



California Environmental Protection Agency

AIR RESOURCES BOARD

Update on California's Regulation for Reducing Sulfur Hexafluoride Emissions from Gas Insulated Switchgear

California Air Resources Board

January 25, 2017

Overview

- ◆ Regulation Update
- ◆ 2015 SF₆ Annual Reports
- ◆ SF6 Emissions from GIS
- ◆ Enforcement
- ◆ Inspections
- ◆ Where are we now?
- ◆ Contacts



REGULATION UPDATE



Affected Entities

- ◆ Investor-owned utilities
- ◆ Publically-owned utilities
- ◆ Co-generating industries
- ◆ Military
- ◆ Universities
- ◆ State government
- ◆ Private Sector

Key Elements of the Regulation

- ◆ Annual maximum emission rate
- ◆ Initial emission rate at 10% of nameplate capacity
- ◆ GIS owners must reduce their SF₆ emission rate by 1% per year over a ten year period from 2011 to 2020
- ◆ Beginning in 2020, maximum emission rate not to exceed 1%

Recordkeeping and Reporting Requirements

- ◆ Compliance through recordkeeping and reporting
- ◆ Annual reports are due June 1 each year and must include:
 - SF₆ emissions
 - SF₆ emission rate
- ◆ GIS owners must have available upon ARB request:
 - Current SF₆ inventories
 - GIS SF₆ nameplate capacity
- ◆ All records must be retained for three years

Emergency Event

- ◆ Section 95351(a)(3)

- **“Emergency Event”** means a situation arising from a sudden and unforeseen event including, but not limited to, an earthquake, flood, or fire.

- ◆ Section 95353

- Emergency Event Exemption

Nameplate Capacity

- ◆ Section 95351(a)(10)

- **“Nameplate Capacity”** means the design capacity of SF6 specified by the manufacturer for optimal performance of a GIS device. Nameplate capacity may be found on the nameplate attached to the GIS device, or may be stated within the manufacturer’s official product specifications.

- ◆ Section 95356(d): *Annual SF6 Emissions*

- ◆ Section 95356(e): *Annual SF6 Emission Rate*

- ◆ Discrepancies in nameplate vs. actual capacity

2015 SF₆ ANNUAL REPORTS

- ◆ 231 facilities
- ◆ 40,635 lb SF₆ emitted
- ◆ 1.9 million lb nameplate capacity
- ◆ 2.1% average emission rate
- ◆ Approx. 49k GIS devices



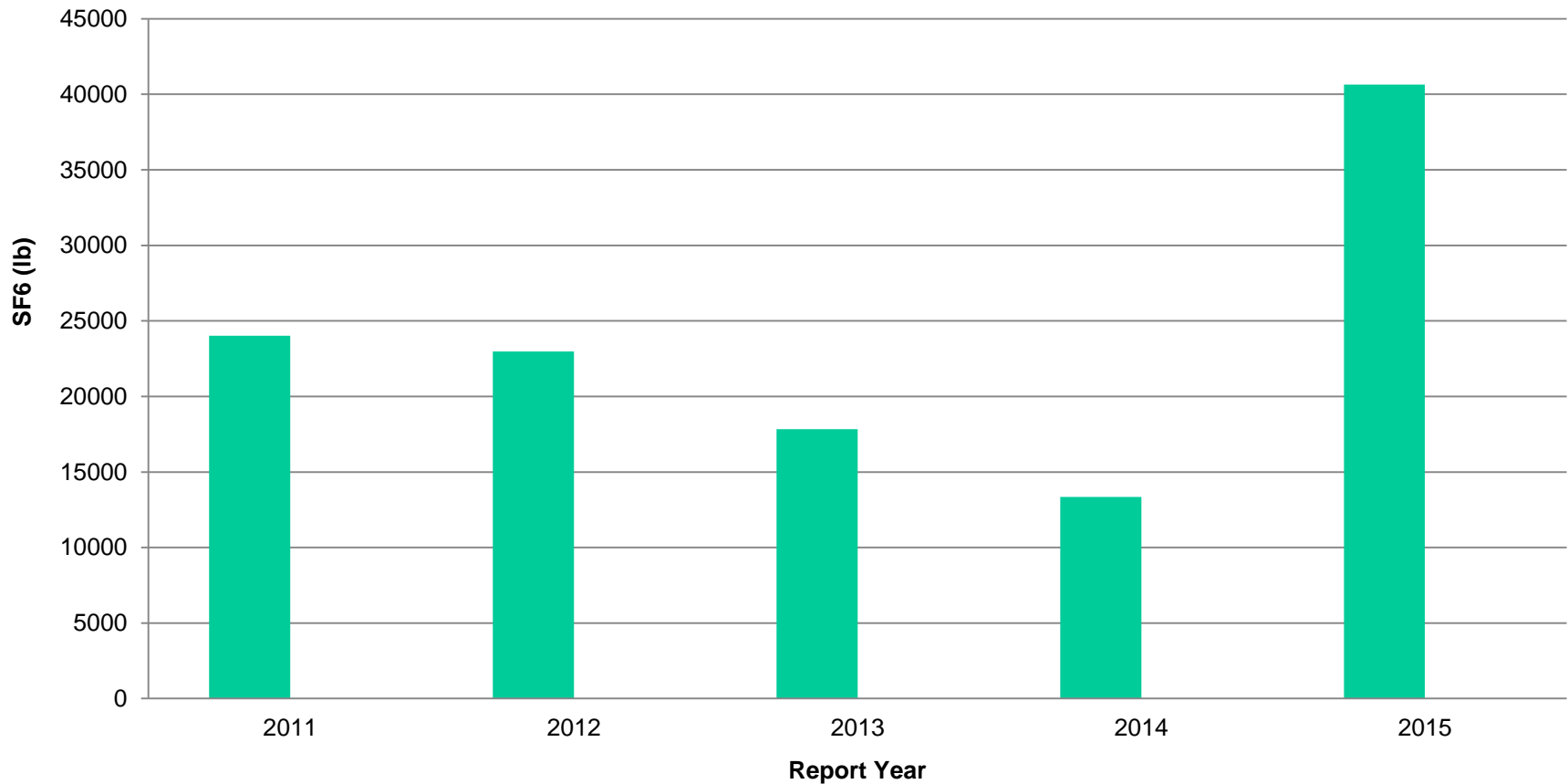
SF6 EMISSIONS FROM GIS



California's GIS SF6 Emissions Trends

Report Year	SF6 Emissions (lbs.)	SF6 Emission Rate (%)	SF6 MMTCO2e
2011	24,021	1.3	0.26
2012	22,982	1.2	0.25
2013	17,839	0.9	0.19
2014	13,340	0.6	0.15
2015	40,635	2.1	0.44

CA SF6 Emissions from GIS



ENFORCEMENT

- ◆ Enforcement action initiated or completed on 10 entities for 2011- 2014 reporting years
- ◆ Enforcement action initiated or under consideration on four (4) entities from the 2015 reporting year



INSPECTIONS

- ◆ Fall 2013: Started conducting inspections
- ◆ Approx. 15 inspections to date



WHERE ARE WE NOW?



Update

- ◆ 2016 Annual Report due to ARB by June 1
- ◆ Continue to review reports
- ◆ Inspections will be ongoing
- ◆ FAQs last updated in August 2014
- ◆ Will continue working with regulated parties

CONTACTS

Dave Mehl, Energy Section Manager

(916) 323-1491

dmehl@arb.ca.gov

Tom Pomales, Air Pollution Specialist

(916) 324-0343

tpomales@arb.ca.gov