



California Environmental Protection Agency

AIR RESOURCES BOARD

Regulation for Reducing Sulfur Hexafluoride Emissions from Gas Insulated Switchgear

***US EPA's SF₆ Partnership
Workshop***

May 7, 2014

Overview

- ◆ Background
- ◆ Regulation
- ◆ 2012 SF₆ Annual Reports
- ◆ Enforcement
- ◆ Inspections
- ◆ Where are we now?
- ◆ Contacts



BACKGROUND



Sulfur Hexafluoride (SF₆)

- ◆ Sulfur hexafluoride (SF₆) is a potent greenhouse gas
 - 23,900 times the global warming potential of carbon dioxide (CO₂)
 - One pound of SF₆ emitted is equivalent to 11 tonnes of CO₂
- ◆ 80% of California's SF₆ emissions come from gas insulated electrical switchgear

REGULATION



Affected Entities

- ◆ Investor-owned utilities
- ◆ Publically-owned utilities
- ◆ Power Plants
- ◆ Military
- ◆ Universities
- ◆ State government
- ◆ Industry

Key Elements of the Regulation

- ◆ Establishes annual maximum emission rate
- ◆ Set initial emission rate at 10% of nameplate capacity
- ◆ Requires GIS owners to reduce their SF₆ emission rate by 1% per year over a ten year period from 2011 to 2020
- ◆ Beginning in 2020, sets 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

Environmental Impacts

- ◆ Expected to decrease GHG emissions by an annual average 25,300 MTCO₂e
- ◆ Expected to cumulatively reduce emissions by 253,000 MTCO₂e over the ten year regulatory period
- ◆ Expected to achieve 70% reduction from baseline by 2020

2012 SF₆ ANNUAL REPORTS

- ◆ 182 facilities
- ◆ 42 k devices
- ◆ 23 Mlbs emitted
 - ~3% decrease from 2011
- ◆ 1.9 MMLbs nameplate capacity
- ◆ 1.2% average emission rate



ENFORCEMENT

- ◆ Four entities for 2011 reporting year
- ◆ Four entities being considered for 2012 reporting year



INSPECTIONS

- ◆ Fall 2013: Started conducting inspections
- ◆ Approx. 10 inspections to date



WHERE ARE WE NOW?



Update

- ◆ 2013 Annual Report due to ARB by June 1
- ◆ Continue to review reports
- ◆ Inspections will be ongoing
- ◆ FAQs last updated in July 2013
- ◆ Will continue working with regulated parties

CONTACTS

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