



June 12, 2018

Mr. Dave Mehl  
Manager, Project Assessment  
Industrial Strategies Division  
California Air Resources Board  
1001 I Street  
Sacramento, California 95814

**RE: CARB Proposals - May 3, 2018 SF<sub>6</sub> Technical Working Group Meeting**

Dear Mr. Mehl:

Pacific Gas & Electric Company, Sacramento Municipal Utility District, San Diego Gas & Electric Company, Southern California Edison Company, Los Angeles Department of Water and Power, Turlock Irrigation District, the Northern California Power Agency<sup>1</sup> and Southern California Public Power Authority<sup>2</sup> (“Utilities Group”) appreciate the opportunity to offer comments to the CARB proposals offered during the technical working group meeting held on May 3, 2018 and look forward to offering more substantive comments after the revised ‘Strawman’ proposed regulation is available.

I. General Comments

The Utilities Group represents the majority of electricity transmission and distribution system owners in California. We compliment CARB staff for fostering open and collegial dialog during this informal process to consider amendments to the existing SF<sub>6</sub> regulation. The Utilities Group supports amendments that will help reduce high global warming potential (GWP) gas emissions and still ensure that critical uses of sulfur hexafluoride (SF<sub>6</sub>) are preserved, particularly to warrant the continued safe and reliable operation of the statewide electricity grid, and is pleased to offer the following comments for your consideration:

- Revisit the proposed de minimis emissions threshold
- Review the proposed SF<sub>6</sub> gas insulated equipment (GIE) phase-out schedule
- Exempt hermetically-sealed SF<sub>6</sub> GIE from the phase-out schedule
- Include Technical Infeasibility Waivers

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<sup>1</sup> The Northern California Power Agency (NCPA) is a nonprofit California joint powers agency established in 1968 to construct and operate renewable and low-emitting generating facilities and assist in meeting the wholesale energy needs of its 16 members: the Cities of Alameda, Biggs, Gridley, Healdsburg, Lodi, Lompoc, Palo Alto, Redding, Roseville, Santa Clara, Shasta Lake, and Ukiah, Plumas-Sierra Rural Electric Cooperative, Port of Oakland, San Francisco Bay Area Rapid Transit (BART), and Truckee Donner Public Utility District—collectively serving nearly 700,000 electric consumers in Central and Northern California.

<sup>2</sup> The Southern California Public Power Authority (SCPPA) is a joint powers agency whose members include the cities of Anaheim, Azusa, Banning, Burbank, Cerritos, Colton, Glendale, Los Angeles, Pasadena, Riverside, and Vernon, and the Imperial Irrigation District. SCPPA Members collectively serve nearly five million people throughout Southern California. Each Member owns and operates a publicly-owned electric utility governed by a board of local officials who are directly accountable to their constituents.

II. Revisit the Proposed Deminimis Emissions Threshold:

CARB proposed that entities with a non-hermetically sealed GIE system capacity less than 5,500 MT CO<sub>2</sub>e would be exempt from the annual leak rate limits in the regulation. We agree with the proposal to apply this exemption to gaseous media using GIE with a non-zero GWP and believe that this provision will encourage the phase-out of SF<sub>6</sub> and introduction of SF<sub>6</sub>-gas alternatives. However, we do not believe that an exemption at the proposed level would provide regulatory relief for small entities with circuit breakers or circuit switcher inventories that could easily exceed the proposed threshold, and suggest that CARB consider a 10,000 MT CO<sub>2</sub>e threshold for non-hermetically sealed GIE instead, consistent with the mandatory greenhouse gas reporting regulation reporting threshold.

III. Review the Proposed SF<sub>6</sub> GIE Phase-out Schedule

During the technical working group meeting, CARB also proposed a tiered phase-out schedule for the purchase of new SF<sub>6</sub> GIE starting on December 31, 2024 for equipment rated at 72kV and lower and then incrementally adding higher voltage classes - 145kV, 245 kV, and greater than 245 kV - every other year through December 31, 2030. We support a tiered phase-out schedule for new GIE purchases that is dependent upon the commercial availability of non-SF<sub>6</sub> equipment for each voltage class of equipment, is cost-effective, and is linked to a robust technical exemption mechanism to ensure the SF<sub>6</sub> GIE phase-out does not compromise the safety, reliability and integrity of the electricity system. However, since utilities have separate processes to introduce new products into their operations, we continue to recommend that the tiered phase out schedule allow sufficient time following commercial availability of the non-SF<sub>6</sub> equipment for utilities to: a) purchase the non-SF<sub>6</sub> equipment through competitive solicitation, b) test the operation and maintenance of such equipment, c) ensure compatibility with existing equipment and electricity systems, and d) provide sufficient time for workforce training and education.

IV. Exempt hermetically-sealed SF<sub>6</sub> GIE from the phase-out schedule

In our March 29, 2018 letter we recommended that the phase-out requirement only apply to non-hermetically sealed SF<sub>6</sub> GIE since manufacturers design and build hermetically-sealed SF<sub>6</sub> GIE to be 'sealed for life' with no routine maintenance or in-the-field refilling required. Moreover, since hermetically sealed SF<sub>6</sub> GIE typically contains less than 35 lbs. SF<sub>6</sub>, and operational emissions from hermetically-sealed GIE are unlikely, we believe that it is appropriate to exclude this class of equipment from the SF<sub>6</sub> GIE phase-out schedule. CARB's efforts to phase out the use of SF<sub>6</sub> should focus on the larger non-hermetically sealed GIE which has higher potential for leakage, and therefore is more cost effective to transition over to non-SF<sub>6</sub> equipment.

V. Include Technical Infeasibility Waivers

During the technical working group meeting, CARB noted that a Technical Infeasibility Waiver section would be included in the next Strawman proposal of revisions to the regulation. We support this concept and look forward to reviewing the details of this proposal after it is available. Our proposal in the March 29, 2018 letter provided a recommendation on how a waiver can be implemented on a case-by-case basis for a project or application based on the date of equipment purchase. Since procurement of GIE is not 'off the shelf', we recommend a streamlined waiver process, particularly in time-sensitive situations where delays could compromise system reliability or safety.

Conclusion

We thank CARB staff for the ongoing dialogue regarding how best to update the SF<sub>6</sub> GIE regulation, and look forward to continued engagement to develop amendments that reflect the state's goal to reduce high GWP gas emissions and ensure the continued safe and reliable operation of the statewide electricity grid.