

**BEFORE THE  
AIR RESOURCES BOARD  
OF THE  
STATE OF CALIFORNIA**

**SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY  
FURTHER COMMENT ON PROPOSED REGULATION ORDER:  
REGULATION FOR REDUCING SULFUR HEXAFLUORIDE EMISSIONS  
FROM GAS INSULATED SWITCHGEAR**

Norman A. Pedersen, Esq.  
Lily M. Mitchell, Esq.  
HANNA AND MORTON LLP  
444 South Flower Street, Suite 1500  
Los Angeles, California 90071-2916  
Telephone: (213) 430-2510  
Facsimile: (213) 623-3379  
E-mail: *npedersen@hanmor.com*  
*lmitchell@hanmor.com*

Attorneys for the **SOUTHERN CALIFORNIA  
PUBLIC POWER AUTHORITY**

Dated: February 24, 2010

## TABLE OF CONTENTS

<b>I.</b>	<b>INTRODUCTION AND SUMMARY.....</b>	<b>1</b>
<b>II.</b>	<b>THE PENALTY PROVISIONS SHOULD BE AMENDED .....</b>	<b>2</b>
	<b>A. Current penalty provisions are inappropriate.....</b>	<b>2</b>
	<b>B. Alternatives to current penalty provision of Proposed SF6 Regulation.....</b>	<b>4</b>
<b>III.</b>	<b>ACTUAL COST OF COMPLIANCE WITH THE PROPOSED RECORD-KEEPING AND REPORTING REQUIREMENTS WILL BE SUBSTANTIALLY HIGHER THAN ARB’S ESTIMATE.....</b>	<b>5</b>
	<b>A. Per-use weighing of SF6 containers is more extensive than current procedures. ....</b>	<b>5</b>
	<b>B. Estimated costs of record-keeping and reporting .....</b>	<b>6</b>
	<b>C. Per-use weighing of SF6 containers should not be required.....</b>	<b>7</b>
<b>IV.</b>	<b>CONCLUSION .....</b>	<b>8</b>

**SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY  
FURTHER COMMENT ON PROPOSED REGULATION ORDER:  
REGULATION FOR REDUCING SULFUR HEXAFLUORIDE EMISSIONS  
FROM GAS INSULATED SWITCHGEAR**

**I. INTRODUCTION AND SUMMARY**

The Southern California Public Power Authority (“SCPPA”)<sup>1</sup> respectfully submits this further comment on the Proposed Regulation Order: Regulation for Reducing Sulfur Hexafluoride Emissions from Gas Insulated Switchgear (“Proposed SF6 Regulation”), in addition to the SCPPA comment submitted on February 16, 2010.

SCPPA representatives attended a meeting with members of the California Air Resources Board (“ARB”) staff on February 18, 2010. At this meeting, some of the issues raised in the SCPPA submission of February 16 were discussed and the staff noted that it intends to put forward certain changes to the Proposed SF6 Regulation. While SCPPA very much appreciates the changes proposed by the ARB staff, and considers them well-justified, some issues remain outstanding.

These further comments address the following issues:

- The imposition of daily penalties for an annual obligation is inappropriate, and is not required under the Health and Safety Code.
- The costs of complying with the recordkeeping requirements, particularly the per-use weighing of SF6 containers, are likely to be considerably higher than the ARB staff’s estimate. Per-use weighing is not necessary to determine an annual emissions rate, and should not be required.

---

<sup>1</sup> SCPPA is a joint powers authority. The members are Anaheim, Azusa, Banning, Burbank, Cerritos, Colton, Glendale, Los Angeles Department of Water and Power, Imperial Irrigation District, Pasadena, Riverside, and Vernon.

SCPPA also reiterates the other points made in the SCPPA submission of February 16, including in particular the desirability of being able to count early reductions of SF6 emissions towards compliance in future years. This would provide useful flexibility for compliance entities, and would be consistent with the approach taken in the Low Carbon Fuel Standard and the approach proposed to be taken in the 33% Renewable Electricity Standard.

## **II. THE PENALTY PROVISIONS SHOULD BE AMENDED**

### **A. Current penalty provisions are inappropriate.**

The proposed enforcement language for exceeding the annual SF6 emission rate is not appropriate for compliance with an annual limit, and does not constitute a method for converting a violation of the annual limit into the number of days in violation for purposes of assessing the appropriate penalty.

Section 38580 of the California Health and Safety Code (“Code”), introduced with AB 32, gives ARB discretion to develop a method to convert a violation of a regulation (which would include a violation of an annual requirement such as the SF6 emission rate) into the number of days in violation, where appropriate, for purposes of assessing penalties. Section 38580(b)(3) of the Code states:

The State Board *may* develop a *method to convert a violation* of any rule, regulation, order, emission limitation, emissions reduction measure adopted by the State Board pursuant to this division *into the number of days of violation, where appropriate*, for purposes of the penalty provisions of Article 3 (commencing with section 42400) of Chapter 4 of Part 4 of, and Chapter 1.5 (commencing with section 43025) of Part 5 of, Division 26. (emphasis added)

The key feature of the Proposed SF6 Regulation is the imposition of a maximum annual emission rate. However, section 95358(c) of the Proposed SF6 Regulation mandates that a violation of the annual limit is automatically 365 separate daily violations, without considering whether it is appropriate for the magnitude of the exceedance and without providing a conversion

method as required by the Code. Section 95358(c) of the Proposed SF6 Regulation is worded as follows:

Any exceedance of the maximum allowable SF6 emission rate for a calendar year shall constitute a single, separate violation of this subarticle for each day of the calendar year.

The legislature did not intend for the ARB to issue a mandatory penalty provision deeming an annual emission violation to automatically constitute 365 days of violation. If the legislature had intended such a result, it would have enacted a specific penalty provision to that effect. Instead, the legislature authorized the ARB to exercise its discretion in developing a method, as appropriate, to determine the appropriate number of separate violations attributable to an entity that violates the Proposed SF6 Regulation and other regulations adopted under AB32.

However, the enforcement language in section 95358(c) of the Proposed SF6 Regulation does not allow for the exercise of any discretion by the ARB or any consideration of the appropriateness in an individual case as to whether or how many separate violations should be attributed to a violation of the annual SF6 emissions rate for purposes of assessing penalties. The proposed language in section 95358(c) does not constitute a “method” as authorized by the legislature, but is instead an absolute mandate that deems any violation of the annual SF6 emissions rate, regardless of the circumstances, to be 365 separate violations subject to a separate penalty for each.

If the ARB adopts section 95358(c) as currently worded, the ARB may be acting outside of the scope of the authority delegated to it by the legislature in violation of Govt. Code section 11346 and following. In addition, such an approach would be arbitrary and lacking in evidentiary support. There is no legal basis or evidentiary support to conclude in advance that exceeding the annual SF6 emissions rate automatically constitutes 365 separate daily violations, regardless of the degree of the exceedance. For example, one entity may slightly exceed the

annual SF6 emission rate by 10 pounds over the calendar year, and another entity may grossly exceed the annual SF6 emissions rate by 500 pounds well before the end of the calendar year. Under the proposed language, each of these entities would be treated the same; each deemed to have committed 365 violations. This is inappropriate, and provides no method by which to calculate the actual number of days in violation.

**B. Alternatives to current penalty provision of Proposed SF6 Regulation.**

A reasonable alternative to the proposed language would consist of the ARB exercising its discretion to develop a method, as appropriate, to calculate the number of days in violation for entities that violate the maximum annual SF6 emissions rate. Such a method should include a review of all emissions records for the facility and a determination as to what caused the exceedance, the duration of the exceedance and the extent of the exceedance.

Alternatively, a simpler approach would be for the ARB to deem an exceedance of the maximum annual SF6 emission rate to be a single violation, and specify a method for assessing penalties proportional to the magnitude of the violation. For instance, it would be simple to calculate the pounds of excess SF6 emissions using data provided in the annual report, as follows:

$$\text{Excess Emissions} = (\text{actual Annual SF6 Emissions}) - (\text{allowed emissions based on the maximum annual SF6 emission rate and the nameplate capacity of the entity's Active GIS Equipment})$$

Subsequently, a penalty could be assessed based on the pounds of excess emissions, taking into consideration mitigating circumstances and the entity's efforts to comply with the regulation. This method would provide a fair and objective means to assess penalties proportional to the degree to which the annual emissions limit is exceeded.

A similar technique appears to be envisaged for the 33% Renewable Electricity Standard, also under AB 32, where a "sliding-scale schedule" is to be developed to "establish the number

of violations based on the extent and quantity of RES credit shortfalls incurred by a regulated party.” Proposed Concept Outline for the California Renewable Electricity Standard at page 14.

**III. ACTUAL COST OF COMPLIANCE WITH THE PROPOSED RECORD-KEEPING AND REPORTING REQUIREMENTS WILL BE SUBSTANTIALLY HIGHER THAN ARB’S ESTIMATE.**

The staff report accompanying the Proposed SF6 Regulation states:

Staff assumed that per-utility recordkeeping and reporting costs for the first year would range between \$500 and \$1,900. Annual recordkeeping and reporting costs for succeeding years would range between \$240 and \$960 per entity.

Initial Statement of Reasons, Executive Summary, Economic Impacts on page ES-4.

However, this cost estimate substantially underestimates the actual costs to comply with the recordkeeping and reporting requirements as currently contained in the Proposed SF6 Regulation.

**A. Per-use weighing of SF6 containers is more extensive than current procedures.**

Section 95355(b)(4) of the Proposed SF6 Regulation currently requires “A chronological accounting, by weight in pounds, of SF6 transferred into or out of the containers.” This proposed requirement to weigh each SF6 container each time gas is transferred into or out of the container is much more extensive than the current requirement to weigh the containers once per year. The number of times per year the SF6 containers will need to be weighed depends on how much SF6 equipment the entity operates, how often the equipment is serviced (refilled or scheduled maintenance), and the quantity of equipment placed into service and/or removed from service during the year.

SCPPA appreciates that the ARB staff proposes to remove the per-use weighing requirement, and supports this change. However, as the wording of the change is not yet

available, our comments and the cost estimates below are based on the wording of the current Proposed SF6 Regulation.

**B. Estimated costs of record-keeping and reporting**

For medium and large utilities that operate multiple facilities with SF6 equipment and have many SF6 gas containers, a computerized recordkeeping system will be needed to integrate the per-use weighing and recordkeeping into the work management system, to properly manage and store the data, and to be able to produce records upon demand for inspection purposes.

To properly quantify the cost of compliance with the proposed recordkeeping and reporting requirements, the cost of each of the following elements should be included. (Note: labor cost estimates are based on \$100 per hour.)

**Table 1: Cost breakdown**

<b>Cost Element</b>	<b>Detailed Description</b>	<b>Estimated Cost</b>
Initial Costs	1) Develop and implement a recordkeeping system to store and manage current inventories of SF6 containers and equipment <ul style="list-style-type: none"> <li>▪ System development</li> <li>▪ System integration with existing work management system and applications</li> <li>▪ System rollout and training</li> <li>▪ Reports development (e.g., SF6 container and equipment inventories)</li> <li>▪ Hardware (computer equipment, field recordkeeping equipment, etc.)</li> <li>▪ Data backup / restoration system</li> </ul>	\$250,000  (see cost estimate attached to comments by Southern California Edison)
	2) Purchase scales to weigh SF6 bottles that meet the 1% accuracy requirement <ul style="list-style-type: none"> <li>▪ Based on 10 scales</li> </ul>	\$2,280 per scale, \$22,800 total
Annual Costs  (Note: these values represent a medium sized electric utility, and can be scaled to estimate costs for a small or large entity.)	1) Ongoing training of staff on recordkeeping <ul style="list-style-type: none"> <li>▪ Based on 1 hour per employee (trainer time is additional)</li> </ul>	\$100 to \$1,000 per year
	2) Weighing SF6 bottles (annual weighing + every gas transfer) plus data entry <ul style="list-style-type: none"> <li>▪ Based on 15 minutes x 2 employees per bottle x 200 large SF6 bottles</li> </ul>	\$10,000 to \$30,000 per year
	3) Annual calibration of scales	\$500 per year



Cost Element	Detailed Description	Estimated Cost
	<ul style="list-style-type: none"> <li>▪ Not currently known whether this can be done in-house or needs to be outsourced. Assumed 30 minutes per scale x 10 scales.</li> </ul>	
	4) Data review and quality assurance <ul style="list-style-type: none"> <li>▪ Assumed 24 hours labor.</li> </ul>	\$2,400 per year
	5) Calculate annual SF6 emissions and emission rate; prepare annual report with copies of SF6 container and equipment inventories; internal review and approval; submit report to ARB. <ul style="list-style-type: none"> <li>▪ Assumed 40 hours labor.</li> </ul>	\$4,000 per year
Additional Costs	1) Prepare for inspection, escort during inspection, respond to information requests <ul style="list-style-type: none"> <li>▪ Assume 10 to 15 hours labor</li> </ul>	\$1,000 to 1,500 per inspection
	2) Emergency Event Exemption request (gather information, prepare and submit request) <ul style="list-style-type: none"> <li>▪ Assume 8 - 10 hours labor</li> </ul>	\$800 to \$1,000 per event
	3) Equipment replacement <ul style="list-style-type: none"> <li>▪ Scales to weigh SF6 bottles</li> <li>▪ Recordkeeping system upgrades and maintenance</li> </ul>	\$2,280 per scale To be determined

**Table 2: Cost summary**

Initial Year System Implementation, Recordkeeping & Reporting Cost Estimate (medium entity)	\$289,800 to \$310,700
Subsequent Year Annual Recordkeeping & Reporting Cost Estimate (medium entity)	\$17,000 to \$37,000 per year
Total Recordkeeping & Reporting Cost over 10 year compliance period (medium entity)	\$440,000 to \$640,000

(Note: The cost summary does not take into account any savings from reduced purchases of SF6.)

In light of the information presented above, SCPPA recommends that the ARB revisit staff's cost analysis of the Proposed SF6 Regulation and continue to work with stakeholders to prepare a revised estimate that more accurately reflects the actual cost to comply with the proposed recordkeeping and reporting requirements.

**C. Per-use weighing of SF6 containers should not be required.**

Since weighing the SF6 bottles is the most significant annual cost, SCPPA supports the change we understand the ARB staff will propose, to eliminate the per-use weighing of the gas

containers, in favor of weighing the bottles at the start and end of each year. This is all that is necessary to calculate the annual decrease in SF6 inventory for the calculation of Annual SF6 Emissions as specified in section 95356(d) of the Proposed SF6 Regulation. It is also consistent with the current practice and calculation method specified in ARB's Regulation for the Mandatory Reporting of Greenhouse Gas Emissions ("Mandatory Reporting Regulation") and the U.S. EPA voluntary SF6 emission reduction program.

Additional data collected by weighing the SF6 containers whenever gas is transferred into or out of the container during the year is not used in the calculation of Annual SF6 Emissions and the Annual SF6 Emission Rate for purposes of compliance with the Proposed SF6 Regulation, would increase the labor costs and burden on utility staff resources, and may increase the potential for work related injuries.

#### **IV. CONCLUSION**

SCPPA urges the ARB to consider these comments when deliberating on the Proposed SF6 Regulation. SCPPA appreciates the opportunity to submit these comments to the ARB.

Respectfully submitted,

*/s/ Norman A. Pedersen*

---

Norman A. Pedersen, Esq.  
Lily M. Mitchell, Esq.  
HANNA AND MORTON LLP  
444 South Flower Street, Suite 1500  
Los Angeles, California 90071-2916  
Telephone: (213) 430-2510  
Facsimile: (213) 623-3379  
E-mail: *npedersen@hanmor.com*  
*lmitchell@hanmor.com*

Attorneys for the **SOUTHERN CALIFORNIA  
PUBLIC POWER AUTHORITY**

Dated: February 24, 2010