March 11, 2019

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

Filed electronically

RE: WPTF 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,

The Western Power Trading Forum ("WPTF") provides the following comments on the Discussion Draft referenced above. WPTF is a broad-based organization of companies that advocate for competitive market rules throughout the Western Interconnection. WPTF's interest in the Discussion Draft primarily relates to how the Discussion Draft would affect independent power producers ("IPPs"). IPPs use SF_6 Gas Insulated Equipment ("GIE") in the switchgear applications of power plants in California. Since nearly all power plants use SF_6, the existing SF_6 Regulation and the Discussion Draft could affect all technology types.

These comments focus on four issues: (1) the ARB should evaluate the potential economic impacts associated with the proposed SF_6 phase out and take into account the relative amount of historic SF^6 emission releases; (2) the ARB should align the technical infeasibility exemption with the definition for feasibility in the California Environmental Quality Act ("CEQA"); (3) the ARB should allow individual generating units within a facility to establish their own nameplate capacity; and (4) the ARB should provide a longer timeframe to establish the baseline level for an entity's nameplate capacity.

I. Economic Considerations

In preparing these comments, WPTF consulted with vendors to collect information on the possible, aggregate costs of the proposed phase-out of SF_6. There are currently at least two alternatives to SF_6: vacuum / air blast technology and proprietary gas blends with lower global warming potential. WPTF does not believe that vacuum / air blast technologies will be feasible at the higher voltage levels of large power plants. We do not believe vacuum technologies can safely perform the arc quenching function that SF_6 currently provides in high-voltage applications. We are also concerned about the physical space and the parasitic power load of vacuum and air blast technologies at high voltage levels. Even if vacuum and air blast technologies were technically feasible in high voltage applications, the technology would likely require costly overhauls of switchgear equipment.

WPTF members spoke with vendors who are evaluating alternative gases to replace SF_6. Some vendors believe that proprietary gas blends may be as effective as SF_6 in high voltage applications. However, the use of the proprietary gas blends will also require facility modifications to properly install the new equipment. We believe that each high voltage retrofit (i.e., for a single generating unit) could exceed

$250,000, and the aggregate cost to the industry (i.e., for entities above the proposed 5,500 $MTCO_2(e)$ threshold) would be more than $50,000,000.

The ARB should consider the economic considerations in both the rulemaking process and in the context of evaluating the proposed technical feasibility exemption. In preparing the cost-benefit analysis for this Regulation, the ARB should consider the relative amount of SF_6 releases by power plants in the past. WPTF consulted with its members and found that releases have generally been below the established limits. The existing SF_6 regulation has been in place for almost a decade. There is greater awareness of the stringency under the 1% standard and companies are integrating best practices to minimize risks of future releases. The ARB should consider the likelihood and amount of future releases relative to the potential cost of this regulation.

It is also important to consider how this regulation may have varying economic effects depending on the type of regulated entity. Transmission and distribution ("T&D") operators may be able to shoulder higher compliance costs by rate-basing those costs. Some T&D operators may even earn a rate of return on technology changes. On the other hand, IPPs may not be able to pass through the costs of retrofits. If the costs are as high as we believe they may be, this regulation could create a new risk of economic retirement for renewable power plants and facilities needed to integrate renewables. In this context, the proposed phase out would be counterproductive to the state's broader GHG goals, which heavily rely on a growing percentage of renewables on the system.

In addition to the economic analysis, the ARB should re-evaluate the de-minimis threshold and avoid setting a threshold arbitrarily. It is not clear what the rationale is for including entities above the threshold as those that are similarly situated below the threshold. WPTF's proposal for the option to establish "unit-level" reporting described in Section III below would help address this concern. However, at a higher level, the ARB should consider simply focusing the regulation on the transmission and distribution owners. It is WPTF's understanding that approximately 95% of the total SF_6 capacity in California is within the transmission and distribution owners' control. From a system-wide perspective, this would be the most cost-effective approach to phasing out the majority of SF_6 capacity in the electricity sector.

II. Technical Infeasibility Exemption

The Discussion Draft contemplates a technical infeasibility exemption that might allow for an increase in nameplate capacity or replacement of existing SF_6 cylinders after 2019. As discussed above, we are concerned about the potential for new risks of economic retirements. It is therefore critical that the technical infeasibility exemption consider cost. Put differently, the Executive Officer should have the discretion under the SF_6 regulations to consider a multitude of factors. The Discussion Draft would limit the Executive Officer's discretion to a technical engineering analysis. This is unnecessary and could lead to risks that operators of power plants could not quickly replace SF_6 canisters at facilities that are critical to system reliability.

The California Environmental Quality Act ("CEQA") contains a definition for "feasibility" that should serve as an analogy. Under CEQA, lead agencies exercise discretion in evaluating whether mitigation measures for potentially significant environmental impacts are "feasible", which "means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors. . . Infeasibility is defined as those things that are not

capable of being accomplished given the constrains set forth in the CEQA definition of feasibility." (See Cal. Pub. Res. Code, § 21061.1.) The ARB should incorporate this definition in the proposed revisions to Section 95355.3(a)(2).

In addition to the technical infeasibility exemption, the ARB should also evaluate how the nameplate capacity is updated. Language should be included allowing a regulated entity to permanently retire a GIE device at any date within the year. The annual inventory should not be a time-weighted average when a retirement happens within a year. The current regulation could potentially and inadvertently force a GIE device owner to delay the retirement of a GIE device, thus creating the potential for real emissions, because an early retirement requires the annual inventory to be recalculated based on a time-weighted average. The GIE owner/operator should be able to permanently retire a GIE device at any point within the year and avoid potential non-compliance due to a calculated reduced emissions rate.

III. Parity for Large and Small Regulated Entities

The current SF_6 regulation applies very differently to similar SF_6 releases depending on how many facilities the regulated entity operates. For a company that owns only one facility subject to the SF_6 regulation, the 1.0% emission limitation may be difficult to adhere to, even after implementing best practices for maintenance and handling of switchgear and adhering to manufacturer recommendations. On the other hand, for a large T&D operator with a multitude of facilities using SF_6 in switchgear applications, a single release will not likely create a compliance issue. It appears that the Discussion Draft contemplates this inequity in the existing Regulation. Assuming our understanding is correct, WPTF supports the proposed language in Section 95352.2 that would provide GIE owners with multiple generation facilities with the optionality to "combine" those facilities into a single nameplate capacity determination.

The potential concern regarding the equity of the regulation goes the other way too (i.e., GIE owners below the 5,500 $MTCO_2(e)$ threshold vs. those above the threshold). This proposed threshold is an arbitrary demarcation that could lead to potential competitiveness issues; particularly among IPPs who compete against one another in the wholesale power markets. A single power plant may have multiple generating units that are typically dispatched independently of one another. A power plant that is a single unit should be treated similarly to a power plant that has multiple units, such that the power plant with multiple units can treat each generating unit as a single regulated entity. To address this concern, the ARB should enable reporting entities to establish the nameplate capacity calculation at the "unit level".

IV. The Baseline Year for the Name Plate Capacity Determination

The Discussion Draft sets 2019 as the baseline year for the determining the nameplate capacity of SF_6 for each reporting entity. After 2019, in order to add or replace SF_6 canisters, a regulated entity would need to seek a technical exemption. WPTF is concerned that this proposed process will not provide power plant owners with the flexibility they need to quickly replace canisters and be available to respond to dispatch instructions. In other words, the proposed process could lead to reliability and safety issues. To address these concerns, the ARB should postpone the establishment of a baseline year until regulated entities have enough time to evaluate their future needs for GIE and there is better information on the potential need for technical exemptions going forward. This will provide regulated entities with a reasonable amount of time to evaluate and catalog their inventory and determine which SF_6 canisters may

need to be replaced in the near term. In addition, the ARB should allow for an update to the capacity determination to allow SF_6 canisters to be replaced in the normal replacement cycle.

Conclusion

WPTF appreciates the opportunity to engage with the ARB staff on the rulemaking design before the formal rulemaking begins. WPTF looks forward to working with the ARB to ensure that the economic, reliability, and competitiveness implications of this Regulation are fully evaluated and addressed in the final regulatory design.

Sincerely,

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Scott Miller
Executive Director
Western Power Trading Forum