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March 28, 2025

Submitted Electronically

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

Re: Calpine Corporation's Comments on Carbon Capture, Removal, Utilization, and Storage (SB 905) Workshop

Dear Deputy Executive Officer Sahota,

Calpine Corporation submits these comments in response to the California Air Resources Board's ("CARB") public workshop on Carbon Capture, Removal, Utilization, and Storage, Senate Bill ("SB") 905 (Chapter 359, Statutes of 2022).

I. Introduction and Executive Summary

Under SB 905, CARB must promulgate regulations pertaining to carbon capture and storage ("CCS"), among other technologies.[1] Assembly Bill ("AB") 1279, the California Climate Crisis Act (Chapter 337, Statutes of 2022), which was double-joined with SB 905 (meaning that neither could go into effect unless both did), declares the policy of the state to reduce anthropogenic greenhouse gas ("GHG") emissions to 85 percent below 1990 levels by 2045 and to achieve net zero GHG emissions no later than 2045 and maintain net negative GHG emissions thereafter.[2] It also requires CARB to update its Scoping Plan to "[i]dentify and implement a variety of policies and strategies that enable carbon dioxide removal solutions and carbon capture, utilization, and storage technologies in California to complement emissions reductions and achieve the[se] policy goals."[3] As the double-joining of AB 1279 and SB 905 reflects, the deployment of established CCS technologies is an important feature of California's plan to attain its 2045 emission-reduction targets. CARB's 2022 Scoping Plan specifically emphasizes the need for significant deployment of CCS on electricity generation facilities,[4] which will be needed to maintain critical grid reliability as California moves toward AB 1279's targets.

Calpine operates the largest fleet of natural gas combined-cycle ("NGCC") and combined heat and power ("CHP") facilities in the United States. In California, Calpine is developing multiple pathbreaking carbon capture and storage ("CCS") projects that will reduce GHG emissions while preserving reliability of the

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[1] Cal. Health & Safety Code §§ 39741.1(c), 39741.5.

[2] *Id.* § 38562.2(c).

[3] *Id.* § 38562.2(d).

[4] Cal. Air Res. Bd., 2022 Scoping Plan Update, at 86, https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf.

grid. The Sutter Decarbonization Project is expected to capture up to 1.75 million metric tons of carbon dioxide ("CO2") each year from the Sutter Energy Center near Yuba City, California.[5] Calpine also has a pilot project underway at Los Medanos Energy Center, a CHP plant in Pittsburg, California, where it has set up a learning center to disseminate information about CCS technology, and is exploring full-scale CCS retrofits at several other sites across the country, including multiple sites in California.

Calpine is committed to helping CARB ensure that its SB 905 regulations encourage the construction of CCS projects that are essential to achieving the state's climate goals, while protecting public health, the environment, and reliability of the electricity grid. While there are many promising carbon dioxide removal ("CDR") technologies under development, Calpine respectfully submits that CARB focus its initial regulatory development on rules for CCS technologies that will be applied to projects that are subject to the Mandatory Reporting Regulation ("MRR") and the Cap-and-Trade Program, including electricity generation facilities, and that provide permanent geologic sequestration in a Class VI permitted facility. CARB should also ensure that its regulations adhere closely to the requirements of the statute. In its February 27, 2025 workshop, CARB asked questions on three general topics: (1) financial responsibility, (2) criteria and toxics monitoring, and (3) permit and project portal.[6] Calpine makes the following points:

1. CARB is required to address financial responsibility with respect to two categories of potential leakage impacts: (a) those that impede achievement of the state's GHG reduction goals and (b) those that cause other adverse health, safety, and environmental impacts.

2. With respect to the first category, CARB should clarify how its Cap-and-Trade Program accounts for and imposes responsibility for CO2 that leaks into the atmosphere. To do so, CARB will need to amend the Cap-and-Trade Regulation and the MRR, and it should begin considering these amendments now to provide CCS developers with regulatory clarity.

3. With respect to the second category, CARB should adopt financial responsibility requirements that closely align with those in EPA's Class VI well permitting rule, which requires demonstrating responsibility for a range of potential impacts to water sources using a flexible list of financial instruments. [*p. 12, Q1-4*][7]

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[5] Calpine, *Press Release: Calpine Announces Execution of Full-Scale CCS Demonstration Project Cost Sharing Agreement with the Department of Energy for Sutter Decarbonization Project* (Aug. 7, 2024), https://www.calpine.com/calpine-announces-execution-of-full-scale-ccs-demonstration-project-cost-sharing-agreement-with-the-department-of-energy-for-sutter-decarbonization-project/.

[6] Cal. Air. Res. Bd., Carbon Sequestration: Carbon Capture, Removal, Utilization, and Storage Program (SB 905, Caballero, 2022), at 11-13, Feb. 27, 2025, https://ww2.arb.ca.gov/sites/default/files/2025-02/FEB27_2025_CARBWorkshop_Introduction_Public%20Comment.pdf (hereinafter CARB Workshop Presentation).

[7] The brackets indicate the specific questions (and page) of the CARB Workshop Presentation to which Calpine is offering comment.

4. Criteria and air toxics monitoring should be focused on the specific impacts of a given CCS project. Monitoring requirements should be narrowly tailored to a project's capture technology and its site-specific air monitoring and mitigation plan. [*p. 13, Q1-4*]

5. Calpine supports the development of the unified permitting application required by SB 905. However, CARB should focus its near-term efforts on the more substantive requirements of SB 905 that will have the greatest impact in implementing SB 905. [*p. 11, Q1-4*]

Calpine looks forward to continued engagement with CARB as it develops these regulations.

II. Accounting Methodologies, Financial Responsibility, and Leakage

SB 905 requires CARB to promulgate regulations ensuring that a CCS operator "maintain financial responsibility for a period of time that is sufficiently long enough to demonstrate that the risk of carbon dioxide leakage poses no material threat to public health, safety, and the environment and to achievement of net zero greenhouse gas emissions in California and that terminates no earlier than 100 years after the last date of injection of carbon dioxide into a geologic storage reservoir."[8]

This provision requires addressing financial responsibility for leakage impacts in two discrete categories: (1) impacts that impede "achievement of net zero greenhouse gas emissions in California" and (2) impacts that could result in other "material threat[s] to public health, safety, and the environment." For impacts in the first category, CARB can best address financial responsibility by amending the accounting methodologies and related provisions in the Cap-and-Trade Regulation and the MRR. While CARB plans to release proposed amendments to the Cap-and-Trade Regulation later this year,[9] CARB should start considering these issues in tandem with its SB 905 rulemaking. Covered entities that are developing CCS projects need regulatory clarity on how compliance obligations will be determined. For impacts in the second category, CARB should largely adopt the financial responsibility requirements in EPA's Class VI regulations in the Underground Injection Control program under the Safe Drinking Water Act.[10]

A. Cap-and-Trade Program Accounting Methodologies and Financial Responsibility for GHG Leakage

Calpine supports CARB's continued implementation of the Cap-and-Trade Program as an important tool to achieve the state's GHG reduction and carbon neutrality targets. The Cap-and-Trade Program is well-equipped to ensure that "the risk of carbon dioxide leakage [from CCS projects] poses no material threat . . . to achievement of net zero greenhouse gas emissions in California."[11] However, CARB will need to amend both the Cap-and-Trade Regulation and the MRR to clarify accounting methodologies and rules

[8] Cal. Health & Saf. Code § 39741.5.

[9] Cal. Air Res. Bd., Cap-and-Trade Program, https://ww2.arb.ca.gov/our-work/programs/cap-and-trade-program (last accessed March 17, 2025) (stating that CARB "expect[s] to move forward this year").

[10] *See* 40 CFR §§ 146.81–146.95.

[11] Cal. Health & Saf. Code § 39741.5.

regarding financial responsibility for future leakage of GHGs into the atmosphere. CARB should consider and address these issues now to reduce the regulatory uncertainty faced by CCS developers and other market participants and to leverage the price signal that the Cap-and-Trade Program provides to further support CCS development in support of AB 1279's goals.

The Cap-and-Trade Regulation already sketches out a general accounting framework that can be applied to sources that emit carbon (e.g., a gas-fired power plant that is a "first deliverer of electricity") and use CCS technology to capture emissions (termed "carbon dioxide suppliers"). In a placeholder provision, the Regulation currently provides that GHGs captured and permanently sequestered through CCS should not be included in a carbon dioxide supplier's "aggregate" compliance obligation.[12] But the Cap-and-Trade Regulation and the MRR require amendments in key respects, some of which are described below.

First, the regulation currently does not clarify key accounting details for calculating the aggregate compliance obligation and, in this respect, is not clear that a covered entity will have its compliance obligation calculated by taking the total emissions that would have occurred *in the absence of any CCS*, and then subtracting the amount of emissions permanently sequestered, as reported pursuant to the entity's status as a "carbon dioxide supplier."[13] Amendments to the reporting and monitoring methodologies are needed to make sure that this calculation is consistent and does not "double count" emission reductions.[14]

Second, the Cap-and-Trade Regulation may require amendments so that it applies to, and can impose compliance obligations on, entities engaged in injection or geological sequestration. Although the Cap-and-Trade Regulation provides that carbon dioxide suppliers (i.e., entities that *capture* emissions) are covered entities, it does not currently provide that entities engaged in geologic sequestration are. Moreover, the MRR does not provide clear rules as to whether and how entities engaged in geologic sequestration must report the amounts of CO2 that they inject or sequester, as it arguably does not incorporate Subpart RR of EPA's Greenhouse Gas Reporting Program ("GHGRP").[15] The MRR and the

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[12] 17 C.C.R. § 95852(g).

[13] *Id.*

[14] For example, if an electricity generating facility with combustion turbines reports emissions using the federal Tier 4 Calculation Methodology to measure CO2 emitted into the air at the stack (or absorber column) using Continuous Emission Monitoring Systems ("CEMS"), then the CO_2 reduction associated with CCS would be built into reported emissions already—*before subtraction* of any CO2 verified to be geologically sequestered. *See* 17 C.C.R. § 95102 (defining Tier 4 as "a stationary combustion calculation method that utilizes quality assured data from a continuous emission monitoring system to generate an emissions estimate, as specified in 40 CFR § 98.33"); 40 CFR § 98.33(a)(4). To subtract CO2 verified to be geologically sequestered from that total would "double count" those emission reductions in violation of SB 905. *See* Cal. Health & Saf. Code § 39741.1(e).

[15] Entities under the MRR are subject to a general duty to "submit an annual emissions data report" that is "compiled using the methods specified by source category in 40 CFR Part 98"—i.e., the GHGRP. 17 C.C.R. § 95101(a)(2). Part 98 includes Subpart RR, which is applicable to "any well or group of wells

Cap-and-Trade Regulation also do not require geologic sequestration entities to report how much injected CO2 came from each individual carbon dioxide supplier—a provision that will be necessary to ensure tracking of CO2 along the chain of custody.

Third, amendments will be needed to ensure that leakage of CO2 into the atmosphere is monitored and reported so that it can be addressed within the Cap-and-Trade Program. In the unlikely event that leakage does occur from the surface, those tons of CO2 must be accounted for in the year that they occur. Although federal law currently defines "surface leakage,"[16] the MRR and the Cap-and-Trade Regulation do not. Further, neither the MRR nor the Cap-and-Trade Regulation requires entities engaged in geologic sequestration to report how much surface leakage of CO2 occurs. As a result, the Program currently lacks critical information that will be needed to account for leaked emissions and maintain the integrity of the Program. While geologic sequestration in Class VI wells is designed to avoid leakage of emissions to the atmosphere, for purposes of consistency across regulatory programs, Calpine recommends that CARB define surface leakage and ensure that any procedures for quantifying it align with federal law, including the recapture provisions governing the section 45Q tax credit.

Fourth, CARB will need to amend the Regulation to specify which entity or entities should be responsible for surface leakage of CO2, including in circumstances where multiple sources of carbon dioxide are supplied to a single sequestration facility from both covered entities and sources that may not be covered entities (e.g., because they are conducting direct air capture ("DAC")). The Regulation should establish default rules (around which the parties in the CCS supply chain may contract) to address emissions that leak from the surface and who should bear the Cap-and-Trade compliance obligation if and when leakage occurs. As guiding principles, the rules should preserve the integrity of the Program, while providing appropriate incentives for all parties involved in the CCS supply chain to take appropriate steps to avoid surface leakage.

Calpine would urge CARB to consider other approaches to account for leaked emissions and the Cap-and-Trade compliance obligation associated with such leakage, than the one CARB adopted in the CCS Protocol of the Low Carbon Fuel Standard ("LCFS").[17] Under the LCFS, an entity receives marketable

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that inject a CO2 stream for long-term containment in subsurface geologic formations," including "all wells permitted as Class VI." 40 CFR § 98.440(a), (b). But the MRR arguably does not incorporate Subpart RR, as it adopts only the GHGRP regulations promulgated in rules published in the Federal Register on four listed dates, and none of those rules included Subpart RR. 17 C.C.R. § 95100(c).

[16] *See* 40 CFR § 98.449 (provision of Subpart RR defining "surface leakage" to mean "the movement of the injected CO2 stream from the injection zone to the surface, and into the atmosphere, indoor air, oceans, or surface water"); 26 CFR § 1.45Q-5(c) (requiring recapture of the section 45Q tax credit with respect to the number of metric tons of qualified carbon oxide that has leaked to the atmosphere as quantified "pursuant to the requirements of 40 CFR part 98 subpart RR or CSA/ANSI ISO 27916:2019").

[17] Cal. Air Res. Bd., *Carbon Capture and Sequestration Protocol Under the Low Carbon Fuel Standard* 137 (Aug. 1, 2018), https://ww2.arb.ca.gov/sites/default/files/2020-03/CCS_Protocol_Under_LCFS_8-13-18_ada.pdf.

credits from CARB, some of which are withheld and placed into a buffer account. But in the Cap-and-Trade Program, an entity must surrender allowances for its emissions in a given year, which will typically require purchasing allowances. Due to the differences in these programs, a buffer account could disincentivize CCS development and is unnecessary in light of other potential mechanisms available for assignment of responsibility for leaked emissions if they occur.

The above suggestions describe at only a high-level some of the key changes that will be needed in the Cap-and-Trade Regulation and the MRR to address accounting issues relevant to CCS projects, including those related to financial responsibility for the Cap-and-Trade compliance obligation with respect to leaked emissions. Calpine has spent time studying the issue and sketching out potential proposals and would be pleased to engage further. CARB should structure its SB 905 rulemaking in light of these forthcoming amendments to the Cap-and-Trade Regulation and the MRR, as those amendments will provide necessary clarity for market participants developing CCS projects in the state.

B. Financial Responsibility for Public Health, Safety, and Environmental Impacts [*p. 12, Q1-Q4*]

As the Cap-and-Trade amendments will only address accounting, financial responsibility, and leakage issues related to the integrity of the Cap-and-Trade Program, CARB's SB 905 rulemaking must also address financial responsibility to "demonstrate that the risk of carbon dioxide leakage poses no material threat to public health, safety, and the environment."[18] SB 905 indicates that the focus should be on impacts to underground water sources, providing that the requirements may be "no less stringent than those contained in Section 146.85 of Title 40 of the Code of Federal Regulations, as that section read on January 1, 2022." The relevant Class VI provision requires a CCS operator to demonstrate financial responsibility for many types of costs using multiple acceptable instruments.

In question 2, CARB asks if the agency should require financial responsibility with respect to costs beyond those listed in Section 146.85. Calpine is unaware of additional costs that might need to be covered. The Class VI program already provides that source operators must show instruments demonstrating their ability to cover the costs of corrective action (that meets the requirements of § 146.84); injection well plugging (that meets the requirements of § 146.92); post injection site care and site closure (that meets the requirements of § 146.93); and emergency and remedial response (that meets the requirements of § 146.94).[19] Calpine respectfully submits that these requirements are properly scoped to address the health, safety, and environmental concerns required by SB 905.

In question 1, CARB asks if the instruments listed in Section 146.85 are sufficient or if other instruments should be considered. The Class VI regulations allow a CCS operator to demonstrate financial responsibility using any of the following instruments: trust funds, surety bonds, letter of credit, insurance, self insurance (i.e., financial test and corporate guarantee), an escrow account, or any other instruments

[18] Cal. Health & Saf. Code § 39741.5.

[19] 40 CFR § 146.85(a)(2)(i)-(iv).

satisfactory to the agency.[20] As this list encompasses two broad categories of instruments—third-party instruments and self-insurance instruments—Calpine believes that the list provides suitable flexibility.[21]

In question 4, CARB asks how the requirements should "account for scenarios such as ownership transfer, bankruptcy, change of ownership structure, change in insurance carrier, etc."[22] If the ownership or insurance of the geologic sequestration facility operator changes, the entity that owns the facility should be required to provide updated instruments within a certain period of time. CARB's regulations will also need to include mechanisms that reflect an appropriate allocation of responsibility if an event such as bankruptcy of the facility operator or insurance carrier.

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In short, with respect to financial responsibility, Calpine has two recommendations. First, it encourages CARB to begin considering the necessary amendments to the Cap-and-Trade Regulation and MRR to preserve the integrity of the Program in the event of surface leakage. This may involve default and backup rules on responsibility for the Cap-and-Trade compliance obligation (around which the relevant parties in the CO2 supply chain may contract), as well as rules for attributing leaked emissions among various covered and non-covered entities whose emissions were injected at the sequestration facility. Second, Calpine recommends that the regulations for financial responsibility track the Class VI requirements as closely as possible.

III. Criteria and Toxics Monitoring [*p. 13, Q1-Q4*]

On monitoring, CARB asks which criteria pollutants or toxics should be prioritized, where along the CCS project, and how long such monitoring should be conducted. CARB also asks what project-specific air monitoring CCS developers are currently conducting or intending to conduct.[23]

As a general rule, CARB should ensure that its monitoring regulations are flexible and tailored to a capture an injection site's particular technologies and focus on evidence-based impacts. A one-size-fits-all approach to monitoring is neither appropriate nor contemplated by SB 905. The law requires CARB to establish basic monitoring requirements, but it also requires CCS operators to "[c]reate an air monitoring and mitigation plan to measure, track, and minimize potential toxic air contaminants and criteria air pollutants from the site of the carbon dioxide capture, removal, or sequestration project and submit the plan to the state board."[24] Through these plans, CARB can tailor monitoring to the specific context of a given amine, capture technology, source location, and relevant scientific information.

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[20] *Id.* § 146.85(a)(1)(i)-(vi).

[21] *See* Federal Requirements Under the Underground Injection Control (UIC) Program for Carbon Dioxide (CO2) Geologic Sequestration (GS) Wells, 75 Fed. Reg. 77,230, 77,268 (Dec. 10, 2010)

[22] CARB Workshop Presentation at 12.

[23] CARB Workshop Presentation at 13.

[24] Cal. Pub. Res. Code § 71464(c).

Capture Facility: At a high level of generality, monitoring at the capture facility will encompass criteria pollutants and air toxics. Carbon capture facilities on point sources will require air quality permits from the local air districts in California, which are responsible for implementing federal, state and local regulations including the AB 2588 Air Toxics "Hot Spots" Program. These programs will ensure compliance with both state and federal ambient air quality standards for criteria pollutants and public health standards for toxic air contaminants. As part of the permitting process, air districts will conduct ambient air quality impact and health risk analyses for criteria and air toxics, assessing the specific technology deployed at the capture facility, the topography and location of the facility, and whether emissions from its operation will result in any unacceptable levels of pollutants.

Most technologies ready for commercial deployment have been tested at test facilities located in Alabama, Norway or other test facilities around the world and have conducted emissions testing delineating toxic air contaminants that would be expected to be present. This information can be used to develop the Air Quality Monitoring and Mitigation Plan required by SB 905. Calpine has been operating a pilot project at Los Medanos Energy Center funded by the Department of Energy for a year and a half to test emissions from use of a proprietary solvent that is expected to achieve low criteria pollutant emissions when used for CCS. As the testing campaign comes to an end, the intent is that the information obtained during it will be available through DOE reporting and Calpine will be using the data generated from the pilot to inform permitting decisions at future commercial scale projects.

CO2 Transportation: SB 905 established a moratorium on the use of pipelines to transport carbon dioxide outside of a "facility or property" until the federal Pipeline and Hazardous Materials Safety Administration ("PHMSA") has concluded its rulemaking.[25] On January 10, 2025, PHMSA proposed a rule with many detailed requirements, including (among other things) a leak detection system, a fixed vapor detection and alarm system, and a monitoring and mitigation program to address corrosion-affecting constituents in the product stream.[26] After two months, this rule has not been published in the Federal Register. Even if it is eventually published, it is unclear how long it will take the agency to finalize it.

The Legislature has signaled through introduction of bills in both houses that it plans to address the current moratorium on the use of pipelines.[27] One of these bills, SB 614, was amended just this week to lift the moratorium and instead provide that the Office of the State Fire Marshal ("OSFM") shall allow carbon dioxide transport via pipeline if the applicant can demonstrate that it complies with applicable requirements, including PHMSA's draft rule, relevant California and local laws, and additional safety standards required by the OSFM concerning, among other things, leak detection, emergency response and

[25] Cal. Pub. Res. Code § 71465(a).

[26] *See* PHMSA, Pipeline Safety: Safety of Carbon Dioxide and Hazardous Liquid Pipelines 18–20 (Jan. 10, 2025), https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/2025-01/PHMSA%20Notice%20of%20Proposed%20Rulemaking%20for%20CO2%20Pipelines%20-%202137-AF60.pdf.

[27] Blanca Begert, *Bill Would Create a Path to Lift California's Carbon Pipeline Moratorium*, E&E News (March 20, 2025), https://www.eenews.net/articles/bill-would-create-a-path-to-lift-californias-carbon-pipeline-moratorium/.

monitoring and detection of contaminants entering the pipeline.[28] Calpine believes that such requirements would adequately address safety and monitoring requirements for pipelines. CARB should monitor closely the development of bills advancing in the Legislature and ensure that its development of any monitoring requirements for CO2 pipelines do not duplicate, conflict or operate at cross-purposes with upcoming requirements imposed by other agencies such as OSFM.

Storage Facility: At the storage facility, SB 905 requires "monitoring of sequestered carbon dioxide, including movement within the geologic storage complex, for a period of time that is sufficiently long enough to demonstrate that the risk of carbon dioxide leakage poses no material threat to public health, safety, and the environment and to achievement of net zero greenhouse gas emissions in California."[29] It also requires "[m]onitoring of criteria pollutants and potential toxic air contaminants at the one or more sites within the geologic storage complex and at mobile or fixed sites within the facility, and monitoring of ambient carbon dioxide concentrations over the geologic storage complex to facilitate leak detection."[30]

Calpine encourages CARB to ensure that these monitoring requirements dovetail with, and largely mirror, the requirements in EPA's Class VI well regulations for a site-specific testing and monitoring plan.[31] These monitoring plans require monitoring of the CO2 plume within the storage complex as well as (in some cases) surface air monitoring and/or soil gas monitoring.[32] Again, CARB should provide flexibility for a given air monitoring and mitigation plan to illustrate that monitoring of a certain substance in a certain manner is (or is not) required, as science evolves and understanding of the potential emissions from sequestration facilities is better understood. At the storage site, SB 905 requires that monitoring should "terminate[] no earlier than 100 years after the last date of injection of carbon dioxide."[33] Monitoring for this period of time is required by law and necessary given the possibility of leakage.

Calpine looks forward to engaging with CARB and providing information and data about the monitoring it has already conducted and its monitoring plans moving forward.

IV. Permit and Project Portal [*p. 11, Q1-Q4*]

CARB also asks four questions with respect to the permit and project portal, including (1) what features would increase the likelihood that it is used, (2) what existing similar systems might provide a model, (3)

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[28] SB 614 (Stern) (amended in Senate March 26, 2025), sec. 4 (adding section 51011.5 to the Government Code and amending section 71465 of the Public Resources Code to lift the moratorium and require compliance with section 51011.5 of the Government Code instead), https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202520260SB614.

[29] Cal. Health & Saf. Code § 39741.1(a)(3)(D).

[30] *Id.* § 39741.1(a)(3)(E).

[31] 40 CFR § 146.90 (monitoring requirements under the Class VI well program); *cf. id.* § 98.440-449 (Subpart RR requirement for monitoring and reporting GHGs by geologic sequestration sources).

[32] 40 CFR § 146.90(h).

[33] Cal. Health & Safe. Code § 39741.1(a)(3)(D).

what other considerations CARB should address, and (4) what existing CCS project databases should be emulated.[34]

Calpine emphasizes that use of the permit and project portal described in SB 905 is optional. Although the portal may have informational value for CCS developers and the public, SB 905 does not delegate permitting authority over CCS projects to CARB. Each CCS project is unique, often involving different agencies and complex site-specific issues. As a result, the permit and project portal is likely to involve a significant amount of work for CARB while providing only modest value for project developers.

Calpine would urge CARB to focus first and foremost the substantive rulemaking and standards development concerning complex issues of financial responsibility and monitoring, as project developers would benefit immensely from regulatory clarity on these issues. Through the promulgation of these rules and standards, CARB can play the leadership role called for by SB 905 in advancing the development and deployment of CCS as one tool to support attainment of AB 1279's emission-reduction and carbon-neutrality targets.

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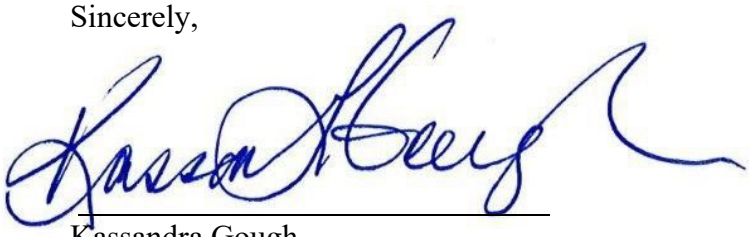
Please contact either of us at Kassandra.Gough@calpine.com or Diana.Gallegos@calpine.com with any questions regarding these comments.

Sincerely,



Kassandra Gough
Vice President, Government and Regulatory Affairs

/S/
Diana S. Gallegos
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[34] CARB Workshop Presentation at 11.