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April 15, 2019

Mary Jane Coombs
California Air Resources Board
1001 "I" Street
Sacramento, CA 95814

Filed electronically

RE: TID Comments on February 22, 2019 Discussion Draft of Potential Changes to the Regulation for Reducing Sulfur Hexafluoride Emissions from Gas Insulated Switchgear

Dear Ms. Coombs,

Turlock Irrigation District ("TID") submits the following comments on the ARB's February 22, 2019 Discussion Draft for amendments to the SF6 Regulation. TID appreciates the opportunity to provide these comments and commends the ARB for its efforts in working closely with equipment manufacturers, load serving entities, and other entities to ensure that the phase out of SF6 is accomplished in a prudent manner that balances California's efforts to address all sources of GHG emissions against the important role that SF6 continues to play in terms of safety and reliability in the electricity sector.

As discussed below, TID is in support of the ARB's efforts to phase out SF6, provided there is sufficient flexibility to ensure that transmission and distribution operators can continue to meet reliability and safety standards, particularly at the higher voltage levels. TID recommends the following revisions to the Discussion Draft:

(1) adjust the assumptions about the in-service life cycle for gas insulated equipment ("GIE") to better reflect actual industry in-service timeframes;

(2) allow greater flexibility to adjust the baseline ahead of phase out schedule;

(3) hermetically sealed devices should not be subject to a compliance obligation;

(4) the ARB should bolster the confidentiality provisions in the Draft Regulation.

TID Background

TID was organized as the first Irrigation District in California on June 6, 1887 and is in its 131st year of operation. TID currently serves a retail electric customer base of just over 100,000 customers and provides irrigation water to over 5,800 growers and nearly 150,000 acres of farmland. Of the 11 communities that TID serves, 7 are classified as Disadvantaged

Communities, and a majority of our service territory is in the top 20% of Cal Enviroscreen 3.0 impacted communities.

TID's mission is to provide stable, reliable, and affordable water and power to its customer owners, be good stewards of our resources, and provide a high level of customer satisfaction. TID has been a long-time supporter of California greenhouse gas standards, and made early investments in wind energy and other renewable sources before there was any requirement for Publicly Owned Utilities to do so. TID has also made considerable investments in reducing the GHG emissions of its transmission and distribution system by investing in vacuum technology at the 72.5 kV level. TID is investing in GHG reductions and is on course to reduce its aggregate emissions while still maintaining reliability.

TID is distinguished from the large investor owned utilities in that it operates a Balancing Authority Area that is not part of the California Independent System Operator. TID is one of eight Balancing Authorities ("BA") in California, tasked with balancing retail demand, generation, and wholesale purchases and sales while providing adequate reserve capacity to maintain reliability within its Balancing Authority Area. TID's generation, transmission and distribution facilities are all necessary to support TID's legal requirements and compliance with National Electric Reliability Council ("NERC") standards.

Discussion

1. The ARB Should Revise Its Assumptions About the In-Service Life Cycle for Gas Insulated Equipment to Better Reflect Actual In-Service Timeframes.

As the oldest irrigation district in California, TID has considerable experience in operating, maintaining and replacing physical equipment necessary for the delivery of water and energy. TID sets a high standard for its operations and maintenance teams by setting clear internal procedures, requires regularized inspections and maintenance, and is constantly evaluating equipment replacement needs. In TID's history as a transmission and distribution operator, it believes that a 55-year replacement cycle is prudent for most types of GIE, particularly those at the high voltage levels. The ARB should revise its assumptions about equipment replacement cycles to avoid a pre-determined replacement cycle, particularly in the context of setting the Annual Emission Factors. Any portion of the regulation made under the assumption that each GIE should be replaced after 40 years could be placing an undue burden on the utility. Each utility's practices and operating conditions will ultimately determine the useful life of the equipment.

2. The ARB Should Establish the Nameplate Baseline Consistent with the Phase-Out Schedule.

TID's primary concern with the Discussion Draft is the 2019 baseline calculation. Prior to the phase out date for the voltage class and application of the equipment, it is reasonable to assume a

low GWP technology is either unavailable or unproven. In this case, the only available solution will likely require SF6 technology. Therefore, if a replacement or improvement is required, the impacted utility will have no choice but to increase its SF6 inventory based on an increase in total nameplate capacity. Applying an emissions limit based on 2019 nameplate capacity would cause the already strict 1% emissions limit to become even more stringent with any additional SF6 capacity that is added after 2019. Put another way, in the years when existing older oil insulated breakers are replaced with SF6 breakers, due to the non-existence of breakers with new insulating media, the 1% emissions limit will be exceeded.

TID has been very proactive in making investments in SF6 handling equipment and has been diligent in identifying and addressing any equipment leaks on its system. That aside, the current 1% emission rate is a restrictive rate, especially given TID's relatively small SF6 inventory. TID's practices include monthly rounds of all substations in which the pressure is recorded at each piece of GIE. Additionally, low gas pressure alarms will alert the 24/7 power operations group of the condition. If the pressure vessel of a breaker develops a pinhole leak, by the time it is identified and repaired, it is possible emissions would approach or exceed current limits. A condition such as this is something completely outside the control of best maintenance practices. By holding the nameplate capacity to an arbitrary level, the only effect it would have is to reduce the threshold of an already restrictive emissions limit. This creates a real challenge for maintaining compliance by small and medium sized transmission and distribution operators. A single release can put the entity over the strict emissions limit. The proposed 2019 baseline will not prevent this type of failure and it will not improve internal practices.

This proposal is particularly concerning for TID because it has oil breakers that must be replaced and put into service over the next ten years. There are several other projects identified that are also needed to meet TID's load growth. Collectively, these projects could increase TID's existing SF6 capacity by 25-35%. These upgrades will be critical to maintaining TID's compliance with NERC reliability standards and keeping electricity flowing to power hospitals and schools. The costs of SF6 or other technologies will also be a key consideration in light of the sensitivity of DACs to rate increases.

TID takes its compliance obligations very seriously and this risk is a major concern. TID does not feel it is reasonable to apply this limitation while the inventory of SF6 is still permitted to increase. As such, TID recommends the baseline nameplate capacity be aligned with the conclusion of the SF6 phase-out schedule. In making this change, the ARB would ensure that any additional SF6 capacity is still subject to a strict 1% emissions limit, but the regulation provides room to grow, consistent with considerations for reliability, safety, and cost.

3. **Hermetically Sealed Devices Should Not Be Subject to a Compliance Obligation.**

Hermetically sealed devices have very little risk of release. It is our understanding from informal discussions with vendors and agency staff that since the SF6 GIE regulation was promulgated there have not been any reported releases from hermetically sealed devices. TID would

appreciate the ARB's confirmation of this understanding. Assuming that our understanding is correct, we encourage the ARB to simply exclude this class of equipment. Doing so would not risk compromising the environmental goals of the program, but would provide greater flexibility to regulated entities in satisfying their load growth and equipment replacement needs.

Moreover, the measurement of hermetically sealed devices is particularly challenging because there is no way TID is aware of to release the SF6 from a hermetically sealed device, measure the SF6, and then replace it in the device. Put differently, including this class of equipment and requiring measurement could risk emissions of SF6 that are caused by entities trying to comply with the regulation. The ARB should avoid these issues (as well as the problematic nameplate capacity adjustment provisions) and simply exempt hermetically sealed devices.

4. The ARB Should Bolster the Confidentiality Protections Under the Regulation.

TID is concerned that if the ARB requires a plan that is submitted to the ARB, there is a risk that the plan could become publicly available (either through the ARB's own release or through a Public Records Act request). Data concerning SF6 (particularly inventory location data) is highly sensitive because it potentially discloses the location of infrastructure critical to national security. While TID has no concerns with the creation of the plan and making it available on-site to regulators or others who can have access to critical infrastructure information, TID requests that the ARB not require the automatic transmittal of this information and certainly not publicly disclose any of the location information to the extent that the ARB is in receipt of this data.

Conclusion

TID appreciates this opportunity to provide feedback on the Discussion Draft and looks forward to working with the ARB to ensure that the environmental goals of this program can be satisfied in conjunction with considerations for reliability and cost.

Sincerely,

/s/

Ken R. Nold
Turlock Irrigation District