



May 26, 2021

Ms. Carey Bylin
Manager, Energy Section
Industrial Strategies Division
California Air Resources Board
1001 I Street, Sacramento, CA 95814

RE: SCE Comments Regarding the 15-Day Text Proposed Amendments to the Regulation for Reducing Sulfur Hexafluoride Emissions from Gas Insulated Switchgear

Dear Ms. Bylin,

Southern California Edison (“SCE”) appreciates the opportunity to comment on the California Air Resources Board’s (“CARB”) Proposed Amendments to the Regulation for Reducing Sulfur Hexafluoride Emissions from Gas Insulated Switchgear (“Proposed Amendments”) released May 5, 2021.

SCE appreciates the dedication of the CARB Staff over the past several years to learn and understand the unique challenges of the individual utilities and the manufacturers producing gas insulated equipment (GIE). We recognize the substantial effort CARB Staff has taken to work with stakeholders to address specific concerns and develop a regulation that will reduce GHG emissions and be achievable and cost-effective while preserving safety and reliability in the electricity grid. The Proposed Amendments in the 15-Day Text continue to build a more feasible regulation. SCE offers the following recommendations to improve clarity during implementation of the rule.

I. Provide implementation guidance documents, a calculation template and an SF6 phase-out exemption form to facilitate consistency and minimize errors.

SCE would find significant value in any additional guidance from rulemaking staff during rule implementation, such as a guidance document, which could describe example scenarios and address frequently asked questions. CARB staff has spent a great deal of time describing and clarifying the intent of the rule for stakeholders in meetings and workshops and it would be helpful for this level of understanding to be memorialized for future reference. The regulation is very technical, and we would like to prevent any misinterpretations.

A calculation template or tool to be used for the annual reporting would drive consistency in annual reports among stakeholders while minimizing reporting errors. Lastly, a form, template, or tool to be used when requesting an SF6 phase-out exemption would also help standardize and streamline the process.

II. Clarify proper mass-balance accounting for SF₆ gas transfers into or out of GIE that is either jointly owned or GIE in which utility does not have any ownership but has some cost responsibility.

Section 95354.1 states, 'When accounting for emissions associated with GIE that are jointly owned by multiple GIE owners, each joint owner must apply its equity share of the relevant GIE when calculating annual emissions, pursuant to section 95354(a)(7)(b).

SCE would like to bring to CARB staff's attention that different contractual arrangements exist between SCE and other 3rd party entities. These contracts are based not only on the ownership of GIE but also on maintenance related cost responsibility. A few of the common contractual arrangements are listed below.

1. GIE is 100% owned by SCE; SCE and 3rd party split 50% of the maintenance costs each.
2. GIE is 100% owned by 3rd party; SCE and 3rd party split 50% of the maintenance costs each.
3. GIE is 100% owned and maintained by 3rd party.
4. GIE is 100% owned by SCE; 3rd party has 100% cost responsibility.
5. Jointly owned GIE between 2 or more parties with varying cost responsibility.

As can be seen above, equity share alone is not sufficient guidance to allocate emissions. As an example, for scenario described in #2; per current guidance, SCE would NOT have to account for emissions because of 0% ownership. However, there might be a scenario where gas from SCE's cylinder inventory is used to top off this GIE during leak repair. While all the gas is reduced from SCE's cylinder inventory (affecting the term *Decrease in covered insulating gas inventory*), because the 3rd party is responsible for only 50% of maintenance costs, SCE would only sell them 50% of the gas (affecting the term *Disbursement of covered insulating gas*). The remaining 50% of the gas shows up as SCE emissions. This is not consistent with the current guidance.

While some of these scenarios are covered under the current guidance listed in Section 95354.1, SCE would appreciate specific guidance from CARB on how to account for emissions associated with unique contractual situations to not generate non-existent emissions. Further, additional guidance on accounting for these GIE during commissioning and decommissioning where gas added or removed is not owned by GIE owner will be helpful to ensure consistent and accurate emissions reporting across all utilities.

III. Ensure utility supplier/bid lists provided as part of an SF6 phase-out exemption request remain confidential.

Section 95357(d)(5) requires that an SF6 phase-out exemption request must contain:

(5) the names of manufacturers:

(A) Contacted about the availability of non-SF6 GIE that might be appropriate for use in the type of project(s) described in section 95357(d)(3)(A) and/or 95357(d)(3)(B), and the dates contact was initiated;

(B) That submitted bids pursuant to section 95357(l); and

(C) A description of the universe of entities eligible to bid based on the bidding process used by the GIE owner (e.g., public solicitation, qualified vendor list);

SCE's bid process, including qualified vendor lists and submitted bids are considered business confidential information. Section 95358, Treatment of Confidential Information, does not specify how to claim confidentiality. SCE would like to ensure that vendor's proprietary technologies and pricing information remains confidential and would appreciate additional guidance and clarity to confirm that this type of information would remain confidential.

IV. Clarify rule language to specify that non-SF6 alternatives must be available from at least two suppliers to require purchase.

SCE understands the intent of the regulation is to require the purchase of non-SF6 GIE when it is available for a specific application after the phase-out date from at least two suppliers. However, we believe the rule language in Section 95357(b)(1) could potentially be interpreted incorrectly. An example of incorrect interpretation would be if a stakeholder receives ten bids and two suppliers are unable to provide non-SF6 GIE, but eight suppliers can provide non-SF6 GIE. Since non-SF6 GIE is "unavailable from at least two suppliers", a phase-out exemption may be submitted.

Proposed edits to §95357(b), SF₆ Phase-Out Exemption and Failure Notification, are indicated below in underlined and ~~strikethrough~~ text:

(b) Beginning September 1, 2024, a GIE owner may submit an SF6 phase-out exemption request if, based on bids received pursuant to section 95357(l) either:

(1) Non-SF6 GIE of the equipment type and GIE characteristics necessary for the particular project(s) or application(s) are ~~unavailable~~ available from ~~at least~~ less than two suppliers; or

V. Provide clarity in rule language to indicate that nameplate values adjusted via Nameplate Capacity Adjustment Procedure are not retroactive.

SCE appreciates the ability and option to adjust nameplate values in Section 95357.2, Nameplate Capacity Adjustments. It is our understanding that the intent of the section is to allow GIE owners to adjust nameplates on GIE acquired prior to December 31, 2021 and that those adjustments would not change or affect historical CARB annual reports. It would be helpful for the rule language to clearly state

that the nameplate capacity adjustment is not retroactive and historical CARB reports are not subject to changes based on the new or updated nameplate capacity.

SCE suggests adding language to Section 95357.2 to clearly state this intent so that there is no confusion in the future.

Suggested Language – Nameplate capacity adjustments pursuant to Section 95357.2 would take effect in the data year of the adjustment. A GIE owner’s prior annual reports would not be adjusted.

VI. Add SF₆ alternative gases with low maximum incremental reactivity VOC-exempt compounds lists.

SCE anticipates significant implementation and annual operating costs for GIE owners associated with local air district permitting for equipment containing SF₆ alternative gases (NOVEC, etc.) that CARB may not have considered in the economic analysis.

A Permit to Construct/Operate is required prior to building, erecting, installing, altering, or replacing any equipment that has a potential to emit air contaminants. SF₆ alternative gases contain volatile organic compounds (VOC). South Coast Air Quality Management District Rule 102 defines VOC as any volatile compound of carbon, excluding exempt compounds and a list of excluded compounds¹. For example, NOVEC 4710 is volatile, contains carbon, and its main component (2,3,3,3-tetrafluoro-2-(trifluoromethyl)-Propanenitrile [CAS 42532-60-5; C4F7N]) is not specified as an exempt compound. The relevant federal regulation (40 CFR 51.100) clarifies the definition of VOC to specify such compounds must participate in atmospheric photochemical reactions. As a heptafluoro-iso-butyronitrile, it is likely that the main component of NOVEC 4710 has negligible photochemical reactivity; however, since it has not been listed as an exempt compound by CARB², the U.S. Environmental Protection Agency or local air districts, it would be considered a VOC and would therefore be subject to local air district permitting requirements.

The costs associated with permitting each GIE unit can vary widely among local air districts. Depending on how each air district decides to categorize the unit, the fees to obtain a Permit to Construct could be between \$1,850 to \$4,700 per unit, plus staff or consultant labor hours to prepare and submit the permit to construct. After that, there are annual fees associated with the Permit to Operate.

These local permitting costs could add to the mounting costs associated with switching to new, technologies versus the existing, proven SF₆ technologies on the electric grid (such as the costs of pilot programs, labor for retrofit, premium costs over existing technologies, training employees on new technologies, etc.). The cost burden will fall on the shoulders of customers.

To minimize barriers to adoption of alternative SF₆ technologies and to minimize cost impacts to customers, we request that CARB, in close collaboration with GIE owners and manufacturers, work with U.S. EPA and the air districts to add SF₆ alternative gases to their VOC-exempt compounds lists.

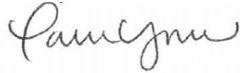
¹ <https://www.aqmd.gov/docs/default-source/rule-book/reg-i/rule-102-definition-of-terms.pdf?sfvrsn=4>

² https://ww3.arb.ca.gov/ei/speciate/voc_rog_dfn_1_09.pdf

Conclusion

SCE thanks CARB for the continued collaboration and opportunity to provide comments on the 15-Day Text Proposed Amendments. We look forward to implementing this regulation to reduce GHG emissions while maintaining safety and reliability in the electricity grid.

Respectfully,



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