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June 21, 2024

Submitted Electronically

Rajinder Sahota, Deputy Executive Officer
California Air Resources Board
1001 I Street
Sacramento, California 95814

Re: Comments in Response to Public Workshop on Potential Amendments to the Cap-and-Trade Regulation

Dear Deputy Executive Officer Sahota,

Calpine Corporation submits these comments in response to the California Air Resources Board's ("CARB") May 31, 2024 public workshop on potential Cap-and-Trade Regulation amendments. Calpine's comments focus on the importance of integrating carbon capture and storage ("CCS") into the Cap-and-Trade Program so that CCS projects that benefit California—including Calpine's federally-supported Sutter Decarbonization Project—can maximize the impact of federal funding. In particular, Calpine encourages CARB to amend the Cap-and-Trade Regulation and Mandatory Reporting Regulation so that reductions resulting from CCS at covered sources are reflected in those covered sources' reported emissions and resulting compliance obligations.

I. Calpine is a leader in developing CCS projects with state and federal support.

As a longtime supporter of federal, state, and industry efforts to address climate change, Calpine is a sector leader in CCS. Calpine operates the largest fleet of natural gas combined-cycle ("NGCC") and combined heat and power ("CHP") facilities in the United States, and is developing multiple pathbreaking California CCS projects to reduce greenhouse gas ("GHG") emissions. For instance, as part of the Carbon Capture Demonstration Projects under the Infrastructure Investment and Jobs Act, two Calpine projects were awarded up to \$540 million in federal funding in December 2023.¹ One of those projects, Sutter Decarbonization Project, will capture up to 1.75 million metric tons of CO₂ each year from the Sutter Energy Center near Yuba City, California.²

¹ *OCED Selects Three Projects in CA, ND, and TX to Reduce Harmful Carbon Pollution, Create New Economic Opportunities, and Advance Carbon Reducing Technologies*, DOE Office of Clean Energy Demonstrations (Dec. 14, 2023), <https://www.energy.gov/oced/articles/oced-selects-three-projects-ca-nd-and-tx-reduce-harmful-carbon-pollution-create-new>.

² DOE Office of Clean Energy Demonstrations, "Carbon Capture Demonstration Projects, Selections for Award Negotiations," <https://www.energy.gov/oced/carbon-capture-demonstration-projects-selections-award-negotiations>.

Calpine also has two pilot projects underway at Los Medanos Energy Center, a cogeneration plant in Pittsburg, California, and full-scale CCS retrofits at several other sites across the country.

CARB and other state officials have recognized the pioneering status of these CCS projects. At the ribbon-cutting for Calpine's \$25-million, federally-funded ION Clean Energy pilot project at Los Medanos Energy Center, CARB Chair Liane Randolph called CCS a "critical tool" in fighting climate change and meeting the state's carbon neutrality targets, and California Natural Resources Agency Secretary Wade Crowfoot stated that the project was a "big step forward."³

The facilities discussed above are located near high-quality sequestration basins, including those within the Central Valley of California. As one report by the Energy Futures Initiative and Stanford University found, California has the potential to store 60 million tons of CO₂ each year—the equivalent of total electricity sector emissions in 2017—for 1,000 years.⁴

In sum, Calpine has been advancing a pipeline of CCS projects to reduce emissions from gas-fired power plants because—though challenges remain—CCS holds great promise to reduce emissions from both electricity generation and other sectors of the economy. This technology can also help maintain reliability of the electricity system as demand for electricity increases due to the electrification of other sectors, particularly in California.

II. Calpine encourages CARB to integrate CCS into Cap-and-Trade so that California CCS projects can fully harness federal funding incentives.

CCS is necessary to achieve California's emissions objectives, as CARB and other agencies have recognized. However, federal policy can only help CCS deploy at the needed scale if California integrates CCS into state policy in a manner that fully recognizes the emissions-reduction benefits of these projects. To that end, Calpine encourages CARB to propose amendments to the Cap-and-Trade Regulation and Mandatory Reporting Regulation, so that reductions occurring at covered sources as a result of CCS are reflected in their reported emissions and resulting compliance obligations. Otherwise, the price signal delivered by the Cap-and-Trade Regulation will not support the deployment of CCS at covered sources. This sort of amendment will help ensure federal policies incentivizing CCS aid California in reaching its 2022 Scoping Plan target of

³ Judith Prieve, *First-of-its Kind East Bay Pilot Project to Capture Harmful Emissions Could Be Game-Changer for Gas-Powered Plants*, SAN JOSE MERCURY NEWS (Jul. 15, 2023), <https://www.mercurynews.com/2023/07/15/calpine-unveils-pilot-project-to-produce-cleaner-electricity-capture-harmful-emissions/>.

⁴ ENERGY FUTURES INITIATIVE, STANFORD PRECOURT INSTITUTE FOR ENERGY & STANFORD CENTER FOR CARBON STORAGE, AN ACTION PLAN FOR CARBON CAPTURE AND STORAGE IN CALIFORNIA: OPPORTUNITIES, CHALLENGES, AND SOLUTIONS, at S-6 (Oct. 2020), <https://static1.squarespace.com/static/58ec123cb3db2bd94e057628/t/5f91b40c83851c7382efd1f0/1603384344275/EFI-Stanford-CA-CCUS-FULL-10.22.20.pdf> (citing OPTIONALITY, FLEXIBILITY & INNOVATION, ENERGY FUTURES INITIATIVE (May 2019)).

emissions 48% below 1990 levels by 2030 and 85% below 1990 levels and carbon neutrality by 2045.⁵

Such amendments would also align with CARB's broader recognition of the importance of CCS. Last year, CARB and other agencies held a set of meetings to discuss their respective roles in implementing a critical piece of 2022 legislation, Senate Bill 905 (Caballero), which requires CARB to establish a Carbon Capture, Removal, Utilization, and Storage Program, and to adopt regulations for a unified permit application that will expedite the issuance of permits or other authorizations for CCS projects.⁶ In these meetings, CARB described the roles that CCS is anticipated to play in achieving AB 1279's goals; how the amendments to the Section 45Q tax credit enacted by the Inflation Reduction Act provide significant support for CCS;⁷ and how, in light of this increased federal support, proposed U.S. Environmental Protection Agency rules identify CCS as the best system of emission reduction for fossil fuel-fired power plants.⁸

Calpine agrees with CARB that CCS is a vital tool for decarbonizing the electricity sector and maintaining reliability, particularly as other sectors electrify. To properly incentivize CCS and harness federal support, Calpine encourages CARB to update Cap-and-Trade to guarantee that reductions achieved due to CCS are included in reported emissions. Such common-sense amendments will drive ambition and innovation in pursuit of the 2022 Scoping Plan's targets.

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Please contact me at 916.491.3366 or Kassandra.Gough@calpine.com with any questions regarding these comments.

Sincerely,



Kassandra Gough
Vice President,
Government and Regulatory Affairs

⁵ See Cal. Health and Saf. Code § 38562.2(c) (codifying the 2045 targets pursuant to the California Climate Crisis Act, Assembly Bill ("AB") 1279, Muratsuchi, 2022).

⁶ See Cal. Health and Safety Code §§ 39741.1, 39741.2.

⁷ 26 U.S.C. § 45Q(a)(3)(A); (d)(1)(A).

⁸ See OVERVIEW OF SB 905 CARBON CAPTURE UTILIZATION AND SEQUESTRATION REQUIREMENTS (Aug. 15, 2023), https://ww2.arb.ca.gov/sites/default/files/2023-08/Overview%20of%20SB905%20CCUS%20Public%20Meeting%20PowerPoint_August%2015th%202023_0.pdf, at 15.