State of California
Air Resources Board

Board Item Summary

Item # 26-1-1: Public Meeting to Consider Proposed UC Agreement with the University of California, Berkeley, Titled "Equipment Lead Times and Supply Chain Alternatives for the Phase-out of Sulfur Hexafluoride Gas-Insulated Equipment (SF6 GIE)"

Staff Recommendation:

The California Air Resources Board (CARB or Board) staff recommends that the Board approve a proposed UC agreement with the University of California (UC), Berkeley, titled "Equipment Lead Times and Supply Chain Alternatives for the Phase-out of Sulfur Hexafluoride Gas-Insulated Equipment (SF6 GIE)."

Note: This item is listed on the agenda to comply with Board approval requirements in Government Code section 1091 since Board Member Shaheen and Dr. Iris Tommelein (the project's Principal Investigator) both hold appointments in the Department of Civil and Environmental Engineering at UC Berkeley.

Discussion:

In 2021, CARB adopted the Regulation for Reducing Greenhouse Gas Emissions from Gas-Insulated Equipment (GIE Regulation) to drive down emissions of sulfur hexafluoride (SF6), a potent greenhouse gas, from the electricity sector. One major component of the GIE Regulation is to phase out the acquisition of SF6 GIE starting in 2025. During the early implementation phase of this regulation, some entities indicated that manufacturers' product availability and extended supply-chain lead times present challenges to complying with CARB's regulatory phase-out schedule. This study aims to describe and document the manufacturing and supply-chain landscape of SF6 and non-SF6 GIE based on market data obtained from the manufacturers and other stakeholders involved. The characterization of the availability of equipment will include lead times for acquisition of SF6 and non-SF6 GIE that are commercially available at present, as well as lead times to commercial availability of non-SF6 GIE under development. The collected data will be captured in a database and, if possible, delineated using a simple supply chain forecasting model to project lead time estimates and potential challenges that may arise in the near- and longer-term future.

Summary and Impacts:

This data collection and modeling effort will provide an understanding of potential supply chain disruptions and manufacturing lead time impacts to the availability of both SF6 and non-SF6 GIE. Additionally, the study will provide an update on non-SF6 GIE technology readiness and development roadmap. Both objectives will help inform CARB in its implementation of the GIE Regulation, including assessing the suitability of the regulatory requirements to current market conditions.