 7:27-22. Of those, 17 facilities already report their methane emissions in an emission statement because they meet the VOC threshold at existing N.J.A.C. 7:27-21.3(b)2. The remaining nine facilities are public- or privately owned landfills. The proposed amendments at N.J.A.C. 7:27-21.2(a) will ensure that, in addition to the 17 facilities currently reporting, those nine facilities will also report their methane emissions through the Emission Statement Program. Therefore, amending N.J.A.C. 7:27-21.2(a) to require methane emissions reporting, effectively extends the requirement at existing N.J.A.C. 7:27-21.3(b)2 to include additional entities.

In addition to those facilities that are major sources subject to operating permits pursuant to N.J.A.C. 7:27-22, other facilities may meet the 100 tons per year reporting threshold for methane based on their "potential to emit" methane. Existing Subchapter 21 defines "potential to emit" to include fugitive emissions and insignificant source operations. See N.J.A.C. 7:27-21.1. Therefore, a compressor station, which is an industrial facility that

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maintains the flow and pressure of natural gas by receiving gas from the pipeline, re-pressurizing it, and sending it back into the pipeline system, may be subject to Subchapter 21 if its potential to emit methane meets the proposed threshold.

N.J.A.C. 7:27-21.1 defines reporting year as the calendar year during which emissions reported in an emission statement were emitted. The Department proposes at N.J.A.C. 7:27-21.2(a) to apply the methane reporting threshold beginning with reporting year 2022. A facility that is newly required to report methane emissions will begin the initial reporting period on the first of the month following the operative date of the amendments, through the end of that calendar year, and submit an emission statement in 2023. After the initial reporting period, the facility will report methane emissions on a calendar-year basis. A facility that is already required to report methane emissions pursuant to existing N.J.A.C. 7:27-21.3(b)2 must continue to report for the entire calendar year of 2022 and submit its emission statement in 2023. Emission statements submitted on paper due to confidentiality claims or on hardship grounds, consistent with N.J.A.C. 7:27-21.4(d), are due annually by April 15. Emission statements submitted electronically are due annually by May 15.

The emission statement shall report the actual air contaminant emissions released from the facility, directly or indirectly, into the outdoor atmosphere, during the year (or portion of a year), and shall include the information required pursuant to N.J.A.C. 7:27-21.5, Required contents of an Emission Statement. To simplify reporting of emissions from a source operation with minimal emissions, N.J.A.C. 7:27-21.5(g) allows an owner or operator to report the operation's potential to emit an air contaminant in place of its actual emissions, if, among other

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conditions, the potential to emit is less than or equal to the criteria amount at N.J.A.C. 7:27-21.5(g)3, Table 2. The Department is proposing to amend Table 2 to add methane with a criteria amount of 1.00 ton per year.

#### Emissions fee

An emissions fee applies to those facilities that are major sources and have an operating permit pursuant to existing N.J.A.C. 7:27-22, Operating Permits. See N.J.A.C. 7:27-22.31.

Facilities with an operating permit will not be subject to an additional emissions fee as a result of adding a reporting threshold for methane. There is no fee for facilities that must submit an emission statement and that are not subject to existing N.J.A.C. 7:27-22.

#### Reporting

Since 2006, facilities subject to the Emission Statement Program at N.J.A.C. 7:27-21 have submitted annual emission statements using RADIUS, the Department's Remote Access Data Information User System software. Those submission requirements are unchanged. Most facilities subject to the proposed amendments at N.J.A.C. 7:27-21 are already familiar with submitting annual electronic reports to the Department using RADIUS.

The Department attempts to lessen the reporting burden on facilities by providing technical support. The Department holds an annual workshop at which all aspects of the Emission Statement Program are reviewed. This workshop is arranged through the Cook College Office of Continuing Professional Education at Rutgers University, New Brunswick, New Jersey. Registration information for this workshop can be accessed at <http://www.cpe.rutgers.edu/programs/environmental.html>. The Department also operates a

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help desk specifically to assist facilities with questions related to emission statement submittal and can be reached at (609) 633-2675. With these systems, resources, and procedures in place, additional costs to facilities should be minimal.

#### Reporting for Gas Public Utilities, N.J.A.C. 7:27E-3

The Department proposes new N.J.A.C. 7:27E-3.1, Reporting requirements for gas public utilities, to require each gas public utility operating within the State, and providing natural gas, to submit an annual Pipeline Modernization Report. The Department proposes to define “gas public utility” at N.J.A.C. 7:27E-1.2 to mean a public utility, as defined at N.J.S.A. 48:2-13(a), that distributes natural gas to end users within the State. As proposed at N.J.A.C. 7:27E-3.1, each gas public utility will be required to include three categories of information in the Pipeline Modernization Report: general information about the mains and service lines in the State, leak monitoring information, and blowdown event information.

Methane is the largest component of natural gas, typically making up 78 to 92 percent of its composition. 2050 Report at 112. Methane emissions occur during every stage of the natural gas supply chain, including from distribution lines through leaks or from other maintenance-related occurrences, known as blowdowns or venting events. Natural gas leaks can be accidental, caused by malfunctioning or aging components, or may occur as fugitive emissions from properly operating equipment. Some information regarding blowdown events is reported to the EPA and the Department. When a natural gas transmission line experiences a blowdown in excess of 50 standard cubic feet (scf), the blowdown event emission information is reported to the EPA in accordance with Federal rules at 40 CFR Part 98, Mandatory

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Greenhouse Gas Reporting. See 40 CFR 98.233(i). However, the EPA does not require similar reporting for distribution lines. Pursuant to N.J.A.C. 7:27-16, the Department currently receives reports of blowdown events from transmission and distribution lines where, in the absence of control, more than 2,000 pounds of VOC could be released to the atmosphere; however, that is a limited subset of all blowdown events.

There are currently four gas public utilities with distribution lines in New Jersey: Public Service Enterprise Group, New Jersey Resources, Elizabethtown Gas, and South Jersey Gas Company. These utilities serve customers through two types of distribution lines, known as mains and service lines. Both mains and service lines are made from a variety of material types, such as cast iron, unprotected steel, protected steel, and plastic. Distribution lines made from cast iron and unprotected steel are leak prone and, therefore, have a higher emission factor when compared to protected steel and plastic. As of 2019, the United States Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) reported 3,582.6 miles of cast iron distribution lines in New Jersey, which is more than any other state in the nation. 2050 Report at 114.

As proposed at N.J.A.C. 7:27E-3.1(a) and (b)1, each gas public utility must provide the Department with information regarding the miles of mains and number of service lines in its New Jersey distribution system, identified by material type, in the reporting (calendar) year. The number of service lines, rather than length of service lines, is important for the Department to determine the number of service connections, which will be utilized to estimate emission leaks. The Department proposes to define "main" and "service line" at N.J.A.C. 7:27E-1.2 as

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those terms are defined at 49 CFR 192.3. “CFR” is defined as the United States Code of Federal Regulations. The Federal regulations at 49 CFR Part 192 govern the minimum safety standards for transportation of natural gas through a pipeline.

Proposed N.J.A.C. 7:27E-3.1(b)1 and 2 require each gas public utility to identify, as part of its report, any mains and service lines in the State that were added to its distribution system, replaced, or refurbished during the reporting year. For replaced or refurbished mains or service lines, the gas public utility is to specify the miles of mains grouped by the original material type and the material type of the replaced or refurbished mains. Similarly, the gas public utility is to specify the number of service lines grouped by the original material type and the material type of the replaced or refurbished service lines. This information will permit the Department to better quantify methane emissions from these operations by further informing the tool used to calculate emissions.

The Department also proposes to require each gas public utility to report information about leaks. Leaks are ranked based on their “grade,” which reflects the probable hazard and need for repair. The Department proposes to define “grade 1 leak,” “grade 2 leak,” “grade 3 leak,” “grade classification,” and “leak identification number” at proposed N.J.A.C. 7:27E-1.2, consistent with general industry standards. Proposed N.J.A.C. 7:27E-3.1(b)3 requires the Pipeline Modernization Report to include information regarding leak identification from gas public utility pipelines with leaks that have a leak grade classification ranked as grade 1, 2, or 3. The report is to include: the leak identification number, which is assigned by the gas utility, the pipeline component type that is leaking, or has leaked, the grade classification of the leak, the

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date the leak is reported, the date the leak is repaired, if applicable, and locational information.

The Department proposes to define “pipeline” as that term is defined in the Board of Public Utilities’ rules governing natural gas pipelines at N.J.A.C. 14:7-1.1A.

Additionally, if applicable, the report is to include information about leak detection methods used by the gas public utility that go beyond standard Federal requirements at 49 CFR Part 192, Subpart M to identify, quantify, and report leaks. Such methods may include high performance gas analyzers, satellite location systems, mobile and/or aerial data gathering, geographical information systems (GIS), and data management systems, which enable more accurate and reliable identification and location of natural gas leaks. The report is to include frequency of leak detection surveys, types of leak detection equipment or technology utilized, leak prevention and leak reduction efforts, and ongoing, or future, plans for utilizing leak detection equipment or technology exceeding Federal requirements.

Finally, the report is to include information about each blowdown event that exceeds 50 standard cubic feet of natural gas released. The report is to include the blowdown identification number, which is assigned by the gas utility, the amount of natural gas released, measured in standard cubic feet, and the mitigation efforts to reduce emissions from the blowdown event. Efforts may include, but are not limited to, lowering system pressure, routing natural gas to flares, and recapturing natural gas for beneficial use. The amount of natural gas released is to be calculated using one of the two methodologies set forth at 40 CFR 98.233(i)2 or 3, incorporated by reference, as amended and supplemented. 40 CFR Part 98 governs the Federal mandatory greenhouse gas reporting program. To calculate the amount of natural gas

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released based on the volume of the pipeline segment between isolation valves and the pressure and the temperature of the gas within the pipeline, the methodology at 40 CFR 98.233(i)2 is to be used. If emissions are measured using a flow meter, the methodology at 40 CFR 98.233(i)3 is to be used. Gas utilities must also report the approximate percent volume of methane of the natural gas released during each blowdown event. The Department will then utilize this information to monitor progress toward the 80x50 goal and to calculate annual CO<sub>2</sub> and methane emissions from the reported blowdown events.

Pursuant to proposed N.J.A.C. 7:27E-3.1(a), the gas public utility would be required to submit a Pipeline Modernization Report every year, electronically, through the Department's online business portal at [NJDEPonline.com](http://NJDEPonline.com). For a gas public utility operating on or before the operative date of the rules, the first report shall be submitted on or before April 1, 2023, for the period from the first day of the first month that is after the operative date, through December 31, 2022. For example, if the operative date is February 6, 2022, the utility is to report for the period beginning March 1, 2022 through December 31, 2022. Subsequent reports shall be for a calendar year and submitted by April 1 of the year after the reporting year.

The gas public utility must maintain records of each item in the Pipeline Modernization Report, as provided at proposed N.J.A.C. 7:27E-3.2, Recordkeeping requirements for a gas public utility. The utility must keep the records at the headquarters of the gas public utility for five years and must make them available to the Department, on request.

N.J.A.C. 7:27E-3.3, Reporting Fee

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The Air Pollution Control Act, at N.J.S.A. 26:2C-9, authorizes the Department to charge administrative fees for the services it performs or provides in administering the Air Pollution Control Act and associated rules. When the gas public utility submits its Pipeline Modernization Report, it must also submit a reporting fee of \$8,000, as provided at proposed N.J.A.C. 7:27E-3.3, Reporting fee. The reporting fee cannot be prorated or refunded. The Department will invoice all gas public utilities subject to the rules. The Department will adjust the reporting fee every five years by the previous five-year cumulative inflation factor, which is based on the Consumer Price Index, and will publish a notice of administrative change to update the rule. If the inflation factor is negative or zero, the fee will not change for that five-year period. The Department will publish a notice of administrative change reflecting the new fee. The adjustment of fees is discussed at proposed N.J.A.C. 7:27E-1.3 and is consistent with the adjustment of operating permit fees in the Air Pollution Control Rules at N.J.A.C. 7:27-22.31(u).

The Department proposes to define “Consumer Price Index” or “CPI” at N.J.A.C. 7:27E-1.2, consistent with its definition by the U.S. Bureau of Labor Statistics.

#### **Registration and Reporting for Refrigeration Systems, N.J.A.C. 7:27E-2**

The Department proposes new N.J.A.C. 7:27E-2 to require an owner or operator of a facility that installs or operates at least one refrigeration system with a full charge of 50 pounds or more of high-GWP refrigerant to register and report information about the equipment and refrigerants used. According to the 2018 Inventory, refrigeration system leaks comprise up to 35 percent of the State’s estimated overall halogenated gas emissions. The proposed registration and reporting program will allow the Department to identify the use of high-GWP

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refrigerants in refrigeration systems in the State, which will provide a more accurate baseline inventory of these pollutants. In developing the program, the Department considered California's refrigerant management program, which includes registration and reporting requirements similar to those proposed in this rulemaking.

The Department proposes to define "refrigeration system" at N.J.A.C. 7:27E-1.2 to mean stationary, non-residential equipment that 1) is an industrial process refrigeration (appliances linked to an industrial process), commercial refrigeration (appliance used in the retail food or cold storage warehouse sectors), or other refrigeration appliance; and 2) the equipment has a single refrigerant circuit that requires 50 pounds or more of any combination of high-GWP refrigerant to maintain normal operating characteristics and conditions. Under this definition, a refrigeration system that requires 50 pounds or more of a high-GWP refrigerant or combination of refrigerants, at least one of which is a high-GWP refrigerant, will have to comply with N.J.A.C. 7:27E-2.

The IPCC has reported on annual leakage rates for different refrigeration equipment types, shown in Table 1 below. IPCC 2006, 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 3, Industrial Processes and Product Use, Chapter 7, Table 7.9, p. 7.52, [https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/3\\_Volume3/V3\\_7\\_Ch7\\_ODS\\_Substitutes.pdf](https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/3_Volume3/V3_7_Ch7_ODS_Substitutes.pdf).

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<u>Table 1. Equipment Leakage Rate and Charge Range</u>			
<b>Source Significance</b>	<b>Equipment Type</b>	<b>Annual Leakage Rate</b>	<b>Charge Range (kg)</b>
Significant high-GWP refrigerant emission source	Chillers	2 - 15 %	10 - 2000
	Industrial process refrigeration including food processing and cold storage	7 - 25 %	10 - 10000
	Medium and large commercial refrigeration	10 - 35 %	50 - 2000
Insignificant high-GWP refrigerant emission source	Domestic refrigeration	0.1 - 0.5 %	0.05 - 0.5
	Mobile air conditioners	10 - 20 %	0.5 - 1.5
	Residential and commercial A/C, including heat pumps	1 - 5 %	0.5 - 100
	Stand-alone commercial applications	1 - 15 %	0.2 - 6
	Transport refrigeration	15 - 50 %	3 - 8

The California Air Resources Board (CARB) similarly reported that refrigeration systems and air conditioning systems have different emission profiles. See CARB, Initial Statement of Reasons for Proposed Regulation for the Management of High Global Warming Potential Refrigerants for Stationary Sources (Oct. 23, 2009), pp. 71-72,

<https://ww3.arb.ca.gov/regact/2009/gwprmp09/isorref.pdf>. Based on this information, the Department proposes to exclude air-conditioning appliances from the definition of refrigeration system. See proposed N.J.A.C. 7:27E-1.2. To avoid uncertainty, the Department proposes to exclude chillers, which are used for comfort cooling and are often large commercial refrigeration systems, from the definition of air-conditioning. Therefore, as proposed, refrigeration systems include chillers, but exclude air-conditioning appliances.

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Examples of refrigeration systems covered by this rule include chillers, industrial ice machines and ice rinks, food processing and cold storage appliances used to store perishable goods, and other medium and large commercial refrigeration. “Industrial process refrigeration,” “normal operating characteristics and conditions,” “‘operating’ or ‘in operation’” “other refrigeration,” “refrigerant circuit,” and “residential” are proposed to be defined as these terms are defined at 17 CCR 95382. “Commercial refrigeration,” “appliance,” and “air-conditioning” are proposed to be defined similar to how those terms are defined at 17 CCR 95382, with some differences to account for the differences in the Department’s rule compared with California’s program.

The Department also proposes to define “stationary” at N.J.A.C. 7:27E-1.2 to further establish the scope of the refrigeration system registration and reporting program. For the refrigeration system to be “stationary,” at least one of three conditions must be met. The system must: be installed in a building, structure, or facility; be attached to a foundation or will reside in the same location for more than 12 consecutive months; or operate at that single location for at least two consecutive years and at least three months each year. Under this definition, an ice rink operating a refrigeration system that is located at the same location for two consecutive years and operates at that location for three months in each year, for example, three of the winter months, is stationary.

In an effort to determine which facilities would be likely to have refrigeration systems subject to the proposed rules, the Department looked at two types of data: 1) types of facilities that commonly use refrigeration systems, as defined at proposed N.J.A.C. 7:27E-1.2; and 2) the

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number of businesses falling in industrial categories most likely to be operating a refrigeration system.

As explained, a refrigeration system could be a commercial refrigeration system, industrial process refrigeration, or a chiller. The types of facilities that the Department has determined are likely to have these equipment types and, therefore, potentially be subject to proposed new N.J.A.C. 7:27E-2 are shown in Table 2 below.

Table 2: Equipment Types Commonly Found in Various Facility Types	
Equipment Type	Facility Type
Chillers	Large office buildings, hotels, shopping centers
Commercial Refrigeration (retail food sector)	Supermarkets, convenience stores, restaurants, food service
Commercial Refrigeration (cold storage warehouse sector)	Cold storage for meat, produce, dairy products, and other perishable goods in warehouses
Industrial Process Refrigeration	Chemical, petrochemical, food processing, pharmaceutical; includes industrial ice machines and ice rinks

To determine the number of facilities potentially subject to proposed new N.J.A.C. 7:27E-2, the Department utilized 2018 data compiled by the U.S. Census Bureau for large establishments having 100 or more employees. The Department determined the facility types likely to have a refrigeration system fall into the industrial categories shown in Table 3 below. The estimated number of facilities in these categories total 991.

Table 3: Industrial Categories in New Jersey
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<b>NAICS Code</b>	<b>NAICS Description</b>	<b>Estimated Number of Facilities</b>
311	Food Manufacturing	83
325	Chemical Manufacturing	92
424	Nondurable goods merchant wholesalers	265
445	Food and beverage stores	272
452	General Merchandise Stores	249
713	Recreation Industries (ice rinks)	30
	TOTAL	991

As explained, the Department proposes to define “refrigeration system” as a single refrigerant circuit that requires 50 pounds or more of any combination of high-GWP refrigerant to maintain normal operating characteristics and conditions. The Department proposes to define “high-GWP refrigerant” to mean a compound used as a heat transfer fluid or gas that is a chlorofluorocarbon, a hydrochlorofluorocarbon, a hydrofluorocarbon, a perfluorocarbon, or any compound or blend of compounds with a 100-year GWP value equal to or greater than 150. The proposed definitions of “chlorofluorocarbon,” “hydrochlorofluorocarbon,” “hydrofluorocarbon,” “perfluorocarbon,” “global warming potential,” and “GWP” are based upon their generally accepted meanings as used in environmental science. The Department proposes to define “global warming potential value” or “GWP value” as the 100-year GWP

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value published by the Intergovernmental Panel on Climate Change in AR4, as currently used by the Department for its greenhouse gas emissions inventory, and if AR4 does not provide a 100-year GWP value for a compound, then the GWP means the 100-year GWP value published in AR5. The 100-year GWP values are published in table 2.14 of the 2007 IPCC AR4, which table is incorporated by reference and available at <https://www.ipcc.ch/site/assets/uploads/2018/02/ar4-wg1-chapter2-1.pdf>, and in Chapter 8 of AR5, pp. 731-37, Appendix 8.A, which table is incorporated by reference and available at [https://archive.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5\\_Chapter08\\_FINAL.pdf](https://archive.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_Chapter08_FINAL.pdf). Thus, according to the proposed definition of GWP value, if a chemical or compound is not listed in AR4 and is listed in AR5, the value in AR5 applies. If a chemical or compound is listed in both AR4 and AR5, the AR4 value applies. To assist owners and operators, the Department will maintain a list of refrigerants and their 100-year GWP values on its website, for informational purposes. A link to the list will be available at <https://www.state.nj.us/dep/ages/index.html> upon the operative date of the rulemaking.

#### Registration

As required at proposed N.J.A.C. 7:27E-2.1, Registration requirements for a facility with one or more refrigeration systems, the owner or operator of a facility with one or more refrigeration systems must register and submit a facility registration fee. Registration is through the Department's online business portal at [NJDEPonline.com](http://NJDEPonline.com). As proposed at N.J.A.C. 7:27E-2.1, the registration shall include the facility name, address, physical location, North American Industry Classification System code, if applicable, Employer or Federal Tax

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Identification Number, and information regarding the facility's responsible official. The Department proposes to define "facility" and "responsible official" consistent with their definitions at N.J.A.C. 7:27-1.4 and 8.1.

As proposed at N.J.A.C. 7:27E-2.1, the owner or operator of a facility shall register the facility through the online business portal at [NJDEPonline.com](http://NJDEPonline.com) according to the following schedule. If the facility has at least one refrigeration system installed on or before the operative date of the rulemaking, the registration deadline is the first day of the first month that is 90 days following the operative date of the rulemaking. For example, if the operative date is February 6, 2022, the registration deadline is June 1, 2022 (the first day of the first month 90 days after February 6, 2022). If the owner or operator has its first refrigeration system installed after the operative date of the rulemaking, the registration is due 90 days after installation.

Registration is valid for five years. Prior to the registration expiration date, the Department will send a renewal invoice to the facility. The owner or operator of the facility is to renew its registration by paying the invoice, either online or by mail. The Department will not renew a registration until it receives the appropriate fee. A renewed registration is valid for another five years. If there is a change to the information on the registration, the owner or operator of the facility must advise the Department on a form available at <https://www.nj.gov/dep/climatechange/> within 120 days after the change.

As provided at proposed N.J.A.C. 7:27E-2.1, registration is not complete until the registration fee is submitted. The Department proposes an initial fee for registration and

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registration renewal of \$400.00, as provided at proposed N.J.A.C. 7:27E-2.2. The proposed fee is per facility, regardless of the number of refrigeration systems installed. As discussed in the Economic Impact statement, the Department's estimated cost to create a new database is approximately \$280,000, and ongoing annual administrative and operational costs to run the new program (annualized over 15 years) are estimated to be approximately \$82,000, or \$410,000 over five years. To offset these costs, the Department proposes a \$400.00 fee to cover each five-year registration period based on the estimated number of facilities (991) expected to be subject to proposed N.J.A.C. 7:27E-2. ( $410,000 \div 991 \approx 414$ ) This fee will remain the same through December 2025 (a period less than five years). Beginning on January 1, 2026, and at the start of each five-year period thereafter, the Department will increase the registration fee by the previous five-year cumulative inflation factor, which is based on the Consumer Price Index, and publish a notice of administrative change. If the inflation factor is negative or zero, the fee will not change for that five-year period. The adjustment of the registration fee is consistent with the adjustment of operating permit fees in the Air Pollution Control Rules at N.J.A.C. 7:27-22.31(u).

#### Reporting

Once the facility is registered, the owner or operator of the facility must submit a Facility Refrigeration System Report in accordance with proposed new N.J.A.C. 7:27E-2.3, Reporting requirements for a facility with one or more refrigeration systems, so that the Department can properly index and categorize the use of high-GWP refrigerants and source(s) of emissions. The report is to include the facility identification number and facility contact

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person name and contact information. As defined at N.J.A.C. 7:27E-1.2, the Department will assign a “facility identification number” at the completion of registration. The “facility contact person” is the person who will be the point of contact with the Department and is knowledgeable about the facility’s refrigeration system(s).

For each refrigeration system at the facility, the owner or operator is to assign an identification number, defined at N.J.A.C. 7:27E-1.2, as the “refrigeration system identification number.” The report is to include the refrigeration system identification number and information for each refrigeration system at the facility, including equipment type, manufacturer, model or description, model year, serial number, date of installation, temperature classification, and the full charge of the refrigeration system. “Equipment type” is defined at proposed N.J.A.C. 7:27E-1.2 to mean commercial refrigeration, industrial process refrigeration, or other refrigeration appliance. The temperature classification may be: (1) a “low temperature refrigeration system,” meaning a commercial or industrial refrigeration system used for frozen products; (2) a “medium temperature refrigeration system” used for chilled products; or (3) another type. “Full charge” means the amount of refrigerant required in the refrigerant circuit to allow the system or appliance to operate under normal operating characteristics and conditions. As defined, “full charge” of the system is determined by using one of three methods: the equipment manufacturer’s specifications; a calculation based on component size, density of refrigerant, volume of piping, seasonal variations, and other relevant considerations; or the midpoint of an established range for full charge based on the

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best available data regarding the normal operating characteristics and conditions for the system.

Additionally, the report is to include the type of each high-GWP refrigerant used. As explained, the IPCC has calculated a 100-year GWP value for halogenated gases, including common blends, which the owner or operator of a facility will use to determine if the refrigerant is “high-GWP,” as defined at proposed N.J.A.C. 7:27E-1.2. See 2007 IPCC, AR4, Chapter 2, pp. 212-13, Table 2.14, and 2013 IPCC, AR5, Chapter 8, pp. 731-37, Appendix 8.A. The report is also to include the quantity of each high-GWP refrigerant purchased, the amount of each high-GWP refrigerant charged into the refrigeration system that is not considered part of an initial refrigerant charge, and the amounts recovered, stored, or shipped by the facility to be reclaimed or destroyed in a calendar year. The Department will use this information to calculate refrigerant leakage and subsequent emissions from each facility. The Department proposes to define “initial refrigerant charge” and “recover” consistent with how the terms are defined at 17 CCR 95382. The Department also proposes to define “reclaim” as the term is defined at 40 CFR 82.152. 40 CFR Part 82 contains the Federal rules for protecting stratospheric ozone.

An owner or operator of a facility with one or more refrigeration systems on or before the operative date of the rulemaking is to submit the initial report on or before April 1, 2023. Similar to the registration requirement, the initial reporting period starts from the first day of the first month that is 90 days following the operative date of the rule, through December 31, 2022. For example, if the operative date of the rulemaking is March 1, 2022, 90 days after the

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operative date is May 30, 2022. The initial reporting period would begin on June 1, 2022, which is the first day of the first month after May 30, 2022. Subsequent reports are for a calendar year and are to be submitted by April 1 for the preceding calendar year.

If a facility's first refrigeration system is installed after the operative date of the rulemaking, the initial report is to be submitted on or before April 1 of the calendar year after installation. The initial reporting period begins the first day of the first month after installation or 90 days after the operative date of the rules, whichever is later, through December 31 of that year. For example, if the operative date of the rulemaking is March 1, 2022, and the first refrigeration system at the facility is installed on April 1, 2022, then the initial report is to be submitted on or before April 1, 2023. The first month after installation is May 1, 2022. Ninety days after the operative date of the rulemaking (March 1, 2022) is May 30, 2022. Because May 30, 2022, is later than May 1, 2022, the initial reporting period begins May 30, 2022, and continues through December 31, 2022. The initial report to be submitted by the April 1, 2023, deadline is to cover the period from May 30 through December 31, 2022. As another example, if the operative date of the rulemaking is March 1, 2022 and the initial installation date is June 15, 2022, the first day of the month after June 15, 2022 is July 1, 2022. Because July 1, 2022 is later than May 30, 2022 (that is, 90 days after the operative date of the rule), the initial reporting period begins July 1, 2022, and continues through December 31, 2022. Subsequent reports are for a calendar year and are to be submitted by April 1 for the preceding calendar year. Thus, under either example, the next report for the 2023 calendar year is to be submitted on or before April 1, 2024. These deadlines are outlined in Table 4 below.

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Table 4: Facility Registration and Reporting Dates					
Refrigeration system installation date*	Registration deadline	Initial report due	Reporting period	Each subsequent report due	Reporting period
Before operative date of the rulemaking	1st day of the first month that is 90 days after the operative date of the rulemaking	April 1, 2023	1st day of the first month that is 90 days after the operative date of the rulemaking, through 12/31/2022	April 1, for preceding calendar year reporting period	1/1-12/31
After operative date of the rulemaking	90 days after installation date	April 1 of calendar year after installation	1st of the month after installation OR 1st of the month 90 days	April 1, for preceding calendar year reporting period	1/1-12/31

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			after operative date of the rulemaking, whichever is later		
*Installation date of first refrigeration system installed at the facility					

To minimize the administrative burden of reporting greenhouse gas emissions on both the Department and the regulated community, the Department has emphasized the use of electronic reporting systems to report environmental data. The Department is proposing to process all submissions through the Department’s online business portal at [NJDEPonline.com](http://NJDEPonline.com) and store the reports on the Department’s existing database system, the New Jersey Environmental Management System (NJEMS). As this electronic reporting system is existing and proven successful, the Department is planning to add a component for reporting refrigerants, as opposed to creating an entirely new electronic system.

Recordkeeping

The owner or operator of a registered facility must also maintain records, as provided at proposed N.J.A.C. 7:27E-2.4, **Recordkeeping requirements for a facility with one or more** refrigeration systems. The owner or operator must maintain records showing all refrigeration system service and refrigerant leak repairs and items required to be reported in the Facility

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Refrigeration System Report, as well as records of refrigeration system component data, measurements, calculations, and assumptions used to determine the full charge. The Department proposes to define “component” at N.J.A.C. 7:27E-1.2 as a part of a refrigeration system or appliance or its connections or subassemblies that is required for the system or appliance to function properly. The Department proposes to define “refrigerant leak” as any discharge of refrigerant into the atmosphere from a refrigeration system.

The facility must keep the records at the facility for five years and must make them available to the Department, on request. The five-year retention period is consistent with record retention periods in the Air Pollution Control Rules.

**Miscellaneous definitions, N.J.A.C. 7:27E-1.2**

In addition to the proposed definitions discussed above, the Department proposes definitions of other terms that are used throughout the proposed new rules. These definitions include “air contaminant,” “distillates of air,” “install or installation,” “construct or construction,” “control apparatus,” “Department,” “equipment,” “person,” and “source operation.” The proposed definitions are consistent with their definitions at N.J.A.C. 7:27.

**Civil Administrative Penalties for Violations of N.J.A.C. 7:27E**

The Department proposes new civil administrative penalties for violations of the requirements of the proposed new Greenhouse Gas Monitoring and Reporting Rules at N.J.A.C. 7:27E. For the convenience of the Department and the regulated community, the Department proposes to include the new penalties in the existing Air Administrative Procedures and

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Penalties, N.J.A.C. 7:27A, which contains tables of penalties for violations of other Department rules related to air pollution control. Specifically, the Department proposes penalty tables at new N.J.A.C. 7:27A-3.10(v). As with the other penalty tables at N.J.A.C. 7:27A-3.10, the proposed tables provide citations to specific provisions of the Greenhouse Gas Monitoring and Reporting rules, identify the violation as minor or non-minor for purposes of eligibility for a grace period, and provide a schedule of penalty amounts based on the frequency of the offense.

The penalties at proposed N.J.A.C. 7:27A-3.10(v) are consistent with existing penalties for similar violations of other Department rules. For example, the Department has determined that the requirements to submit a registration for a facility with one or more refrigeration systems at proposed N.J.A.C. 7:27E-2.1 and to submit a Facility Refrigeration System Report as proposed at N.J.A.C. 7:27E-2.3 are similar to the requirement to submit a completed Release and Pollution Prevention Report at N.J.A.C. 7:1G-7.7(c)1. Failing to meet the requirements of N.J.A.C. 7:1G-7.7(c)1 is a minor violation, eligible for a grace period, with penalties starting at \$1,000. The Department also determined that the requirements to submit a Pipeline Modernization Report and for subsequent recordkeeping at proposed N.J.A.C. 7:27E-3.1 are similar to N.J.A.C. 7:27-16.18(j)2 for natural gas VOC reporting requirements. Failing to meet the requirements of N.J.A.C. 7:27-16.18(j)2 is a minor violation, eligible for a grace period, with penalties starting at \$500.00. Therefore, failing to meet the requirements at proposed N.J.A.C. 7:27E-2.1, 2.3, and 3.1 will be assessed at proposed N.J.A.C. 7:27A-3.10(v) as minor violations,

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eligible for a grace period, with penalties starting at \$500.00 making the penalty provisions for violations of the requirements consistent.

Under the Grace Period Law, N.J.S.A. 13:1D-125 through 133, a person responsible for a minor violation is afforded a period of time by the Department to correct the violation in order to avoid being subject to a penalty. Based upon the criteria set forth at N.J.S.A. 13:1D-129, the Department has determined which of the proposed penalties at N.J.A.C. 7:27A-3.10(v) are minor, and, thus, subject to a grace period, and which are non-minor, and, thus, not subject to a grace period. Generally, the Department has determined that those violations that do not result in emissions (and, therefore, pose minimal risk to the public health, safety, and the environment) and do not materially and substantially undermine or impair the goals of the regulatory program are classified as “minor.” Under the existing rules, a minor violation can be ineligible for a grace period if the conditions at N.J.A.C. 7:27A-3.10(s) are not met.

Existing N.J.A.C. 7:27A-3.10(q) and (r) provide which violations are minor and subject to a grace period, and which are non-minor and not subject to a grace period. The Department proposes to amend N.J.A.C. 7:27A-3.10(q) and (r) to delete the specific reference to the penalty tables at (m) and (n) and instead refer to “all penalty tables at N.J.A.C. 7:27A.” The amended language is necessary to apply those provisions to the new proposed penalties at paragraph (v). The amended language at subsections (q) and (r) will also ensure that they apply to all penalty tables at N.J.A.C. 7:27A.

Existing N.J.A.C. 7:27A-3.5 authorizes the Department to impose a civil administrative penalty for a violation of the Air Pollution Control Act or any rule promulgated, or

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administrative order, operating certificate, registration requirement, or permit issued pursuant to the Act, even if the violation is not otherwise included at N.J.A.C. 7:27A. The Department proposes to amend N.J.A.C. 7:27A-3.5 to include a reference to proposed new N.J.A.C. 7:27E to make it clear that the Department may also assess a civil administrative penalty for a violation of N.J.A.C. 7:27E, even if the violation is not included in the tables proposed at N.J.A.C. 7:27A-3.10(v). The Department proposes to amend N.J.A.C. 7:27A-3.2 to include a reference to the definitions at proposed new N.J.A.C. 7:27E.

### **Social Impact**

The Department anticipates that the proposed new rules and amendments will have a positive social impact in New Jersey. Through this rulemaking, the Department will collect data that will assist the Department in future rulemaking efforts intended to reduce emissions of methane and halogenated gases used as refrigerants.

The reporting required under the proposed rulemaking will provide more reliable baseline emissions estimates of these greenhouse gases, which will better inform future climate policies. The Department, as well as other government agencies and the public, will be able to track emission trends from the regulated entities, which will help raise awareness, as well as identify and implement emission reduction strategies. See EPA, Mandatory Reporting of Greenhouse Gas Emissions, Final Rule, 74 FR 56,259, 56,265 (Oct. 30, 2009). Therefore, the

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Department anticipates that the proposed new rules and amendments will have a positive social impact.

### **Economic Impact**

The Department anticipates that the proposed new rules and amendments will have an economic impact. As discussed in the Social and Environmental Impact statements, climate change impacts are significant and far-reaching. Among the significant direct and indirect environmental changes the State will experience are “increases in temperature, variability in precipitation, frequency and intensity of storms, sea-level rise, ocean acidification, and the associated impacts to ecological systems, natural resources, human health, and the economy.” 2020 Report on Climate Change, p. vi.

Although the proposed rulemaking will have a direct economic impact in the form of increased compliance costs, the Department expects that the rules will have an indirect positive economic impact, as well. The refrigerant reporting requirements could help raise awareness of the types of refrigerants used and the presence of costly system leaks. According to the EPA, if every supermarket prioritized leak tightness, “the industry would save an estimated \$108 million annually.” See

[https://www.epa.gov/sites/production/files/documents/GChill\\_Retrofit.pdf](https://www.epa.gov/sites/production/files/documents/GChill_Retrofit.pdf). Similarly, gas public utilities may increase their advanced leak detection methods or conduct their blowdown events in a way to reduce overall methane emissions. As the 2050 Report noted, “[t]he use of cutting-edge leak detection and quantification methods and more frequent leak surveys will result in repairs and replacement to reduce methane leaks.” See 2050 Report, p. 119. Through

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this awareness, the respective owners and operators may better maintain their systems in a way that could decrease overall operational costs and reduce emissions of potent greenhouse gases. The rulemaking, additionally, will result in the unquantified benefits of providing the Department with more accurate and timely data on greenhouse gas emissions in the State, which will inform future emissions reduction strategies. By helping to mitigate the effects of climate change, these strategies will result in more positive economic benefits.

To estimate the cost of compliance with the amendments and proposed new rules at facilities with refrigeration systems, gas public utilities, landfills, wastewater treatment facilities, and any other facility with the potential to emit more than 100 tons per year of methane, the Department utilized the Regulatory Impact Analysis for EPA's Mandatory Reporting of Greenhouse Gas Emissions Final Rule. See EPA, Regulatory Impact Analysis for the Mandatory Reporting of Greenhouse Gas Emissions Final Rule (Sept. 2009), <https://www.epa.gov/sites/production/files/2015-07/documents/regulatoryimpactanalysisghg.pdf>. Adjusting the EPA's estimated reporting and recordkeeping costs to 2020 dollars, the Department assumes that the compliance cost per facility with the proposed amendments and new rules is \$3,000. It is likely that these costs will decline over time as facilities establish their systems and become more efficient in their reporting. The Department understands that individual facilities may incur greater or lesser expenses in the process of meeting the proposed requirements. Cost of compliance will vary depending on multiple factors, including the number of emission sources, current monitoring and reporting practices, and current staffing. Specific costs associated with different facility

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types are described below. It is likely that many impacted facilities will choose to pass some, or all, of the increased costs of operation on to consumers in the form of higher prices.

### **N.J.A.C. 7:27-21, Emission Statements**

The proposed amendments at N.J.A.C. 7:27-21 add a reporting threshold for methane. Facilities that meet the proposed 100 tons per year threshold for methane and are also major sources with an operating permit pursuant to N.J.A.C. 7:27-22 that already report their methane emissions pursuant to N.J.A.C. 7:27-21, will not incur additional compliance costs. As explained, the Department estimates at least 26 facilities fall into this category. For facilities that meet the proposed 100 tons per year threshold for methane and are major sources with an operating permit pursuant to N.J.A.C. 7:27-22 (and, therefore, must submit an emission statement), but do not currently report their methane emissions because they do not meet the VOC threshold trigger under the existing rules, the Department estimates the cost of compliance to be approximately \$300.00 per year. As explained, the Department estimates at least nine landfills fall into this category. The Department estimates that a facility that will newly be required to submit an emission statement based on its methane emissions will incur costs of approximately \$3,000 per year to comply. These facilities may include natural gas compressor stations and other natural gas facilities.

Since the Emission Statement Program is well established, the Department expects to incur minimal costs associated with the proposed amendments.

N.J.A.C. 7:27E-3, Reporting for Gas Public Utilities

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As discussed above, the Department has estimated the annual cost of compliance with the proposed new rules to be \$3,000 based on the Regulatory Impact Analysis for EPA's Mandatory Reporting of Greenhouse Gas Emissions Final Rule. In addition, gas public utilities regulated under proposed new N.J.A.C. 7:27E-3, Reporting for gas public utilities, will be required to submit an annual reporting fee. This reporting fee is based on the cost of administration and analysis of data being submitted to the Department by the estimated four gas public utilities subject to pipeline modernization reporting. Pursuant to proposed N.J.A.C. 7:27E-3.3, Reporting fee, each of these gas public utilities will submit an annual reporting fee of \$8,000 (subject to adjustment by an inflation factor). Therefore, the Department anticipates that gas public utility expenses will increase by \$11,000 annually.

The Department estimates it will incur an additional \$34,120 annually in operating expenses associated with processing, analyzing, and storing data submitted in the Pipeline Modernization Reports. Based on information available to the Department at the time of this rulemaking, the Department estimates that four gas public utilities will be subject to the proposed new rules at N.J.A.C. 7:27E. Assuming no utilities enter or exit the market, annual reporting fees are, therefore, expected to provide revenues to the Department of approximately \$32,000 annually. These revenues will offset the majority of the Department's costs associated with pipeline modernization reporting.

#### **N.J.A.C. 7:27E-2, Registration and Reporting for Refrigeration Systems**

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As discussed above, the Department has estimated the annual cost of compliance with the proposed new rules to be \$3,000 based on the Regulatory Impact Analysis for EPA's Mandatory Reporting of Greenhouse Gas Emissions Final Rule. In addition, facilities regulated pursuant to proposed N.J.A.C. 7:27E-2, Registration and reporting requirements for refrigeration systems, will be required to submit a registration fee. This registration fee is based on the cost of administration and analysis of data being submitted to the Department by the estimated 991 facilities subject to high-GWP refrigerant reporting. Pursuant to proposed N.J.A.C. 7:27E-2.2, each of these facilities will submit a registration fee of \$400.00 every five years (subject to adjustment by an inflation factor) for an annual cost of \$80.00. Therefore, the Department anticipates that expenses for these facilities will increase \$3,080 annually as a result of this rulemaking.

The Department will incur capital and operating expenses from creating a new Refrigeration Registration and Reporting Program. It is estimated that the creation of a new reporting and tracking database will cause a one-time cost to the Department of \$280,000, while the annual administrative costs associated with staff processing, analyzing and reporting annual data in the Facility Refrigeration System Reports, technical support for database management, and other operational costs are expected to be roughly \$58,000. Annualized over 15 years, the Refrigeration Registration and Reporting Program costs to the Department are estimated at approximately \$82,000 annually.

The Department estimates, based on information available to it at the time of this rulemaking, that proposed N.J.A.C. 7:27E-2 will apply to approximately 991 high-GWP

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refrigerant-emitting facilities. Assuming no facilities enter or exit the market, registration fees are, therefore, expected to provide annualized revenues of approximately \$79,280. These revenues will offset the majority of the costs associated with the Refrigeration Registration and Reporting Program.

### **Environmental Impact**

In accordance with the GWRA, the Department maintains a greenhouse gas emissions inventory and requires reporting to monitor the State's progress toward the 80x50 goal. The proposed new rules and amendments establish reporting requirements for gas public utilities with local distribution lines, which are significant sources of methane, and facilities with refrigeration systems using high-GWP refrigerants, which are significant sources of halogenated gases. The Department also proposes to amend the existing Emission Statement program to add a methane reporting threshold, which is likely to apply to landfills and sewage treatment facilities, natural gas compressor stations, and other natural gas facilities. Methane and halogenated gases are potent greenhouse gases with up to thousands of times more heat-trapping potential than carbon dioxide on a pound for pound basis. As part of the State's comprehensive strategy to minimize the risks of climate change, the proposed rules are among the initial steps the Department will take to address emissions of the greenhouse gases that are driving climate change. Although the proposed reporting requirements do not require emissions reductions, the Department expects a positive environmental impact as the requirements will inform future strategies intended to lower emissions of these climate pollutants. The Department expects additional environmental benefits through increased

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awareness of system issues, such as leaks, by requiring owners and operators to report information about refrigerants used and gas public utilities to report about their distribution lines. This increased awareness, in turn, could result in reduced emissions through better maintenance and replacement of faulty or old equipment or could drive decisions to switch to alternatives with less global warming impact.

The recently released *2020 New Jersey Scientific Report on Climate Change* is the Department's first effort to compile scientific material in a comprehensive report detailing both the direct effects of climate change, and how greenhouse gases, which are driving climate change, will impact the environment. See New Jersey Department of Environmental Protection. *2020. New Jersey Scientific Report on Climate Change, Version 1.0* (Eds. R. Hill, M.M. Rutkowski, L.A. Lester, H. Genievich, N.A. Procopio) Trenton, NJ 184 pp. While the report examines climate change at the global and regional levels, its purpose is to explain the current and anticipated effects and impacts in New Jersey. See *id.* at 3. In fact, one of the report's findings is that New Jersey is uniquely vulnerable to climate change due to multiple factors, including its coastal location, population density, and geography. See *id.*, Executive Summary.

Climate scientists worldwide agree that the substantial increase in heat-trapping greenhouse gases in the earth's atmosphere from fossil fuel production and combustion, as well as land degradation, are the principal causes of climate change. See *id.*, p. vi. As the 2020 Report explains, the increasing CO<sub>2</sub> concentration was first observed over 60 years ago. *Id.* at 15. "Since then other human-sourced greenhouse gases have been recognized as contributing to climate change, such as methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), ozone (O<sub>3</sub>), many halogenated

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gases (especially chlorofluorocarbons [CFC-11 and CFC-12]), among others.” *Id.* at 16. Although CO<sub>2</sub> is the most abundant greenhouse gas, scientists have recently begun to study the role of other climate pollutants and forcers that are driving climate change, such as hydrofluorocarbons, methane, and black carbon. See *id.* at 25-26. It is now understood within the scientific community that while these pollutants and forcers tend to have shorter atmospheric lives, they also have much higher warming potentials, making them significant contributors to climate change. See *id.*

Climate change resulting from the increase in greenhouse gases and other highly warming climate pollutants and forcers affects temperature, precipitation, sea-level rise, and ocean acidification. See 2020 Report on Climate Change at 28. And “[a]s temperature, precipitation, sea-level rise, and ocean acidification increase, so will the impacts to New Jersey’s air, water, habitats, and wildlife.” *Id.* at vii.

#### *Air Quality*

The EPA sets national ambient air quality standards (NAAQS) for six criteria pollutants. One of these health-based standards is for ground level ozone. New Jersey is classified as nonattainment for the ozone standard, which means the level of ozone measured at designated monitors around the State exceeds the Federal standards. See 2020 Report on Climate Change, p. 61. “The primary climate change impacts on ozone formation are expected to result from changes to meteorological conditions, often referred to as the ozone-climate penalty.” *Id.* at 62. The ozone-climate penalty refers to a phenomenon in which the level of ozone precursors in the atmosphere may remain stable or even decrease, but warming temperatures offset those

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improvements, such that ozone formation remains unchanged. Thus, the work New Jersey has done, and continues to do, to reduce ozone precursors may be less effective at reducing ground-level ozone as temperatures continue to rise due to greenhouse gas emissions, like CO<sub>2</sub>, and short-lived climate pollutants, like black carbon. See *Id.* at pp. 61-62 and 25-26.

Increased concentrations of ground level ozone have been linked to a number of health impacts, including, but not limited to, eye irritation, aggravated asthma and other respiratory distress, and premature death. See *Id.* at 63-64. Additionally, there is some evidence that the health impacts of increased ozone may be elevated when combined with other climate-related impacts, such as the higher temperatures that occur during heat waves. See *Id.* at 66. This is particularly significant for New Jersey's urban areas where high temperatures are often accompanied by high levels of other local air pollutants. See *Id.* at 66.

Climate change impacts air quality in other ways. The increased heat waves and drought caused by climate change can lead to greater wildfire risk. See 2020 Science Report on Climate Change at p. 67. The particulate matter and other pollutants from wildfires that burn in New Jersey and those that burn in upwind states can negatively impact New Jersey's air quality. See *Id.* at 66-67. Climate change also increases exposure to other aeroallergens, such as pollen (longer growing season), dust particles (droughts and dust storms), and mold (severe weather events). *Id.* at 68-69.

In short, climate change will result in increased respiratory and cardiovascular health problems, particularly among vulnerable populations, such as the very young, very old, and those suffering from asthma or allergic illness. See *Id.* at 61-69.

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### *Water Resources*

The effects of climate change (temperature, precipitation, sea-level rise) may impact water quality and supply in New Jersey. See 2020 Report on Climate Change, p. 71. For instance, increasing temperatures translate into longer growing seasons, which leads to higher water demand. Added water use for agriculture could put stress on New Jersey's groundwater resources and diminish the supply. See *Id.* at 71-73. The quality of groundwater sources in New Jersey may also suffer adverse impacts from climate change as increased periods of precipitation can lead to contamination of groundwater supplies. Similarly, sea-level rise can lead to saltwater intrusion of coastal groundwater supplies causing increased levels of salinity. See *Id.* at 73-75. Water quality concerns extend beyond groundwater supplies. New Jersey's surface water resources may also be threatened by rising air and water temperatures, increased extreme weather events, and sea-level rise, all of which could result in increased salinity, which existing water treatment plants are not designed to handle. See *Id.* at 75.

In sum, climate change may result in a reduction in the amount of water necessary to meet the State's needs and require more extensive resources to treat the remaining water supply.

### *Agriculture*

The effects of climate change, particularly precipitation levels, changes in temperature, and the concentration of CO<sub>2</sub> in the atmosphere, will impact crop and animal farming. See 2020 Report on Climate Change, p. 81. Insects, weeds, and pathogens are expected to thrive in

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warmer, wetter weather, which is in stark contrast to the decrease in productivity anticipated for many of New Jersey's crops and livestock, who may be unable to adapt to the environmental effects of climate change. See *Id.* at 81-83. On the whole, climate change is anticipated to have a negative impact on New Jersey's agricultural industry, as it may diminish the variety of crops and livestock that are cultivated in New Jersey for sale and consumption both locally and regionally.

#### *Forests, Wetlands, and Carbon Sequestration*

The effects of climate change, including precipitation levels, changes in temperature, and the concentration of CO<sub>2</sub> in the earth's atmosphere, have already begun to impact ecosystems in New Jersey's forests and wetlands. See 2020 Report on Climate Change, pp. 85-113. Warmer temperatures mean that some pest species will grow faster, travel further, and live well into warmer winters, all the while putting pressure on tree species unprepared for the onslaught. See *Id.* at 90-91. In New Jersey, the pine beetle is a prime example of this phenomenon. See *Id.* at 91. Warmer temperatures have allowed this pest to increase its numbers and range, creating conditions ripe for "massive mortality events covering tens of thousands of acres of New Jersey's pine forests." *Id.* at 91. Likewise, warmer temperatures and the potential for prolonged periods of drought may affect the composition of the tree species in New Jersey's forests. These conditions favor species that are more tolerant of drought and sandy soils, while existing hardwood trees will become stressed. See *Id.* at 85-90. Moreover, "[i]ncreases in temperature, and the hot, dry periods that result, may intensify the danger of wildfires by drying out vegetation and soil" in New Jersey forests. *Id.* at 93.

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Some of New Jersey's freshwater wetlands are under threat because of climate change impacts, such as changes in precipitation, sea-level rise, and increased temperatures. See 2020 Report on Climate Change, p. 95-98. Tidal wetlands in New Jersey face similar threats to their existing ecosystems due to the effects of climate change. See *Id.* at 98-108. Sea-level rise contributes to the erosion of existing tidal wetlands and an increase in marsh migration. Increased frequency, severity, and duration of precipitation events will also contribute to the erosion of some tidal wetlands. See *Id.* at 104-107. The erosion and diminishing of New Jersey's freshwater and tidal wetlands will result in the loss of plant and animal habitats, loss of natural flood control resources, and depletion of the State's natural buffers that help to protect coastal communities from storms. See *Id.* at pp. 95 and 99.

New Jersey's forests and wetlands serve as carbon sinks. See 2020 Report on Climate Change, p. 111. Specifically, these resources work as natural carbon capture systems, removing CO<sub>2</sub> from the atmosphere and helping New Jersey lower its net emissions. See *Id.* As explained above, the loss of forests and wetlands due to climate change will hinder New Jersey's ability to offset carbon emissions through these carbon sinks, and in the case of forests destroyed by pests, such as the pine beetle or wildfires, forests could become net carbon emitters. See *Id.* at 112.

In sum, climate change will have a negative impact on the State's plant and animal life, reducing habitats and diminishing the quality of recreational and cultural endeavors available within the State.

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### **Federal Standards Statement**

N.J.S.A. 52:14B-1 et seq. (P.L. 1995, c. 65), requires State agencies that adopt, readopt, or amend State rules that exceed any Federal standards or requirements to include in the rulemaking document a Federal standards analysis. The Department is proposing to amend N.J.A.C. 7:27-21 to add a reporting threshold for methane and to adopt new rules to require gas public utilities with local distribution lines in the State to report information regarding their in-State mains and service lines and blowdown events for these lines. The Department has determined that there are no Federal standards or requirements comparable to the methane-related amendments and new rules. Therefore, a Federal standards analysis is not required.

The Department is also proposing new rules to require owners or operators of a facility with a refrigeration system that requires 50 pounds or more of a high-GWP refrigerant to register and report information about their equipment and high-GWP refrigerants used. Federal regulations require owners and operators of appliances normally containing 50 or more pounds of a refrigerant that is an ozone-depleting substance, including CFCs and HCFCs, to maintain records as part of the Federal leak management program. See 40 CFR Part 82. Proposed N.J.A.C. 7:27E-2 would require owners and operators of a refrigeration system that requires 50 or more pounds of a high-GWP refrigerant, which includes CFCs and HCFCs, to register and report information about their equipment and refrigerants used. For ozone-depleting substances, proposed N.J.A.C. 7:27E-2 is comparable to, but does not exceed, Federal requirements. For refrigerant alternatives to ozone-depleting substances, the Department has

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determined that there are no comparable Federal standards or requirements. Accordingly, a Federal standards analysis is not required.

### **Jobs Impact**

The Department anticipates that the proposed rulemaking will have little or no impact on job creation or retention in the State. The proposed amendments at N.J.A.C. 7:27-21 will result in expanded reporting for some facilities. Therefore, there may be a small positive impact on job creation and retention to the extent that facilities will need to engage the services of a consultant to input the data and perform any required calculations. The proposed reporting requirements for gas public utilities and facilities with refrigeration systems may similarly have some minimal impact on job creation to the extent a consultant will need be engaged. However, the Department is not able to estimate the number of jobs that may be created as a result.

### **Agriculture Industry Impact**

The Department does not anticipate that the proposed rulemaking will impact the agricultural industry. To the extent that the proposed rulemaking will help inform future rulemaking to reduce greenhouse gas emissions, the Department expects a positive impact on agriculture in this State by reducing the extent of losses attributable to climate change.

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### **Regulatory Flexibility Analysis**

As required by the New Jersey Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq., the Department has evaluated the reporting, recordkeeping, and other compliance requirements that the proposed rulemaking would impose upon small businesses. The Regulatory Flexibility Act defines the term "small business" as "any business which is a resident in this State, independently owned and operated and not dominant in its field, and which employs fewer than 100 full-time employees." N.J.S.A. 52:14B-17. Based on this definition, the Department anticipates that only proposed new N.J.A.C. 7:27E-2 may affect small businesses. The substantive requirements and their corresponding costs are as discussed in the Summary and Economic Impact statement.

The proposed new registration and reporting program at N.J.A.C. 7:27E-2 will provide the Department with information to better estimate emissions of halogenated gases in New Jersey. The GWRA directs the Department to monitor greenhouse gas emissions to track progress towards the 80x50 goal. The emissions information derived from the reporting program will help inform future climate mitigation strategies. Accordingly, the Department has evaluated proposed N.J.A.C. 7:27E-2 and determined that the compliance requirements imposed on small businesses are offset by the State's need to mitigate the impacts of climate change. For this reason, the Department proposes no exception or accommodation for small businesses.

To lessen the burden on small businesses, the Department's Small Business Assistance Program will provide technical support and compliance assistance. The Small Business

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Assistance Program holds an Auditor's Workshop annually. The workshop will include a session for facilities with refrigeration systems on completing the registration and Facility Refrigeration System Report. This workshop is arranged through the Cook College Office of Continuing Professional Education at Rutgers University, New Brunswick, New Jersey. Registration information for this workshop can be accessed at the website <http://www.cpe.rutgers.edu/programs/environmental.html>. The Department also operates a hotline specifically to assist small businesses with questions related to environmental rules and submissions to the Department. The Small Business Assistance Program hotline can be reached at (877) 753-1151.

### **Housing Affordability Impact Analysis**

In accordance with N.J.S.A. 52:14B-4, the Department has evaluated the proposed amendments and new rules to determine their impact, if any, on the affordability of housing and the average costs of housing in the State. The proposed rulemaking neither imposes requirements nor confers direct benefits upon homeowners, builders, or other providers of housing, making it unlikely that the proposed rulemaking will have an impact on the affordability of housing units or result in a change in the average costs of housing in the State.

### **Smart Growth Development Impact Analysis**

In accordance with N.J.S.A. 52:14B-4, the Department has evaluated the proposed amendments and new rules to determine their impact, if any, on housing production in

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Planning Areas 1 or 2, or within designated centers, under the State Development and Redevelopment Plan. The proposed rulemaking applies to owners and operators of facilities with stationary, non-residential refrigeration systems, gas public utilities with distribution lines, and large sources of methane emissions. The proposed rulemaking does not apply to residential housing. Therefore, the rules are not likely to evoke a change in housing production in Planning Areas 1 or 2, or within designated centers, under the State Development and Redevelopment Plan.

#### **Racial and Ethnic Community Criminal Justice and Public Safety Impact**

In accordance with N.J.S.A. 52:14B-4(a)(2), the Department has evaluated this rulemaking and determined that it will not have an impact on pretrial detention, sentencing, probation, or parole policies concerning adults and juveniles in the State. Accordingly, no further analysis is required.

**Full text** of the proposal follows (additions indicated in boldface **thus**; deletions indicated in brackets [thus]):

### **CHAPTER 27**

#### AIR POLLUTION CONTROL

##### SUBCHAPTER 21. EMISSION STATEMENTS

##### 7:27-21.2 Applicability

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(a) This subchapter applies to a facility if the facility emits or has the potential to emit, directly or indirectly to the outdoor atmosphere, any air contaminant listed [in] at Table 1 below at a rate greater than or equal to the applicable reporting threshold given [in] at Table 1.

**The methane (CH<sub>4</sub>) reporting threshold applies to reporting years 2022 and later.**

TABLE 1

AIR CONTAMINANT REPORTING THRESHOLDS

Air Contaminant	Reporting Threshold (Tons per Year)
...	
<b>CH<sub>4</sub></b>	<b>100</b>

(b)-(d) (No change.)

7:27-21.3 General provisions

(a) (No change.)

(b) An Emission Statement shall include the information required [under] **pursuant to** N.J.A.C. 7:27-21.5 and shall include emission information for the following air contaminants:

1. (No change.)

2. If the facility's potential to emit VOC is equal to or greater than 25 tons per year or if the facility's potential to emit any other air contaminants listed [in] at Table 1 at N.J.A.C.

7:27-21.2 is equal to or greater than the reporting threshold, emission information shall be reported for the following:

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i. (No change.)

ii. Beginning with the Emission Statement for reporting year 2003 and for each year thereafter, the greenhouse gas[es] CO<sub>2</sub> [and CH<sub>4</sub>] **reported at the facility level;**

iii – iv. (No change.)

(c) – (h) (No change.)

#### 7:27-21.5 Required contents of an Emission Statement

(a) – (f) (No change.)

(g) To simplify the reporting of emissions from a source operation with minimal emissions, an owner or operator may alternatively report the source operation's potential to emit a given air contaminant as its actual emissions of the air contaminant, provided that:

1.-3. (No change.)

Table 2

#### APPLICABILITY CRITERIA FOR SIMPLIFIED REPORTING

Air Contaminant	Criteria Amount
VOC, NO <sub>x</sub> , CO, SO <sub>2</sub> , TSP, PM <sub>10</sub> , PM <sub>2.5</sub> , <b>CH<sub>4</sub></b> , or	1.00 ton per year
NH <sub>3</sub>	
Pb	0.10 tons per year

(h)-(j) (No change.)

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## CHAPTER 27A

### AIR ADMINISTRATIVE PROCEDURES AND PENALTIES

#### SUBCHAPTER 3. CIVIL ADMINISTRATIVE PENALTIES AND REQUESTS FOR ADJUDICATORY HEARINGS

##### 7:27A-3.2 Definitions

The following words and terms, when used in this subchapter, have the following meanings, unless the context clearly indicates otherwise. Unless otherwise specified below, all words and terms are as defined [in] **at N.J.S.A. 26:2C-2 and N.J.A.C. 7:27, [and] 27C, and 27E.**

...

##### 7:27A-3.5 Civil administrative penalty determination—general

(a) - (c) (No change.)

(d) The Department may assess a civil administrative penalty for a violation of any provision [of] **at N.J.A.C. 7:27, [and] 27C, and 27E** for which no penalty amount is specified [under] **pursuant to N.J.A.C. 7:27A-3.6 through 3.11.** The Department shall base the amount of such a penalty assessment upon the following factors:

1. – 2. (No change.)

(e) – (h) (No change.)

##### 7:27A-3.10 Civil administrative penalties for violation of rules adopted pursuant to the Act

(a) – (p) (No change.)

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(q) Each violation identified in [the penalty tables at (m) and (n) above] **all penalty tables in this chapter** by an “M” in the Type of Violation column, for which conditions at (s) below are satisfied, is a minor violation, and is subject to a 30-day grace period.

(r) Each violation identified in [the penalty tables at (m) and (n) above] **all penalty tables in this chapter** by an “NM” in the Type of Violation column is a non-minor violation and will not be subject to a grace period.

(s)-(u) (No change.)

(v) **The violations of N.J.A.C. 7:27E, whether minor or non-minor in accordance with (q), (r), (s), or (t) above, and the civil administrative penalty amounts for each violation are as set forth in the following Civil Administrative Penalty Schedule. The numbers of the following subsections correspond to the numbers of the corresponding chapter at N.J.A.C. 7:27E. The rule summaries provided in the column labeled "Class" for the requirements set forth in the Civil Administrative Penalty Schedule in this subsection are provided for informational purposes only and have no legal effect.**

#### **CIVIL ADMINISTRATIVE PENALTY SCHEDULE**

- 1. The violations at N.J.A.C. 7:27E-2, Registration and Reporting for Refrigeration Systems, and the civil administrative penalty amounts for each violation are as set forth in the following table:**

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<u>Citation</u>	<u>Class</u>	<u>Type of Violation</u>	<u>First Offense</u>	<u>Second Offense</u>	<u>Third Offense</u>	<u>Fourth and Each Subsequent Offense</u>
N.J.A.C. 7:27E-2.1	Submit facility registration	M	\$1,000	\$2,000	\$5,000	\$15,000
N.J.A.C. 7:27E-2.1(c)	Submit change in facility registration information	M	\$200	\$400	\$1,000	\$3,000
N.J.A.C. 7:27E-2.2	Submit registration fee	M	\$200	\$400	\$1,000	\$3,000
N.J.A.C. 7:27E-2.3	Submit annual report	M	\$1,000	\$2,000	\$5,000	\$15,000
N.J.A.C. 7:27E-2.4	Recordkeeping	M	\$500	\$1,000	\$2,500	\$7,500

2. The violations at N.J.A.C. 7:27E-3, Reporting Requirements for Gas Public Utilities, and the civil administrative penalty amounts for each violation are as set forth in the following table:

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<u>Citation</u>	<u>Class</u>	<u>Type of Violation</u>	<u>First Offense</u>	<u>Second Offense</u>	<u>Third Offense</u>	<u>Fourth and Each Subsequent Offense</u>
N.J.A.C. 7:27E-3.1	Submit annual report	M	\$1,000	\$2,000	\$5,000	\$15,000
N.J.A.C. 7:27E-3.2	Recordkeeping	M	\$500	\$1,000	\$2,500	\$7,500
N.J.A.C. 7:27E-3.3	Submit annual report fee	M	\$200	\$400	\$1,000	\$3,000

## CHAPTER 27E

### GREENHOUSE GAS MONITORING AND REPORTING

#### SUBCHAPTER 1. GENERAL PROVISIONS

##### 7:27E-1.1 Applicability

(a) This chapter applies to:

1. A facility with one or more refrigeration systems with a full charge greater than or equal to 50 pounds of a high-GWP refrigerant or combination of refrigerants, at least one of which is a high-GWP refrigerant; and
2. A gas public utility that operates mains and service lines within the State providing natural gas.

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#### **7:27E-1.2 Definitions**

The following words and terms, when used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise.

"Air-conditioning" means any stationary, non-residential appliance, including a computer-room air conditioner, that provides cooling to a space for the purpose of cooling objects or occupants, but excludes chillers.

"Air contaminant" means any substance, other than water or distillates of air, present in the atmosphere as solid particles, liquid particles, vapors, or gases.

"Appliance" means any device that contains and uses a high-GWP refrigerant, including any refrigerator, chiller, freezer, or refrigeration system.

"CFR" means the United States Code of Federal Regulations.

"Chlorofluorocarbon" or "CFC" means a class of compounds primarily used as refrigerants, consisting of only chlorine, fluorine, and carbon.

"Commercial refrigeration" means a refrigeration appliance used in the retail food and cold storage warehouse sectors. For purposes of this definition, "retail food" includes supermarkets, convenience stores, restaurants, and other food service establishments. "Cold storage" includes the storage of meat, produce, dairy products, and other perishable goods.

"Component," for purposes of N.J.A.C. 7:27E-2, means part of a refrigeration system or appliance (including condensing units, compressors, condensers, evaporators, and

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receivers) and all of its connections and subassemblies, without which the refrigeration system or appliance will not properly function or will be subject to failure.

“Construct” or “construction” means to fabricate or erect equipment or control apparatus at a facility where it is intended to be used, but shall not include the dismantling of existing equipment or control apparatus, site preparation, the ordering, receiving, temporary storage, installation of equipment or control apparatus, or the pouring of footings or placement of a foundation where equipment or control apparatus is intended to be used.

“Consumer Price Index” or “CPI” means the annual average percent change reflecting the change in the average index for all 12 months of one year to the average index for all months the next year, as published by the United States Department of Labor, Bureau of Labor Statistics.

“Control apparatus” means any device that prevents or controls the emission of any air contaminant, directly or indirectly, into the outdoor atmosphere.

“Department” means the New Jersey Department of Environmental Protection.

“Distillates of air” means helium (He), nitrogen (N<sub>2</sub>), oxygen (O<sub>2</sub>), neon (Ne), argon (Ar), krypton (Kr), and xenon (Xe).

“Equipment” means any device capable of causing the emission of an air contaminant, and any stack or chimney, conduit, flue, duct, vent, or similar device connected or attached to, or serving the equipment.

“Equipment type” means commercial refrigeration, industrial process refrigeration, or other refrigeration.

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**“Facility” means the combination of all structures, buildings, equipment, control apparatus, storage tanks, source operations, and other operations that are located on a single site or on contiguous or adjacent sites and that are under common control of the same person or persons.**

**“Facility contact person” means any person that will serve as a point of communication with the Department and is knowledgeable about the facility’s refrigeration system.**

**“Facility identification number” means a unique identifier assigned by the Department when a facility is registered pursuant to N.J.A.C. 7:27E-2.**

**“Full charge” means the amount of refrigerant required in the refrigerant circuit for normal operating characteristics and conditions of a refrigeration system or appliance, as determined by using one of the following three methods:**

- 1. The equipment manufacturer's specifications of the full charge;**
- 2. A calculation based on component size, density of refrigerant, volume of piping, seasonal variances, and other relevant considerations; or**
- 3. The midpoint of an established range for full charge based on the best available data regarding the normal operating characteristics and conditions for the system.**

**"Gas public utility" means a public utility, as that term is defined at N.J.S.A. 48:2-13, that distributes natural gas to end users within the State.**

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**“Global warming potential” or “GWP” means the radiative forcing impact of one mass-based unit of a given greenhouse gas relative to an equivalent unit of carbon dioxide over a given period of time.**

**“Global warming potential value” or “GWP value” means the 100-year GWP value published by the Intergovernmental Panel on Climate Change in its report, IPCC, 2007: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (AR4), and if not in AR4, the GWP value means the 100-year GWP value published by the Intergovernmental Panel on Climate Change in its report, IPCC, 2013: Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (September 2013) (AR5). The 100-year GWP values are published in table 2.14 of the 2007 IPCC AR4, which table is incorporated by reference and available at <https://www.ipcc.ch/site/assets/uploads/2018/02/ar4-wg1-chapter2-1.pdf>, and in Chapter 8, pp. 731-37, Appendix 8.A, which table is incorporated by reference and available at [https://archive.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5\\_Chapter08\\_FINAL.pdf](https://archive.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_Chapter08_FINAL.pdf).**

**"Grade 1 leak" means the grade classification of a leak that represents an existing or probable hazard to persons or property and requires prompt action, immediate repair, or continuous action until the conditions are no longer hazardous.**

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**"Grade 2 leak"** means the grade classification of a leak that is recognized as being not hazardous at the time of detection, but justifies scheduled repair, based on the potential for creating a future hazard.

**"Grade 3 leak"** means the grade classification of a leak that is not hazardous at the time of detection and can reasonably be expected to remain not hazardous.

**"Grade classification"** means the ranking of leaks and their probable hazard and need for repair.

**"High-GWP refrigerant"** means a compound used as a heat transfer fluid or gas that is a chlorofluorocarbon, a hydrochlorofluorocarbon, a hydrofluorocarbon, a perfluorocarbon, or any compound or blend of compounds with a 100-year GWP value equal to or greater than 150.

**"Hydrochlorofluorocarbon" or "HCFC"** means a class of compounds primarily used as refrigerants, consisting of only hydrogen, chlorine, fluorine, and carbon.

**"Hydrofluorocarbon" or "HFC"** means a class of compounds primarily used as refrigerants, consisting of only hydrogen, fluorine, and carbon.

**"Industrial process refrigeration"** means complex customized appliances used in the chemical, pharmaceutical, petrochemical, and manufacturing industries that are directly linked to the industrial process. **"Industrial process refrigeration"** includes industrial ice machines, appliances used directly in the generation of electricity, and ice rinks. Where one appliance is used for both industrial process refrigeration and other applications, it will be

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**considered industrial process refrigeration equipment if 50 percent or more of its operating capacity is used for industrial process refrigeration.**

**“Initial refrigerant charge” means the quantity, in pounds, of high-GWP refrigerant added to a refrigeration system or appliance in order to bring the system to a full charge upon initial installation of a refrigeration system.**

**“Install” or “installation” means to carry out final setup activities necessary to provide equipment with the capacity for use or service. This term includes, but is not limited to, connection of equipment, associated utilities, piping, ductwork, or conveyor systems. This term does not include “construction,” nor the reconfiguration of equipment to an alternate configuration specified in a permit application and approved by the Department. This term includes relocation of existing equipment.**

**“Leak identification number” means a unique identification number assigned by the gas public utility to each leak at a gas public utility. The leak identification number is comprised of the gas public utility identification number followed by a hyphen, followed by a three-digit number starting with 001 sequentially assigned to each unique leak at a gas public utility. For example, if a gas public utility has an identification number of 12345, then the leak identification number for the first leak would be 12345-001.**

**“Low temperature refrigeration system” means a commercial or industrial refrigeration system used for frozen products.**

**"Main" has the meaning defined for this term at 49 CFR 192.3. A main is a type of distribution line.**

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**“Medium temperature refrigeration system” means a commercial or industrial refrigeration system used for chilled products.**

**“Normal operating characteristics and conditions” means a refrigeration system’s operating temperatures, pressures, fluid flows, speeds, and other characteristics, including full charge of the refrigeration system, that would be expected for a given process load and ambient condition during operation. Normal operating characteristics and conditions are marked by the absence of atypical conditions affecting the operation of the refrigeration system.**

**“Operating” or “in operation,” for the purposes of N.J.A.C. 7:27E-2, means the use of a refrigeration system for cooling or freezing. A refrigeration system is considered to be operating, or in operation for, the entirety of any calendar month where it is used for cooling or freezing in any manner for more than a total of 24 hours.**

**“Other refrigeration” means any stationary, non-residential appliance that is used for an application other than industrial process refrigeration, commercial refrigeration, or air-conditioning, or is used for two or more applications including industrial process refrigeration, commercial refrigeration, or air-conditioning.**

**“Perfluorocarbon” or “PFC” means a class of compounds consisting only of carbon and fluorine.**

**“Person” means an individual, public or private corporation, company, partnership, firm, association, society, joint stock company, international entity, institution, county, municipality, state, interstate body, the United States of America, or any agency, board,**

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**commission, employee, agent, officer, or political subdivision of a state, an interstate body, or the United States of America.**

**“Pipeline” has the meaning defined for this term at N.J.A.C. 14:7-1.1A.**

**“Reclaim” has the meaning defined for this term at 40 CFR 82.152.**

**“Recover” means to remove refrigerant in any condition from an appliance and to store it in an external container without necessarily testing or processing it in any way.**

**“Refrigerant circuit” means the parts of a refrigeration system that are normally connected to each other (or are separated by isolation valves) and are designed to contain a high-GWP refrigerant. A single refrigerant circuit is defined by all piping and components that use refrigerant from a common reservoir of a high-GWP refrigerant.**

**“Refrigerant leak” means any discharge of refrigerant into the atmosphere from a refrigeration system.**

**“Refrigeration system” means stationary, non-residential equipment that is an industrial process refrigeration, commercial refrigeration, or other refrigeration appliance, with a single refrigerant circuit that requires 50 pounds or more of any combination of high-GWP refrigerant to maintain normal operating characteristics and conditions. Refrigeration system does not include an air-conditioning appliance.**

**“Refrigeration system identification number” means a unique identification number that the owner or operator gives to each refrigeration system at a facility. The refrigeration system identification number is comprised of the facility identification number followed by a hyphen, followed by a three-digit number starting with 001 sequentially assigned to each**

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**unique refrigeration system at a facility. For example, if a facility has a facility identification number of 12345, then the identification number for the first refrigeration system would be 12345-001.**

**“Residential” means a residential dwelling containing four or fewer dwelling units on one lot or parcel.**

**“Responsible official” has the meaning defined for this term at N.J.A.C. 7:27-1.4.**

**"Service line" has the meaning defined for this term at 49 CFR 192.3. A gas service line is a type of distribution line.**

**“Source operation” means any process, or any identifiable part thereof, that emits, or can reasonably be anticipated to emit, any air contaminant, either directly or indirectly, into the outdoor atmosphere. A source operation may include one or more pieces of equipment or control apparatus.**

**“Stationary” means meeting at least one of the following conditions:**

- 1. Installed in a building, structure, or facility;**
- 2. Attached to a foundation or, if not so attached, will reside in the same location for more than 12 consecutive months; or**
- 3. Located at the same single location for at least two consecutive years and operates at that single location at least three months each year.**

**7:27E-1.3 Adjustment of fees**

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(a) The Department will increase the fees at N.J.A.C. 7:27E-2.2 and 3.3, in accordance with the schedule at Table 1 below.

1. Every five years, the fees shall be adjusted by the previous five-year cumulative inflation factor, rounded down to the next five-dollar increment. The Consumer Price Index, which is used to calculate the five-year cumulative inflation factor, shall be calculated using the Annual Average from the Annual Average Consumer Price Index, for All Urban Consumers (CPI-U): U.S. City Average, all items, index averages. This data is published annually by the U.S. Department of Labor and is available at <https://www.bls.gov/cpi/tables/supplemental-files/home.htm>.

2. The Recent CPI-U shall equal the most currently published Annual Average CPI-U before January 1 of the next five-year period at Table 1. The Base CPI-U shall equal the Annual Average CPI-U for the fifth year prior to the Recent CPI-U.

<b>Table 1</b>		
<b>Five-Year Period</b>	<b>Base CPI-U</b>	<b>Recent CPI-U</b>
<b>(operative date of the section)* through December 31, 2025</b>	<b>N/A</b>	<b>2019 Annual Average</b>
<b>January 1, 2026 through December 31, 2030</b>	<b>2019 Annual Average</b>	<b>2024 Annual Average</b>
<b>January 1, 2031 through</b>	<b>2024 Annual Average</b>	<b>2029 Annual Average</b>

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<b>December 31, 2035</b>		
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**\* The first period begins on (the operative date of the section), and is less than five full calendar years.**

- 3. If the inflation factor is a negative number, the fee shall remain unchanged.**
- 4. The Department will publish a notice of administrative change announcing the adjustment and the amount of the adjusted fees in the New Jersey Register.**
- 5. The adjusted fees shall be operative starting the first day of each five-year period stated at Table 1 above.**

**7:27E-1.4 Confidentiality**

**All information submitted to the Department pursuant to this chapter shall be public information, unless the person submitting the information asserts a confidentiality claim in accordance with the procedures set forth at N.J.A.C. 7:27-1 and the Department determines that the information is entitled to confidential treatment. Information submitted electronically cannot be handled confidentially. Therefore, information submitted pursuant to a confidentiality claim must be submitted in paper form only, and the claims of confidentiality must be asserted by clearly marking the information as required pursuant to N.J.A.C. 7:27-1.6.**

**7:27E-1.5 Right to enter**

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**(a) The Department, and its representatives, shall have the right to enter and inspect, at any time, any facility, building, or portion thereof, including all documents and equipment on the premises, in order to ascertain compliance or noncompliance with this chapter. This right is absolute and shall not be conditioned upon any action by the Department, except the presentation of appropriate credentials, as requested, and compliance with appropriate safety standards.**

**(b) No person shall obstruct, hinder, or delay the Department, or its representatives, in its exercise of its rights pursuant to (a) above.**

**(c) An owner or operator of a facility, and any appropriate employee or representative of any owner or operator, shall, upon request, assist the Department and its representatives in the performance of any inspection.**

#### **7:27E-1.6 Severability**

**If any subchapter, section, subsection, provision, clause, or portion of this chapter, or the application thereof to any person, is adjudged unconstitutional or invalid by a court of competent jurisdiction, such judgment shall be confined in its operation to the subchapter, section, subsection, provision, clause, portion, or application directly involved in the controversy in which the judgment was rendered and it shall not affect or impair the remainder of this chapter or the application thereof to other persons.**

#### **7:27E-1.7 Civil administrative penalties and requests for administrative hearings**

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**Penalties for violations of the provisions of this chapter and the procedure for requesting an adjudicatory hearing are provided at N.J.A.C. 7:27A, Air Administrative Procedures and Penalties.**

## **SUBCHAPTER 2. REGISTRATION AND REPORTING FOR REFRIGERATION SYSTEMS**

### **7:27E-2.1 Registration requirements for a facility with one or more refrigeration systems**

**(a) The owner or operator of a facility with one or more refrigeration systems with a full charge greater than or equal to 50 pounds of high-GWP refrigerant shall electronically register the facility with the Department through the online business portal at [NJDEPonline.com](http://NJDEPonline.com), in accordance with (b) below, by the following dates:**

- 1. (The first day of the first month that is 90 days following the operative date of this section) where the facility had at least one refrigeration system installed on or before (the operative date of this section); or**
- 2. Ninety days after installation of the first refrigeration system at a facility that had no refrigeration systems before (the operative date of this section).**

**(b) The registration shall include the following information:**

- 1. Name of facility, including a facility identifier, such as store number, if any;**
- 2. Facility mailing address including street address, city, state, and zip code;**
- 3. Physical location of the facility, including street address, city, state, and zip code;**
- 4. Facility's North American Industry Classification System Code number (NAICS Code), if applicable;**

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5. **New Jersey Employer Identification Number or Federal Tax Identification Number; and**
  6. **Responsible official's name, title, phone number, and email address.**
- (c) **Registration shall not be complete until the owner or operator of the facility submits the registration fee to the Department, in accordance with N.J.A.C. 7:27E-2.2.**
- (d) **The owner or operator of a registered facility shall notify the Department of any change to the information required at (b) above, through a registration change form provided by the Department at <https://www.nj.gov/dep/climatechange/>, within 120 days of any such change.**
- (e) **Registration pursuant to this section is effective for a period of five years.**
- (f) **To renew a registration, the owner or operator shall pay the renewal registration fee to the Department in accordance with the registration renewal invoice that the Department sends to the facility, as provided at N.J.A.C. 7:27E-2.2. The registration renewal fee shall be the same as the initial registration fee then in effect.**

#### **7:27E-2.2 Registration fee**

**The owner or operator of a facility subject to registration in accordance with N.J.A.C. 7:27E-2.1 shall pay the registration fee through the Department's online business portal at [NJDEPonline.com](http://NJDEPonline.com) or by submitting payment to the Treasurer, State of New Jersey. The initial registration fee is \$400.00. The registration fee cannot be prorated or refunded. The Department will not register a facility or renew a registration until it receives the appropriate fee.**

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**7:27E-2.3 Reporting requirements for a facility with one or more refrigeration systems**

**(a) The owner or operator of a facility subject to registration in accordance with this**

**subchapter shall electronically submit through the Department's online business portal ([NJDEPonline.com](http://NJDEPonline.com)) an annual Facility Refrigeration System Report that contains the information specified at (b) below. The report shall be submitted to the Department in accordance with the following schedule:**

- 1. A facility with one or more refrigeration systems on or before (the operative date of this section), shall submit to the Department, on or before April 1, 2023, an initial report for the period from (the first day of the first month that is 90 days after the operative date of this section) through December 31, 2022. Subsequent reports shall be for a calendar year and shall be submitted by April 1 for the preceding calendar year.**
- 2. All other facilities shall submit to the Department, on or before April 1 of the calendar year after installation of the first refrigeration system, an initial report for the period from the first day of the first month following installation or (90 days after the operative date), whichever is later, through December 31 of the year of installation. Subsequent reports shall be for a calendar year and shall be submitted by April 1 for the preceding calendar year.**

**(b) The Facility Refrigeration System Report shall include the following information for each refrigeration system at the facility:**

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- 1. Facility Identification Number;**
- 2. Facility contact person's name, title, phone number, and email address;**
- 3. Refrigeration system identification number;**
- 4. Refrigeration system installation date;**
- 5. Equipment type;**
- 6. Equipment manufacturer;**
- 7. Equipment model or description;**
- 8. Equipment model year;**
- 9. The serial number(s) of the equipment or component, present and accessible.**  
  
**When the equipment or component is part of an assembly without a serial number, does not have an individual serial number, or is not accessible after assembly, the physical location of the equipment must be recorded in enough detail to permit positive identification;**
- 10. Temperature classification (low temperature refrigeration system, medium temperature refrigeration system, or other);**
- 11. Full charge of the refrigeration system (in pounds);**
- 12. Type of high-GWP refrigerant(s) used;**
- 13. The total weight in pounds of each type of high-GWP refrigerant that the facility purchased during the reporting period;**

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- 14. The total weight in pounds of each type of high-GWP refrigerant that was charged into a refrigeration system during the reporting period, but was not part of an initial refrigerant charge;**
- 15. The total weight in pounds of each type of high-GWP refrigerant that was recovered from a refrigeration system during the reporting period;**
- 16. The total weight in pounds of each type of high-GWP refrigerant that was stored in inventory at the facility, or stored at a different location for use by the facility, on the last day of the reporting period; and**
- 17. The total weight in pounds of high-GWP refrigerant that was shipped by the facility during the reporting period to be reclaimed or destroyed.**

**7:27E-2.4 Recordkeeping requirements for a facility with one or more refrigeration systems**

- (a) The owner or operator of a facility registered in accordance with N.J.A.C. 7:27E-2.1 shall maintain the following records for five years at the facility and make the records available to the Department upon request:**
- 1. Records showing all refrigeration system service and refrigerant leak repairs;**
  - 2. Records showing each item required to be reported in the Facility Refrigeration System Report in accordance with N.J.A.C. 7:27E-2.3(b); and**
  - 3. Records of refrigeration system component data, measurements, calculations, and assumptions used to determine the full charge.**

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### **SUBCHAPTER 3. REPORTING REQUIREMENTS FOR GAS PUBLIC UTILITIES**

#### **7:27E-3.1 Reporting requirements for gas public utilities**

**(a) A gas public utility operating within the State shall electronically submit through the Department's online business portal at [NJDEPonline.com](http://NJDEPonline.com) an annual Pipeline Modernization Report that contains the information specified at (b) below for mains and service lines in the State that are owned, leased, or controlled by the gas public utility. The Pipeline Modernization Report shall be submitted in accordance with the following schedule:**

- 1. A gas public utility operating on or before (the operative date of this section), shall submit to the Department, on or before April 1, 2023, an initial report for the period from (the first day of the first month that is after the operative date of this section) through December 31, 2022. Subsequent reports shall be for a calendar year and shall be submitted by April 1 for the preceding calendar year.**
- 2. A gas public utility that begins operation after (the operative date of this section), shall submit to the Department, on or before April 1 of the calendar year after operation begins, an initial report for the period beginning the first of the month following operation through December 31. Subsequent reports shall be for a calendar year and shall be submitted by April 1 for the preceding calendar year.**

**(b) The Pipeline Modernization Report shall include:**

- 1. The miles of mains and number of service lines in New Jersey, identified by material type, in the distribution system at the end of the reporting period.**

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- 2. Mains and service lines in New Jersey replaced or refurbished in the reporting period, as follows:**
  - i. Miles of mains grouped by the original mains material type and the replacement or refurbished material type; and**
  - ii. Number of service lines grouped by the original service line material type and the replacement or refurbished material type.**
  
- 3. Identification of leaks from pipeline components that have a leak grade classification ranked as grade 1, 2, or 3, as follows:**
  - i. Leak identification number;**
  - ii. Pipeline component that is leaking or has leaked;**
  - iii. Grade classification of the leak;**
  - iv. Date that the leak is reported;**
  - v. Date that the leak is repaired; and**
  - vi. Location of the leak, including the street address or location description, municipality in which the component is located, county, zip code, latitude, and longitude.**
  
- 4. If applicable, leak detection practices that exceed the minimum requirements of 49 CFR Part 192, Subpart M, as follows:**
  - i. Frequency of leak detection surveys;**
  - ii. Types of leak detection equipment or technology utilized;**
  - iii. Leak prevention and reduction efforts; and**

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- iv. Plans to utilize leak detection equipment or technology that exceeds Federal requirements.**
- 5. A report of each blowdown event in excess of 50 standard cubic feet (scf), conducted by a gas public utility, as follows:**
  - i. Blowdown identification number;**
  - ii. The amount of natural gas released, measured in standard cubic feet, as calculated with one of the following methodologies:**
    - (1) The volume of the pipeline segment between isolation valves and the pressure and the temperature of the gas within the pipeline in accordance with 40 CFR 98.233(i)2, incorporated by reference; or**
    - (2) The measurement of emissions using a flow meter in accordance with 40 CFR 98.233(i)3, incorporated by reference;**
  - iii. The percent volume of methane of the natural gas released;**
  - iv. Date of the blowdown event;**
  - v. Reason for blowdown event;**
  - vi. Mitigation efforts to reduce emissions from the blowdown event; and**
  - vii. Location of blowdown event, including street address or location description, municipality, county, zip code, latitude, and longitude.**

#### **7:27E-3.2 Recordkeeping requirements for a gas public utility**

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**The gas public utility shall maintain, for five years, at the headquarters of the gas public utility, records of each item required in the Pipeline Modernization Report in accordance with N.J.A.C. 7:27E-3.1, and shall make the records available to the Department upon request.**

### **7:27E-3.3 Reporting fee**

**A gas public utility subject to this subchapter will be invoiced a reporting fee by the Department. The gas public utility shall pay the reporting fee by the invoice due date either through the Department's online business portal at [NJDEPonline.com](http://NJDEPonline.com) or by submitting payment to the Treasurer, State of New Jersey, at the address listed on the invoice. The initial reporting fee is \$8,000. The reporting fee cannot be prorated or refunded.**