NJ Clean Air Council Public Hearing

SF_6

PSEG

We make things work for you.

We have the
energy
to make things better
... for you, for our investors
and for our stakeholders.

PSEG Has Recognized & Adapted to the Impacts of Climate Change

PSEG has recognized for several decades that climate change is a real phenomenon that impacts our Planet. Inclusion of climate change in our business plans has been a part of the PSEG culture since 1990. PSEG recognizes that there is no simple or short-term solution to address both mitigation and adaptation of global climate change. As new challenges arise, we have adapted our business plans to develop cost-effective solutions meet these challenges.

EPA Mandatory Reporting Program

- ✓ Subpart DD – Electric Transmission and Distribution Equipment Use

- ✓ Applicable to owners and operators of electric power system facilities with a total nameplate capacity that exceeds 17,820 lbs of sulfur hexafluoride (SF_6) and/or perfluorocarbons (PFCs) must report emissions of SF_6 and/or PFCs from the use of electrical transmission and distribution equipment

- ✓ This equipment includes but is not limited to
  - ✓ Gas-insulated substations
  - ✓ Circuit breakers
  - ✓ Switchgear, including closed-pressure and hermetically sealed-pressure switchgear
  - ✓ Gas-insulated lines containing SF_6 or PFCs
  - ✓ Gas containers such as pressurized cylinders
  - ✓ Gas carts
  - ✓ Electric power transformers
  - ✓ Other containers of SF_6 or PFC

EPA Mandatory Reporting Program

- A facility is defined as the electric power system, comprising all electric transmission and distribution equipment insulated with or containing SF_6 or PFCs that is linked through electric power transmission or distribution lines and functions as an integrated unit, that is owned, serviced, or maintained by a single electric power transmission or distribution entity (or multiple entities with a common owner, and that is located between
  - The point(s) at which electric energy is obtained by the facility from an electricity generating unit or a different electric power transmission or distribution entity that does not have a common owner, and
  - The point(s) at which the customer or another electric power transmission or distribution entity that does not have a common owner receives the electric energy

- The facility also includes servicing inventory for such equipment that contains SF_6 or PFCs

Mass Balance Equation

Emissions =

Decrease in SF_6 inventory

+

Acquisitions of SF_6

-

Disbursements of SF_6

-

Net Increase in Total Nameplate Capacity of Equipment

Reported Data

- ✓ Nameplate capacity of equipment (pounds) containing SF_6 or PFCs existing at the beginning of the year (excluding hermetically sealed-pressure equipment)
- ✓ Nameplate capacity of new hermetically sealed-pressure equipment (pounds) purchased during the year and hermetically sealed-pressure equipment retired during the year
- ✓ Nameplate capacity of new equipment other than hermetically sealed-pressure equipment (pounds) purchased during the year and equipment other than hermetically sealed-pressure equipment retired during the year
- ✓ The number of SF_6- or PFC-containing pieces of equipment in each of the following equipment categories:
  - ✓ New hermetically sealed-pressure switchgear during the year
  - ✓ New equipment other than hermetically sealed-pressure switchgear during the year
  - ✓ Retired hermetically sealed-pressure switchgear during the year
  - ✓ Retired equipment other than hermetically sealed-pressure switchgear during the year

Reported Data

- ✓ Transmission miles (length of lines carrying voltages above 35 kV)
- ✓ Distribution miles (length of lines carrying voltages at or below 35 kV)
- ✓ States and territories in which the facility lies
- ✓ SF_6 and PFC stored in containers, but not in energized equipment, at the beginning of the year (pounds)
- ✓ SF_6 and PFC stored in containers, but not in energized equipment, at the end of the year (pounds)
- ✓ SF_6 and PFC purchased in bulk from chemical producers or distributors (pounds)

Reported Data

- ✓ SF_6 and PFC purchased from equipment manufacturers or distributors with or inside equipment, including hermetically sealed-pressure switchgear (pounds)
- ✓ SF_6 and PFC returned to facility after off-site recycling (pounds)
- ✓ SF_6 and PFC in bulk and contained in equipment sold to other entities (pounds)
- ✓ SF_6 and PFC returned to suppliers (pounds)
- ✓ SF_6 and PFC sent off-site for recycling (pounds)
- ✓ SF_6 and PFC sent off-site for destruction (pounds)
- ✓ For any missing data, the parameters for which the data were missing, the substitute parameters used to estimate emissions in their absence, and the quantity of emissions thereby estimated

Annual Reports

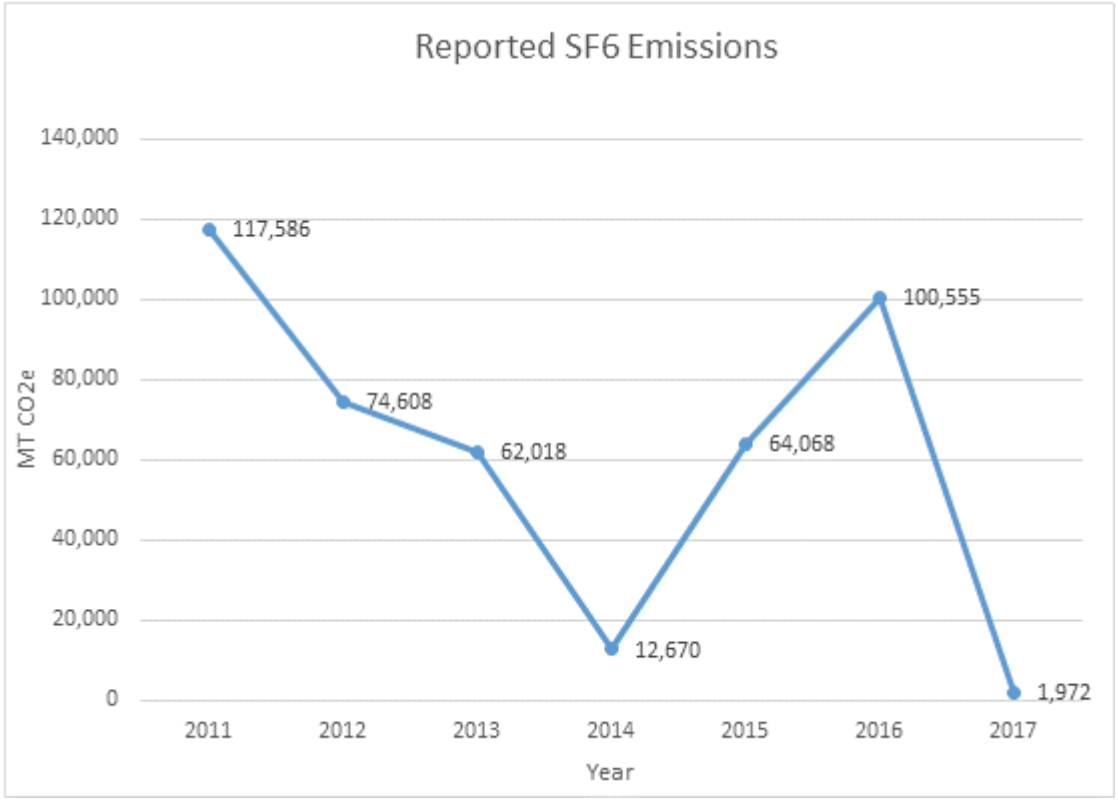
- ✓ Must be submitted to EPA by March 31 of each year
- ✓ Must be submitted electronically using the electronic Greenhouse Gas Reporting Tool (e-GGRT)

PSE&G Electrical Equipment

Nameplate capacity of equipment at the beginning of the year (pounds of SF_6)	213,207
Miles of Transmission lines (carrying voltage above 35 kV)	1,806.96
Miles of Distribution lines (carrying voltages at or below 35 kV)	22,372.08
Facility Service State and Territory	New Jersey

Based on 2017 data submitted in 2018

PSE&G Reported SF_6 Emissions



PSE&G Actions

- ✓ Reporting of emissions required the company to take a deep look into our SF_6 management process
- ✓ Established a Lean Six Sigma Team to require all projects to go through Materials Management in order to minimize inventory
- ✓ The significant reduction in 2017 was due to the retirement and replacement of older equipment with hermetically sealed-pressure equipment