

**ATTACHMENT B
to Resolution 10-1**

February 25, 2010

Staff's Suggested Modifications to the Original Proposal

**PROPOSED REGULATION FOR THE REDUCTION OF SULFUR HEXAFLUORIDE
(SF₆) EMISSIONS FROM GAS INSULATED SWITCHGEAR**

NOTE: *Shown below are the staff's modifications to the originally proposed regulatory text set forth in Appendix A to the Staff Report: Initial Statement of Reasons, released January 7, 2010. Only those portions containing the modifications are included. This document is printed in a style to indicate changes from the originally proposed regulatory language. Staff's modifications to the original proposal are shown in underline to indicate additions and ~~strikeout~~ to indicate deletions]. The symbol "*****" means that the remainder of the text of the regulation for a specific section is not shown, but has been incorporated by reference, unchanged.*

1. Amend proposed sections 95351, 95353, 95354, 95355, and 95356, title 17, California Code of Regulations to read as follows.

§ 95351. Definitions.

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

- (1) **"Active GIS Equipment"** means non-hermetically sealed SF₆ gas insulated switchgear that is:

(A) actively eConnected (i.e., ~~interconnected~~ through busbars or cables ~~which are actively conducting electricity~~) to the GIS owner's electrical power system; or

(B) Fully-charged, ready for service, located at the site in which it will be activated, and employs a mechanism to monitor SF₆ emissions.

"Active GIS equipment" does not include equipment in storage.

- ~~(2)~~(3) **"Emergency Event"** means a situation arising from a sudden and unforeseen ~~natural disaster~~ event such as an earthquake, flood, or fire.

- ~~(3)~~(4) **“Emission rate”** means, subject to the provisions of section 95356(e), a GIS owner’s total annual SF₆ emissions from all active GIS equipment divided by the total SF₆ nameplate capacity of all active GIS equipment.
- ~~(4)~~(5) **“Executive Officer”** means the Executive Officer of the California Air Resources Board (ARB) or his or her designee.
- ~~(5)~~(6) **“Gas container”** means a vessel containing or designed to contain SF₆. “Gas container” includes pressurized cylinders, gas carts, or other containers.
- ~~(6)~~(7) **“Gas insulated switchgear or GIS”** means all electrical power equipment insulated with SF₆ gas regardless of location. Gas insulated switchgear or GIS includes switches, stand-alone gas-insulated equipment, and any combination of electrical disconnects, fuses, electrical transmission lines, transformers and/or circuit breakers used to isolate gas insulated electrical equipment.
- ~~(7)~~(8) **“GIS Owner”** means the person who owns gas insulated switchgear. For purposes of this regulation “GIS owner” excludes temporary ownership by the original equipment manufacturer during GIS equipment transport and installation at a customer’s site.
- ~~(8)~~(9) **“Hermetically Sealed Gas Insulated Switchgear”** means switchgear which is designed to be gas-tight and sealed for life
- ~~(9)~~(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.
- ~~(10)~~(11) **“NIST-Traceable Standards”** means national, traceable measurement standards developed by the National Institute of Standards and Technology (NIST).
- ~~(11)~~(12) **“Person”** shall have the same meaning as defined in Health and Safety Code section 39047.
- ~~(12)~~(13) **“Responsible Official”** means one of the following:

NOTE: Authority cited: Sections 38510, 38560, 38580, 39600, and 39601, Health and Safety Code.
Reference: Sections 38560, 39600, and 39601, Health and Safety Code.

§ 95353. Emergency Event Exemption.

- (a) ~~After January 1, 2020, a~~ A GIS owner may request emissions from an emergency event to be exempted from the calculation of the maximum allowable emission rate if it is demonstrated to the Executive Officer's satisfaction that the release of SF₆:

NOTE: Authority cited: Sections 38510, 38560, 38580, 39600, and 39601, Health and Safety Code.
Reference: Sections 38560, 39600, and 39601, Health and Safety Code.
Amend Section 95354(a)(1) to allow biennial gas container weighing.

§ 95354. SF₆ Inventory Measurement Procedures.

- (a) GIS owners must do all of the following:
- (1) Establish and adhere to written procedures to track and weigh all gas containers as they are leaving and entering storage at the beginning and end of each calendar year, and when gas containers are added or removed from inventory.

NOTE: Authority cited: Sections 38510, 38560, 38580, 39600, and 39601, Health and Safety Code.
Reference: Sections 38560, 39600, and 39601, Health and Safety Code.

§ 95355. Recordkeeping.

Owners of gas insulated switchgear must:

- (b) Establish and maintain a current and complete inventory of gas containers, which includes the following information for each container:

- (4) A chronological accounting, by weight in pounds, of SF₆ ~~transferred into or out of the container~~ ;at the beginning and end of each calendar year, and when gas containers are added or removed from inventory.

NOTE: Authority cited: Sections 38510, 38560, 38580, 39600, and 39601, Health and Safety Code.
Reference: Sections 38560, 39600, and 39601, Health and Safety Code.

§ 95356. Annual Reporting Requirements.

- (a) Beginning in calendar year ~~2014~~ 2012 for emissions occurring during the previous calendar year, and each calendar year thereafter, each GIS owner must submit the following annual report to the Executive Officer no later than the applicable deadline specified in title 17, California Code of Regulations, Section 95100, *et seq.*

- (c) The annual report shall be submitted to the Executive Officer as follows:
- (1) GIS owners subject to the requirements of title 17, California Code of Regulations Sections 95100 *et seq.*, shall use the ARB Greenhouse Gas Reporting Tool or other mechanism, as specified in title 17, California Code of Regulations section 95104~~(e)~~.
 - (2) GIS owners not subject to the requirements of title 17, California Code of Regulations Sections 95100 *et seq.*, may either:
 - (A) Use the ARB's Greenhouse Gas Reporting tool, or other mechanism, as specified in title 17, California Code of regulations section 95104~~(e)~~; or

- (d) *Annual SF₆ Emissions.* GIS owners must use the following equation to determine their SF₆ emissions:

Equation for determining annual SF₆ emissions:

$$\text{User Emissions} = (\text{Decrease in SF}_6 \text{ inventory}) + (\text{Acquisitions of SF}_6) - (\text{Disbursements of SF}_6) - (\text{Net increase in total nameplate capacity of } \text{non-hermetically sealed } \underline{\text{active}} \text{ GIS equipment owned})$$

Where:

Decrease in SF₆ inventory = (SF₆ stored in containers, but not in equipment, at the beginning of the year) - (SF₆ stored in containers, but not in equipment, at the end of the year).

Acquisitions of SF₆ = (SF₆ purchased from chemical producers or distributors in bulk) + (SF₆ purchased from equipment manufacturers or distributors with or inside ~~non-hermetically sealed~~ active GIS equipment) + (SF₆ returned to site after off-site recycling).

Disbursements of SF₆ = (SF₆ in bulk and contained in ~~non-hermetically sealed~~ active GIS equipment that is sold to other entities) + (SF₆ returned

to suppliers) + (SF₆ sent off site for recycling) + (SF₆ sent to destruction facilities).

Net increase in total nameplate capacity of ~~non-hermetically sealed~~ active GIS equipment ~~operated~~ owned = (The nameplate capacity of new ~~non-hermetically sealed~~ active GIS equipment) - (Nameplate capacity of retiring ~~non-hermetically sealed~~ active GIS equipment). (Note that nameplate capacity refers to the manufacturer's SF₆ design capacity rather than to the actual charge, which may reflect leakage.)

NOTE: Authority cited: Sections 38510, 38560, 38580, 39600, and 39601, Health and Safety Code.
Reference: Sections 38560, 39600, and 39601, Health and Safety Code.