

Summary of and Responses to Public Comments Received by the California Air Resources Board Regarding the Aliso Canyon Mitigation Agreement

I. Introduction

This document provides a summary of the substantive comments submitted to the California Air Resources Board (CARB) regarding the Mitigation Agreement between CARB, the California Attorney General's Office (AGO), and the Southern California Gas Company (SoCalGas). This document also provides CARB's responses to those comments.

The Mitigation Agreement is part of a larger settlement agreement between CARB, the AGO, the City of Los Angeles (City), the County of Los Angeles (County) and SoCalGas that resolves the claims of CARB, the AGO, City, and County against SoCalGas in connection with the 2015 gas leak from SoCalGas' Aliso Canyon Underground Natural Gas Storage Facility (Aliso Canyon Facility). That settlement agreement is set forth in a proposed Consent Decree that was lodged with the Los Angeles County Superior Court on August 8, 2018 (Consent Decree). The Mitigation Agreement is Appendix A to the Consent Decree. The Mitigation Agreement also satisfies Governor Brown's mandate that CARB develop a program to fully mitigate the leak's emissions, to be funded by SoCalGas, and achieves the criteria and objectives set by CARB's Aliso Canyon Methane Leak Climate Impacts Mitigation Program, which was posted for public comment and discussed with CARB board members.

CARB invited the public to submit comments on the Mitigation Agreement. (The Consent Decree was not otherwise subject to public comment.¹) A 35-day public comment period began on the date the Consent Decree was lodged with the court and closed on September 12, 2018. CARB received 95 comments. The comments are posted in a docket on CARB's public website, and are appended to this document as Exhibit 1.

II. Background

a. The Aliso Canyon Methane Leak and CARB's Responsibility to Ensure Methane Mitigation

The leak at the Aliso Canyon Facility was discovered on October 23, 2015, and continued for three and a half months, until February, 2016. The leak had an immediate and direct impact on residents of the nearby community of Porter Ranch. The leak also undermined California's wide-ranging efforts to reduce emissions of greenhouse gases

¹ It was not CARB's intent to solicit or respond to comments on other components of the Consent Decree, or the Consent Decree as a whole. Thus, this summary and responses are limited to comments regarding the Mitigation Agreement.

(GHG) and thus to slow climate change. CARB estimates that the leak emitted up to 109,000 metric tons of methane, a potent GHG.²

On January 6, 2016, Governor Brown issued a Proclamation of a State of Emergency in response to the leak (Governor's Proclamation). Therein, he described the ongoing efforts of seven state agencies to respond to the leak and directed those agencies to take all actions to stop the leak, protect public health and safety, ensure accountability and strengthen regulatory oversight of underground natural gas storage facilities. Governor Brown expressly directed CARB to develop a program to fully mitigate the methane emissions from the methane leak from the Aliso Canyon Facility, and he specified that the program "shall be funded by the Southern California Gas Company, be limited to projects in California, and prioritize projects that reduce short-lived climate pollutants." (SoCalGas had earlier submitted a letter to the Governor in which it committed to fully mitigating the leak's methane emissions.)

Pursuant to the Governor's Proclamation, CARB initiated a public review process to explore mitigation opportunities and develop project options for the mitigation program. At the time, California already had a number of ongoing programs designed to address air pollution and climate change. These include a statewide program to address "short-lived climate pollutants" (SLCP) like methane (SLCP Strategy³); state and regional proceedings to address community-level air quality; and regulatory proceedings to address methane leaks from multiple sources throughout the oil and gas sector (including transmission, distribution, and storage). Further, there are proceedings intended to reduce demand for fossil fuels, which include regulatory efforts by CARB and the South Coast Air Quality Management District (SCAQMD) to reduce the use of fossil fuels in transport and the freight sector, and a wide array of California Public Utilities Commission (CPUC) and California Energy Commission (CEC) proceedings to reduce demand for gas in the residential and industrial sectors. The mitigation program directed by the Governor's Proclamation is different from these other programs in that it has a specific goal—to fully mitigate the methane that was emitted by the leak. In developing the Mitigation Program, CARB took into consideration cost, as well as time, because to effectively mitigate the leak's emissions and the cumulative impact those emissions would have on the climate would require methane reductions to happen as soon as possible.

On February 18, 2016, CARB staff provided CARB board members with an update on the leak and mitigation principles and the board members heard public comment. On

² CARB Determination of Total Methane Emissions from the Aliso Canyon Natural Gas Leak Incident (Oct. 21, 2016) available at

<https://ww2.arb.ca.gov/research/aliso%20canyon/aliso%20canyon%20methane%20%20emissions-%20arb%20final.pdf?%2520ga=2.95694940.1371429894.1537459772-1647288959.1528825053>

³ SB 605 (Lara, Stats. 2014) directed CARB to develop a comprehensive strategy to reduce SLCP emissions in California. SB 1383 (Lara, Stats. 2016) directed CARB to approve and implement the SLCP Strategy and also set the statewide 2030 emissions reduction target for methane (and other SLCPs). CARB adopted the SLCP Strategy in March of 2017. It identifies options to accelerate SLCP emissions reductions, including regulations, incentives, and other market-supporting activities.

March 14, 2016, CARB issued a proposed mitigation program containing high-level principles, objectives, project criteria, and project recommendations. CARB accepted public comments on that proposal and issued the final *Aliso Canyon Methane Leak Climate Impacts Mitigation Program* (Mitigation Program) on March 31, 2016.

The Mitigation Program required that mitigation projects meet certain criteria. In addition to the criteria required by the Governor (namely, that the Mitigation Program be funded by SoCalGas and that the projects be located in California and prioritize reducing emissions of SLCPs), these include that any project should complement existing efforts by the State of California to combat global warming and reduce air pollution, and yield real, verifiable, and permanent GHG reductions that would be additional to those that would be achieved under a conservative "business as usual" scenario, including actions that SoCalGas is already taking, or will otherwise be legally obligated to take. The Mitigation Program also set forth objectives to prioritize projects that would catalyze additional projects to reduce of methane emissions; generate significant environmental, economic, and public health co-benefits; and confer co-benefits upon disadvantaged communities and communities affected by the leak, among other things. Applying those criteria and objectives, CARB evaluated a number of mitigation options, and, in the Mitigation Program, set forth its recommendations.

b. Aliso Canyon Litigation

In December 2015 and January 2016, the AGO, the County, the City, and CARB (Government Plaintiffs) filed civil enforcement actions against SoCalGas on behalf of the People of the State of California.⁴ Among other things, the Government Plaintiffs' actions demand relief in the form of full mitigation of the leak's methane emissions. CARB, following on its efforts to develop the Mitigation Program pursuant to the Governor's mandate, engaged in settlement negotiations with SoCalGas regarding mitigation projects to achieve the goals of the Mitigation Program and entered into the Mitigation Agreement. The Mitigation Agreement is incorporated into the global settlement agreement reached among Government Plaintiffs and SoCalGas to resolve all Government Plaintiffs' claims against SoCalGas. That global settlement is memorialized in the proposed Consent Decree, of which the Mitigation Agreement is a part.

The Consent Decree disposes of Government Plaintiffs' claims in their entirety. However, a number of other state and federal agencies with regulatory oversight over SoCalGas and/or underground natural gas storage facilities played and continue to play a role in responding to the leak. For example, the CPUC is investigating the root cause of the leak. A final "Root Cause Analysis" is expected to be complete in 2019. Pending the conclusion of the Root Cause Analysis, the CPUC may bring an additional enforcement action against SoCalGas, to address any regulatory violations disclosed by

⁴ Two other public actions were filed against SoCalGas in connection with the leak: a civil suit by the SCAQMD and criminal charges by the Los Angeles County District Attorney. Both of those actions settled.

that analysis. The CPUC also initiated proceedings to determine the viability of closing the Aliso Canyon Facility, which are ongoing. The Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) issued emergency regulations addressing the integrity of underground storage facilities and injection wells as a result of the leak. Those regulations are finalized and apply to the Aliso Canyon Facility.

In addition to those public actions, a number of private legal actions remain pending against SoCalGas in connection with the leak, including claims by thousands of Porter Ranch residents and businesses for damages.

c. Key Components of the Consent Decree and Mitigation Agreement

The Consent Decree requires SoCalGas to comply with a number of injunctive provisions relating primarily to monitoring of methane emissions from the Aliso Canyon Facility and safety and risk assessment at the Facility. (See Consent Decree at 17-21.) It also requires SoCalGas to pay \$119.5 million, allocated as follows:

- \$21 million dollars in civil penalties, divided equally among the AGO, City and County.
- \$45.4 million to support supplemental environmental projects in the South Coast Air Basin, including the County of Los Angeles, that will address an array of environmental and air quality needs.
- \$26.5 million to fund mitigation pursuant to the Mitigation Agreement (Mitigation Contribution), and an additional \$7.6 million in reserve funds (Mitigation Reserve) to assure that full mitigation occurs. (As discussed below, the structure of the financing is such that these funds will eventually be re-directed to fund additional projects in the South Coast Air Basin, including Los Angeles County and Porter Ranch.)
- \$19 million to reimburse Government Plaintiffs for public costs expended in investigating and prosecuting their claims.

SoCalGas is barred by the Consent Decree from passing these costs on to its ratepayers.

The Mitigation Agreement, which is attached to and incorporated by reference into the Consent Decree, governs the manner in which SoCalGas will mitigate the leak's emissions. The Consent Decree requires that SoCalGas pay \$26.5 million into a private trust, which shall have a trustee, and which shall be administered at first by SoCalGas. The funds in the trust will be used to provide necessary financial support to projects owned by a dairy digester developer that will capture and collect dairy methane (from cow manure) as biogas in an anaerobic "digester" and process that biogas into biomethane for use as transportation fuel. That biomethane will be used in heavy-duty trucks in California, displacing diesel fuel and thereby reducing harmful particulate matter (PM) and nitrous oxides (NO_x) emissions in transportation corridors through the State. These dairy digester projects, which will be located in California's San Joaquin

Valley, are expected to avoid at least 109,000 metric tons of methane emissions that would otherwise be released into the atmosphere within ten years, to reduce the quantity of methane released during the Aliso leak, and thus will achieve “full mitigation” of the leak. SoCalGas will pay an additional sum of \$7.6 million to be held by the trust in reserve and used for additional mitigation projects only in the event the initial \$26.5 million does not achieve reductions of at least 109,000 metric tons of methane.

The project financing will be in the form of loans to a dairy digester developer, which will be repaid in full, plus interest. Those loan repayments and proceeds, as well as any of the \$7.6 million Mitigation Reserve not needed for methane mitigation, will *not* go back to SoCalGas. Rather, the monies will be directed to one of two funds: (1) the “Aliso Fund,” established under the Consent Decree to provide funding for future environmental projects in the South Coast Air Basin (see Section 3.7 in Appendix D to Consent Decree, Supplemental Environmental Projects (SEP) Agreement (SEP Agreement)); and (2) a state fund established by the Legislature pursuant to Senate Bill (SB) 801 (Stern, Stats. 2017), which provides that monies in the fund will be appropriated by the Legislature for “purposes of mitigating impacts on local air quality, public health, and ratepayers resulting from the well failure at Aliso Canyon.” (Public Utilities Code § 2104.7.) In total, after full mitigation is achieved, more than \$43.6 million could be directed to those funds (\$26.5 million plus up to \$9.5 million in interest, plus the \$7.6 million reserve and any interest it has accrued). This is *in addition to* the \$45.4 million set aside by the Consent Decree to support environmental projects in Los Angeles County communities, including Porter Ranch. In sum, up to \$89 million would be directed to projects in Porter Ranch and Los Angeles County as a result of the Consent Decree and implementation of the Mitigation Agreement after ensuring the methane emissions associated with the leak are fully mitigated per the Governor’s Proclamation.

The Mitigation Agreement contains several safeguards to ensure full mitigation of the leak’s emissions is achieved. SoCalGas is not released from its legal obligation to mitigate under the Mitigation Agreement and the Consent Decree until projects sufficient for full mitigation are in operation and CARB has confirmed the digester projects’ capacity to achieve the projected emissions reductions in the specified time period. The Mitigation Agreement specifically identifies other dairy digester projects that can provide additional mitigation if the initial projects do not achieve full mitigation, and creates a process to identify and select additional projects, including non-digester projects, as necessary. The \$7.6 million Mitigation Reserve helps to ensure that such additional projects can be funded, if needed. Projected and actual emissions reductions will be verified by CARB and third-party verification bodies that CARB accredits. Reporting requirements and online public updates will ensure transparency.

In sum, the Mitigation Agreement secures full mitigation of the methane released by the Aliso Canyon leak in a manner wholly consistent with the Governor’s Proclamation and the Mitigation Program, while providing additional air-quality benefits, including reducing the emissions of air pollutants associated with the combustion of fossil fuels in the

transportation sector. It also provides significant future benefits to the South Coast Air Basin, because funds from loan repayments, plus interest (*in addition to* the tens of millions of dollars secured for environmental projects by the larger settlement agreement) will be reinvested in future local environmental projects.

III. Overview of Public Comments

Pursuant to Section 18 of the Consent Decree, CARB held a 35-day public comment period to solicit comments relating to the Mitigation Agreement. CARB received 95 comments (including a petition signed by thousands of members of the public stating that mitigation should not be directed to dairy digester projects but to renewable energy projects that would benefit low-income and vulnerable communities in Los Angeles) and considered all 95 comments.⁵ Many of the comments received by CARB do not relate to the Mitigation Agreement, but rather more generally support or oppose the settlement. In this document, CARB responds only to comments that relate to the Mitigation Agreement.

Commenters include members of the California Legislature, government entities, business coalitions, environmental organizations, and individual members of the public. CARB received supportive letters from, among others, fifteen members of the California Legislature, the California Department of Food and Agriculture, Central City Association of Los Angeles, the Orange County Business Council, the Los Angeles Area Chamber of Commerce, the Valley Industry and Commerce Association, Los Angeles County Business Federation, the San Joaquin Valley Air Pollution Control District, the College of the Sequoias, the Greater Conejo Valley Chamber of Commerce, the Tulare County Economic Development Corporation, El Concilio (of Oxnard), the City of Hanford, the San Gabriel Valley Economic Partnership, the Ventura County Economic Development Association, multiple dairies and dairy associations, the Coalition for Renewable Natural Gas, CSU Bakersfield, the Greater Bakersfield Chamber of Commerce, and Self Help Industries.

The Environmental Defense Fund, Near Zero, and the Union of Concerned Scientists submitted letters expressing support and also raising some concerns and clarifying questions.

CARB received letters raising concerns from, among others, twenty-three members of the California Legislature, the Porter Ranch Neighborhood Council, Sierra Club California, the California Association of Sanitation Agencies, Voters for Environmental Responsibility, Parris (a law firm representing private plaintiffs), a coalition led by the Leadership Counsel for Justice & Accountability, Davis Wright Tremaine (a law firm representing a dairy digester firm), Earthjustice, and a coalition led by Food & Water Watch, which also submitted thousands of signatures on a petition opposing the

⁵ Of these 95 comments, one was a duplicate of another, and several were submitted before the comment period closed, but due to an inadvertent issue with the docket, were posted to the website after the comment period closed.

Mitigation Agreement. Many residents of Porter Ranch also wrote to express their concerns about the settlement generally or the Mitigation Agreement specifically.

Comments supportive of the Mitigation Agreement generally reference the Mitigation Agreement's ability to achieve full methane mitigation in a manner that supports existing statewide policies and goals. They also appreciate that the Mitigation Agreement creates environmental co-benefits for communities already experiencing significant pollution impacts in the San Joaquin Valley and economic co-benefits for the State as a whole. These comments also tend to emphasize the importance of cost-effective mitigation and appreciate the ways in which the Mitigation Agreement secures global, regional, and local benefits through its multi-part loan structure.

Of those who express concern about or opposition to the Mitigation Agreement, some raised concerns about the environmental impacts of supporting dairy mitigation projects and/or opined that the more appropriate approach to reducing dairy methane emissions is to move away from concentrated dairy operations. There were also concerns raised that SoCalGas would benefit from the agreement or that there was going to be inappropriate expenditures of public funds. Many commenters asserted that the mitigation should occur locally, in Porter Ranch or Los Angeles; or called for mitigation focused on ending reliance on natural gas in the South Coast Air Basin generally, and ending reliance on the Aliso Canyon Facility in particular.

Finally, throughout the comments, regardless of whether the comment was supportive or expressed concern, technical issues were raised, such as the design of oversight mechanisms in the Mitigation Agreement and related issues, or ways to improve the Mitigation Agreement.

CARB appreciates the careful review of the Mitigation Agreement by so many stakeholders. Generally speaking, most of the issues relating to the Mitigation Agreement that are raised in the comments were considered by CARB during the development of the Mitigation Program and the Mitigation Agreement. CARB continues to support the terms of the Mitigation Agreement and is not proposing modifications to the Mitigation Agreement. The comments revealed, however, that important aspects of the Mitigation Agreement should be clarified—such as SoCalGas's role in administration of mitigation and CalBio's responsibility to pay for administrative costs—which CARB does in various sections of this document.

IV. Summary of Comments on the Mitigation Agreement and CARB Responses

CARB has separated the substantive comments on the Mitigation Agreement into the following topics: (a) whether the Mitigation Agreement is the appropriate way to achieve full methane mitigation of the Aliso Canyon leak; (b) whether dairy digesters and specific aspects of the Mitigation Agreement present concerns that will harm mitigation or state policy; and (c) whether mitigation should be achieved through projects other than digesters. CARB's summary of the comments and responses for each of these topics are set forth below. (CARB has specifically identified some comments, for reference.) This summary is intended to be complete, but it is not intended to provide a

point-by-point response to every variation of an issue that is raised. Rather, this summary consolidates the major concerns and themes and responds accordingly. (Capitalized terms not defined in this document are defined in the Mitigation Agreement.)

a. Mitigation Agreement is the Appropriate Way to Achieve Full Methane Mitigation of the Aliso Canyon Leak

Many comments were supportive of the Mitigation Agreement, in whole or in part.

Summary of comments:⁶

1. The Mitigation Agreement will effectively achieve full mitigation of the methane leaked at the Aliso Canyon Facility.
2. The Mitigation Agreement will achieve mitigation in manner that supports California's long-term GHG- and SLCP-reduction goals.
3. The methane mitigation projects can appropriately control methane emissions associated with dairy manure, which are currently unregulated, supporting legislative mandates to reduce methane.
4. Digester engineering firms are ready to develop appropriate, reliable controls for methane leaks.
5. The methane mitigation projects will generate a beneficial renewable natural gas for the transportation sector. This will improve air quality both in dairy communities and trade corridors in California. It will also support broad statewide clean-energy policies to reduce PM, NO_x, and smog-forming emissions from diesel trucks, improve health, and reduce other environmental impacts.
6. The methane mitigation projects are cost-effective.
7. The methane mitigation projects will create job and student internship and learning opportunities.
8. The debt-financing design for the methane mitigation projects (issuance of loans that must be repaid) creates additional beneficial public-benefit opportunities to further reduce pollution in the South Coast Air Basin while securing mitigation rapidly.
9. The mitigation investment amount is appropriate.
10. The independent oversight provided in the Mitigation Agreement will help ensure mitigation.

⁶ Within each summary section, the numbered summarized comment corresponds with its numbered response below. In the response, CARB first elaborates upon the comment for context before providing a response.

Response:

CARB concurs with the views expressed in the comments summarized above. As directed by the Governor's Proclamation, CARB's top priority—and the basis for its claims against SoCalGas in the litigation—was to ensure full mitigation of the methane emissions released by the leak through California projects that prioritized SLCP reductions. The Mitigation Agreement achieves that goal in a manner that is consistent with the criteria and objectives set forth in the publicly-vetted Mitigation Program, which are discussed in the Background section above. The Background section also identifies the main benefits and co-benefits of the Mitigation Agreement, and many of the responses to comments below elaborate upon those benefits. Those relevant portions of the Background section and responses below are incorporated by reference here.

b. Dairy Digesters and the Mitigation Agreement Present Concerns

A few comments noted concern over a lack of clarity on why and how CARB came to select methane mitigation and dairy digester projects as the preferred mitigation option to address the leak at the Aliso Canyon Facility. Many comments described particular concerns about dairy digester projects or aspects of the Mitigation Agreement that they stated would prevent full mitigation from being achieved, that would cause additional air or water pollution in the San Joaquin Valley, that were harmful to state policy, that were in violation of state law, or that would benefit SoCalGas.

Summary of comments:

1. Unclear what process and criteria CARB used to focus on methane reductions only and/or to select dairy biomethane projects as the preferred mitigation approach.
2. Concerns about dairy digester pipeline projects:
 - i. Emissions reductions might not be permanent.
 - ii. Digesters and pipelines will leak methane.
 - iii. Biomethane is corrosive and could cause pipeline failure.
 - iv. Dairies are a source of air and water pollution for nearby communities; this mitigation will support this pollution and potentially increase that pollution through encouraging dairy consolidation.
3. Concerns about SoCalGas's role in implementation and inadequacies of mitigation settlement, including:
 - i. The settlement, which includes the Mitigation Agreement, is premature; Government Plaintiffs should not settle until after the Root Cause Analysis is complete.
 - ii. CARB and the Government Plaintiffs should have sought higher civil penalties and Mitigation Contribution.

- iii. SoCalGas should remain legally obligated until full mitigation is achieved and settlement should state that SoCalGas maintains full liability for all damages, environmental or otherwise, with regard to the leak.
 - iv. Neutral party should select trustee and administrator.
 - v. SoCalGas is being subsidized by or otherwise benefiting from this mitigation.
 - vi. Dairy digester projects should be selected on a competitive basis.
 - vii. SoCalGas will give preferential access to its pipelines to the dairy digester developer.
4. Unclear how aspects of the Mitigation Agreement will be implemented, including:
- i. The Mitigation Agreement does not identify who pays the costs of the Administrator, the Mitigation Fund Trustee, CARB-Accredited Verifier, Independent Engineer, or other relevant parties.
 - ii. The Mitigation Agreement does not identify what occurs if a Mitigation Project defaults on its loan obligations or goes out of business.
 - iii. CARB should allow the public to object to mitigation progress reports, and provide for public review of the Mitigation Certification decision.
 - iv. CARB should appropriately justify the discount rate used in the Mitigation Agreement.
 - v. Unclear how leak emissions will be treated in the GHG Inventory and how the mitigation emissions reductions will be treated within the SB 1383 target accounting.
 - vi. CARB should submit all public comments to the court and not oppose a fairness hearing.

Responses:

1. Process and Criteria For Reviewing Methane Only Options and Ultimately Selecting Dairy Digester Pipeline Projects

Methane Only

A few comments noted that other emissions leaked (or continue to leak) from the Aliso Canyon Facility that were harmful; that there are numerous GHG sources that present opportunities to mitigate the leak; and it was unclear why CARB decided to focus only on methane reductions projects for this Mitigation Agreement. (See e.g., Public Comment Nos. 76, 77, and 89.)

The goal of the Mitigation Agreement (and as CARB was directed to do by the Governor's Proclamation) is to fully mitigate the leak by prioritizing SLCP-reduction projects in California. Harms attributable to emissions of other pollutants are or will be addressed by other terms in the Consent Decree and the ongoing private plaintiff cases.

CARB focused only on methane (an SLCP) sources to identify mitigation options because doing so enables a ton-for-ton approach that simplifies the process to account for mitigation. The projects will reduce 109,000 metric tons of dairy manure methane to account for the 109,000 metric tons of natural gas methane released from the Aliso Canyon Facility. GHGs and other climate pollutants pose different relative climate harms over a specific period of time. Scientists at the Intergovernmental Panel on Climate Change (IPCC) measure the warming effect of various GHGs over a specific period of time that the pollutant resides in the atmosphere using Global Warming Potential (GWP) values assigned to each gas. For example, on a 100-year timeframe, methane has 25 times the warming impact of carbon dioxide, while on a 20-year timeframe, methane has 84 times the warming impact. Thus the amount of carbon dioxide required to mitigate climate harms equivalent to 109,000 metric tons of methane would depend on the timeframe considered. Using only methane sources to achieve mitigation provides certainty that all climate harms will be addressed while avoiding the additional complexity resulting from trying to reconcile GWP conversion between different GHGs and different timeframes.

Selection of Dairy Digester Pipeline Projects as Preferred Mitigation Approach

Comments identified it was not clear how CARB decided that dairy digester pipeline projects should be the method to achieve full mitigation. As described in the Background section above and as incorporated by reference here, the Governor directed CARB to develop a program to achieve full mitigation of the leak and as a result CARB developed the Mitigation Program, which established required mitigation project criteria (which included criteria from the Governor's Proclamation), principles, and objectives to prioritize when selecting project types.

Guided by these criteria and objectives, CARB carefully reviewed a variety of methane mitigation opportunities, including projects in the South Coast Air Basin, before selecting the dairy digester projects as the most optimal option to achieve methane mitigation. Dairies are the State's single largest uncontrolled source of methane emissions, accounting for 25 percent of the State's methane emissions. Because SB 1383 prevents CARB from regulating dairy manure methane until "on or after" January 1, 2024 (see Health & Safety Code § 39730.7(b)(4)), methane emissions that are reduced as a result of the Mitigation Agreement are surplus to other state efforts to reduce emissions of methane or other GHGs. Taking into account the many criteria and objectives set forth in the Mitigation Program, as well as cost and time constraints, dairy digesters emerged as the optimal method to achieve mitigation of the leak's impacts.

The Mitigation Agreement's funding of dairy digester projects will provide several unique and significant environmental and economic co-benefits.

First, the Mitigation Agreement supports ongoing efforts to support the development of technology (digesters) to reduce substantial emissions from the dairy sector, a key component of California's strategy to address climate change. SB 1383 requires a 40 percent reduction in dairy methane emissions from 2013 levels by 2030 and further

requires CARB and other state agencies to take actions to support economically viable options for dairy operations to reduce methane emissions and encourage development of biomethane resources. (See e.g., Health & Saf. Code, §§ 39730.7 (b)(1), (b)(4)(B)(i) and (ii), (d)(1) and (2), and (e), and 39730.8.) SB 1383 also encourages development of biomethane projects in California by requiring the CEC to identify recommendations for the development and use of biomethane in CEC's Integrated Energy Policy Report and requiring the CPUC to select five dairy biomethane pilot projects to receive ratepayer reimbursement for their pipeline infrastructure costs. To this same end, the Legislature has appropriated funding to support dairy digester projects to reduce methane and support the State's methane reduction goals. (See e.g., Assembly Bill (AB) 109, Ting, Stats. 2017.) Thus, the Mitigation Agreement is consistent with and supports established state policy.

Second, it is hoped that the success of these projects will catalyze additional emissions reductions because it will demonstrate pollution-control techniques and investment and revenue strategies that may support broader emissions controls. The Mitigation Contribution will cause twelve new dairy digester projects to be built within two years that will collect up to 95 percent of the methane emissions from collected manure on the dairy sites. CARB's SLCP Strategy concluded that up to 500 dairy digesters would be necessary to reduce California's dairy manure methane emissions in line with the SB 1383 reduction target, though it is estimated that only 20 are in operation today in California after years of state support. The Mitigation Agreement's loan structure is anticipated to demonstrate the commercial viability of this industry on a large scale and thus encourage traditional lenders to provide financing for this industry and lessen the need for the State to do so.

Third, biomethane can be used as a renewable fuel in natural gas vehicles, including heavy duty trucks, and could be especially useful for captive fleets in the Central Valley (like feed and milk haulers). It can also be used as a feedstock for other fuels like renewable hydrogen and dimethyl ether (a potential substitute for diesel fuel). When sold as a transportation fuel, the biomethane from these projects has a substantially higher value as a result of the opportunity for the digester developer to receive Low Carbon Fuel Standard (LCFS) Credits (which are currently valued at roughly \$170 per ton) and other available credits of value. Because of this value, the biomethane is not expected to be sold for any other use. This revenue stream supports the goals of CARB's LCFS (which seeks to lower the carbon intensity of transportation fuels), and allows SoCalGas' mitigation payment—once repaid by the dairy digester developer, plus interest—to be used for additional public-benefit projects in the South Coast Air Basin. This benefit also supports many policies intended to help California achieve its climate goals, which now includes the state policy to achieve 100 percent renewable energy and zero-carbon resources by 2045, and the Governor's Executive Order setting the goal to achieve carbon neutrality by 2045. (SB 100, De León, Stats. 2018; Governor's Exec. Order No. B-55-18 (Sept. 10, 2018).)

Fourth, the total emissions reductions ultimately achieved by the dairy digester projects will likely exceed what is required to mitigate the leak's emissions. The mitigation projects are anticipated to mitigate 117,433 metric tons of methane over the ten-year mitigation period, a surplus of 8,433 metric tons (or eight percent) above the 109,000 metric tons of methane required to achieve full mitigation of the leak. And full mitigation is expected to be achieved in 2031, while each dairy digester is estimated to operate for 20 years or more, yielding continued emission-reduction benefits even after mitigation is achieved.

Fifth, the use of the biomethane to fuel trucks in California displaces diesel fuels and their associated harmful PM and NO_x emissions, securing additional air-quality benefits in California trade corridors, which often pass through or near disadvantaged communities that are disproportionately affected by harmful emissions. Additionally, using the biomethane in trucks avoids the harmful emissions associated with using biomethane on or near the dairy farms to generate electricity. All of the estimated 20 dairy digester projects operating in California today generate electricity on-site from the captured biogas. These facilities emit NO_x and other combustion-related emissions like sulfur oxides (SO_x), carbon monoxide (CO), and PM, which exacerbate the already-significant pollution burden of the San Joaquin Valley, one of two regions in the country designated as "extreme" non-attainment for ozone under the federal Clean Air Act. (NO_x, for one, contributes to the formation of ozone as well as secondary particulate matter, which adversely impacts the health of residents.) These harmful local emissions could be avoided by collecting and transporting the biomethane for use as a transportation fuel (as the Mitigation Agreement proposes to do), but the lack of operational history and the high cost of building the necessary infrastructure has to-date resulted in limited private investment interest. It is hoped that the Mitigation Agreement will catalyze such investments, thus supporting similar related projects as well as their associated benefits.

Sixth, the sale of the biomethane gas will provide a revenue stream to the dairy digester developer, allowing mitigation loans to be repaid with interest. Thus, the sums loaned, once repaid, will be re-used to secure further public benefits in the South Coast Air Basin and Porter Ranch.

Additionally, the construction of these projects will provide jobs and economic support to the communities where they are located and to other California businesses that build the components for these projects. Several job training schools and commerce organizations noted that these projects will result in benefits for students and workers in the San Joaquin Valley.

Finally, the capture of manure on the project sites is anticipated to reduce odors and associated impacts in dairy communities.

CARB considered other mitigation options to achieve sufficient methane reductions to mitigate the effects of the leak, but ultimately concluded that dairy digester projects were the best option.

2. Concerns about Dairy Digester Projects

i. Permanence of Emissions Reductions

Some comments stated that various future events may lead to the dairy digester projects no longer operating such that the expected emissions are not permanent—in other words, that the dairies at some future point could again emit the methane in an uncontrolled manner—and/or full mitigation might not be achieved.

The dairy digester projects' methane emissions reductions are permanent and, over the life of the projects, expected to exceed the 109,000 metric tons of methane emissions required to mitigate the leak. The proposed dairy operations, prior to the construction of an anaerobic digester, would emit methane to the atmosphere uncontrolled. The installation of an anaerobic digester allows the dairy operation to capture the previously uncontrolled methane. The projects will capture up to 80 percent of the manure on-site, and reduce the methane emissions of that manure by up to 95 percent. The subsequent combustion of the biomethane as a low-carbon, renewable fuel assures the permanence of the reductions (essentially, the methane is destroyed) and provides co-benefits in reducing NO_x and PM emissions from displaced diesel in the transportation sector.

The Mitigation Agreement is designed to ensure that mitigation occurs in full, even if individual projects fail: There are provisions that will result in the Administrator selecting additional mitigation projects to close any gap between actual and projected emissions reductions, as needed.

ii. Dairy Digester Project/Pipeline Methane Leaks

Multiple comments shared concerns that all dairy digester projects threaten to leak methane on-site and/or that the digesters create conditions for increased methane production—which also could leak. (See e.g., Public Comment Nos. 9, 16, and 64.) Commenters were concerned that methane leaks from the pipelines used would increase as a result of injecting more biomethane. In general, commenters discussing leaks were concerned that the leaks would cause an overall increase in emissions that would undermine the achievement of full methane mitigation and exacerbate climate impacts. Commenters were interested in ensuring that such leaks be measured, addressed, and accounted for by discounting or offsetting emissions counted towards mitigation.

Dairy Digester Leaks—Accounting and Prevention Technology

It is estimated that, of the total methane emissions captured by the digester-pipeline system, seven percent is ultimately lost through system leakage.⁷ In determining the total emissions reductions necessary to achieve the mitigation goal, these system leaks

⁷ The possible sources of methane leaks from a dairy project include: the digester, the gathering pipeline taking the biomethane to the conditioning facility, the utility-pipeline taking the biomethane to the common carrier pipeline, the injection site, and the common carrier pipeline taking the biomethane to its final off-take location.

are taken into account and subtracted from each project's projected emissions reductions, ensuring that those projections are appropriately conservative. Specifically, once the total projected emissions reductions are calculated (using the applicable Quantification Methodology), that number is discounted by seven percent to account for leaks from the dairy digester and the point of injection into the pipeline.

Unforeseen methane "leak" events, maintenance events that cause leaks, or temporary failure would be captured in the Quantification Methodology through the annual verification process. If these impede full mitigation, additional projects will be identified, funded by SoCalGas, and put into operation to achieve full mitigation.

Covered lagoon digesters at California dairy operations do not have a history of significant leakage of manure or methane, and improvements are constantly being made to their design. State-of-the-art covered lagoon digesters like those proposed to be funded and installed pursuant to the Mitigation Agreement have multiple design features that can help reduce the potential for leakage, safeguarding both air and water quality. Current covered lagoon digester designs are constructed to Tier 1⁸ water quality standards for leak protection, utilizing double, extremely-durable, high density polyethylene (or equivalent) liners combined with a leachate collection and removal system, offering a significant improvement in water quality protection over unlined manure storage lagoons.

With respect to methane leakage, the current digester designs prescribe lower operating pressures and utilize high density polyethylene (HDPE) materials which are impervious to weather and have a service life expectancy of up to twenty years. These durable covers are welded to the liner and allow for up to five days of biogas storage in the event of a maintenance event. They are constructed and tested for leakage utilizing state-of-the-art procedures prescribed by the cover manufacturer. In the event that a leak is detected during routine maintenance and inspections, the cover can be quickly repaired without taking the system out of service. Most digester locations maintain a supply of extra, commonly-replaced parts to ensure long-term, uninterrupted operation. Additionally, trained and certified repair technicians are available to provide on-site service on short notice.

Digesters Increasing Production of Methane

There is an increased production of methane relative to the business-as-usual scenario because the covered lagoon digester system maximizes anaerobic productivity. However this increase is not significant, estimated at 5-15 percent. This additional methane production would not measurably offset mitigation, because each digester

⁸ Tier 1: A pond designed to consist of a double liner constructed with 60- mil high density polyethylene or material of equivalent durability with a leachate collection and removal system (constructed in accordance with title 27, California Code of Regulations, Section 20340) between the two liners will be considered to be consistent with the State Water Resources Control Board Resolution 68-16. Review for ponds designed to this standard will be conducted in less than 30 days of receipt of a complete design plan package submitted to the State Water Resources Control Board.

reduces up to 95 percent of the methane associated with the project (and the estimated leaks from the digester itself are already subtracted from each project's projected emissions reductions in the Quantification Methodology). Any leaks not already accounted for will likely be offset by the eight percent surplus methane mitigation the projects are expected to achieve above the 109,000 metric tons requirement.

Pipeline Methane Leaks and Regulation

Leaks in the common carrier pipeline system will not increase based upon the injection of the mitigation projects' biomethane, both because leakage is primarily a function of the pressure in the system, rather than the quantity of gas in the system, and because the quantity of biomethane being added to the system is insignificant relative to the system's capacity.

Methane leaks from oil and gas pipelines are being addressed through SB 1371 (Leno, Stats. 2014). Under SB 1371, CPUC adopted a decision to require the gas utilities (which includes SoCalGas) to reduce methane leakage through their transmission and distribution operations.⁹ The implementation of mandatory best practices by each gas utility as a result of the decision will support California's goal to reduce methane emissions to 40 percent below 2013 emissions by 2030. The gas utilities may achieve this goal in the most cost-effective way possible within the best-practice framework.

Leaks in gathering lines beyond those already accounted for in the mitigation totals might reduce total mitigation, as these are new lines that are not subject to the SB 1371 requirements or CARB's oil and gas rule. (13 Cal. Code Regs. §§ 95565-95677.) However, CARB believes these leaks will be insignificant because the gathering lines are operated at a lower pressure than common carrier pipelines. As mentioned above, some or all of these potential leaks will be offset by the eight percent surplus emissions reductions the projects are expected to achieve.

iii. Corrosiveness of Biomethane

A few comments noted a concern that biomethane is a corrosive gas, more so than natural gas, and injecting it would harm the integrity of the pipeline system, thus causing pipeline failure and additional leaks of gas from the system. (See e.g., Public Comment Nos. 42, 46, and 51.)

The CPUC, in conjunction with CARB and OEHHA, must update analysis of biomethane pipeline injection constituents every five years, as required by AB 1900 (Gatto, Stats. 2012). In addition, the CPUC regulates pipeline-injection requirements for any injected gas to ensure that corrosion is not a concern.¹⁰ The CPUC ensures that corrosion

⁹ See CPUC Decision 17-06-015, Decision Approving Natural Gas Leak Abatement Program Consistent with Senate Bill 1371, available at

<http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M190/K740/190740714.PDF>

¹⁰ See CPUC Decision 14-01-034, Decision Regarding the Biomethane Implementation Tasks in Assembly Bill 1900. See also, PG&E Gas Rule 31, SoCalGas & SDG&E Gas Rule 30, SW Gas Rule 22.

specifications are met, and there is no evidence that biomethane would cause any additional safety concern under the existing regulatory environment.

iv. Environmental Pollution at Methane Mitigation Project Dairies

Commenters stated that dairies are a source of air and water pollution that causes health and environmental impacts affecting nearby communities. Commenters shared their concerns that the revenue stream to dairies from dairy biomethane generated by the dairy digester projects¹¹ would lead to increasing interest in digester projects and further consolidation of dairy farms (and an increase in dairy cow populations in total or at specific locations), causing continued or additional air or water pollution. (See e.g., Public Comment Nos. 9 and 76.)

Regulatory Environmental Compliance

Dairy farms have to comply with important regulatory controls to mitigate or minimize environmental impacts to water, soil, and air, which are overseen by other state agencies such as the California State Water Board Resources Control Board (Water Board) and its regional boards and local air quality management districts. CARB recognizes that ensuring compliance, including via effective enforcement, is critical to surrounding communities.

The operation of dairy digesters at a dairy is somewhat distinct from the dairy farm operations, yet in the areas of overlap (such as collection of dairy manure), the digesters address many environmental impacts of these operations by reducing manure odors, flies, weed seeds, and pathogens and potentially improving soil health and vector control. The California Department of Food and Agriculture's (CDFA) comment, which supports the Mitigation Agreement, is useful to note here because it stated that dairy digesters are a necessary component of long-term, sustainable agriculture and food production in California, and that dairy digester projects receiving funding through their Dairy Digester Research and Development Program (DDRDP) must conform to the strictest environmental standards to receive the grants.

The majority of the dairies associated with the Mitigation Agreement are participants in the California Dairy Quality Assurance Program (CDQAP), a collaborative voluntary partnership between the dairy industry, academia, and others to support the health of consumers, the health of the environment, and the health and welfare of dairy animals. Twelve of the dairies are participants and the other five dairies are in various stages of completing steps to become participants in the program. Dairy participants in CDQAP complete education courses to understand environmental regulations and best management practices. Each dairy also evaluates specific farm conditions and prepares appropriate management plans for their facility. Further, CDQAP requires each participating dairy to become certified through the Environmental Stewardship Program

¹¹ Dairy digester developers and dairy owners are usually separate entities, and generally agree to share in the revenue from biomethane generated from the digester collecting the dairy manure on-site.

as compliant with environmental regulations through an on-farm evaluation. Periodic audits ensure this compliance continues during each five-year certification period.

CARB, the Water Board, the Central Valley Regional Water Quality Control Board, and the San Joaquin Valley Air Pollution Control District are committed to ensuring that implementation of the digester projects in connection with this Mitigation Agreement does not compromise the dairy farms' full compliance with air and water quality regulations. To this end, these agencies will assist the dairies with understanding compliance requirements and will ensure effective communication such that issues can be prevented or immediately acted upon to minimize impacts.

Dairy Digesters' Effect on Dairy Consolidation

Dairy operations in California have been consolidating for decades, likely steadily increasing production efficiency, because the number of dairies in California is decreasing at a faster rate than the number of cows and milk production.¹² It is unlikely that a significant increase in number of dairy cows on existing farms will occur due to installation of dairy digesters. First, the number of milking cows has declined in California in recent years. Second, there are restrictions in permits that set limits on the total herd size of a dairy operation. California dairy operations, especially those in the San Joaquin Valley, are subject to stringent permitting requirements for both air and water quality, and are also likely to be limited in size by these requirements. (See e.g., California Regional Water Quality Control Board Central Valley Region General Order No. R5-2007-0035.) An increase in the number of cows, and thus manure created, would affect air and water quality, and would require changes in environmental controls and permit requirements to protect against and address those impacts.

In addition, there is insufficient information to predict the future direction of the dairy industry based on the availability of LCFS revenue for dairy biomethane or the Mitigation Agreement. The revenue offered from the LCFS program—to the dairy mitigation projects or any other transportation fuel-generating project—is based on the carbon intensity of a particular fuel source and provides value to dairy methane captured out of state as well. Therefore, to the extent the program does incentivize dairy growth, it does so both within and outside of California, and provides no particular competitive advantage to dairies in California.

3. Concerns About Implementation of Mitigation Agreement and SoCalGas's Role
 - i. Settlement Premature as Root Cause Analysis Ongoing

A few comments stated it was premature to settle the Government Plaintiff's case before the CPUC completed the Root Cause Analysis of the underlying cause of the leak. (See e.g., Public Comment No. 6.) The concern is that the settlement might not (or

¹² CDFA, California Cost of Milk Production, 2017 Annual, available at <https://www.cdfa.ca.gov/dairy/pdf/Annual/2017/COP%20Annual2017Data.pdf>

cannot) adequately address the scope of harm to the public and the extent of SoCalGas's culpability with regard to the leak without that final analysis.

Mitigation of the leak's methane emissions must be accomplished as soon as possible, as every day the methane exists in the atmosphere is a day in which its adverse climate impacts are amplified, causing additional environmental and ultimately economic and human health impacts. It is undisputed that methane was leaked from the Aliso Canyon Facility and therefore it would be unnecessary and harmful to wait for the conclusion of the Root Cause Analysis before initiating efforts to mitigate those emissions. It was necessary to finalize agreement of the terms that would govern that effort. Further, by resolving all claims at once, Government Plaintiffs were able to leverage favorable terms; piecemeal settlement would have resulted in fewer collective benefits to the public.

ii. Mitigation Contribution Sufficiency

Some commenters referred to the Mitigation Contribution and the civil penalties to be paid by SoCalGas pursuant to the Consent Decree both as "penalties," and some suggested that civil penalties and/or the Mitigation Contribution should be greater. (See e.g., Public Comment No. 16.) A few commenters noted that other environmental disaster settlements were much larger than this settlement.

The Mitigation Contribution (namely, the \$26.5 million payment to achieve methane mitigation) is not a civil penalty and is not paid to the Government Plaintiffs. Rather, it is the amount necessary to achieve full mitigation of the leak's methane emissions. The Mitigation Contribution is not intended to subjectively compensate for other non-climate harms caused by the leak. Its specific function is to mitigate the methane emissions from the leak, and \$26.5 million is, in the parties' estimation, the objective amount needed to accomplish that specific task. Other settlements addressing other environmental disasters are not useful comparisons to determine what is necessary to achieve mitigation here.

iii. Extent of SoCalGas's Legal Obligations

Commenters asserted that SoCalGas should not be released from its obligation until full methane mitigation is achieved, that is, after the ten-year mitigation period when all projects have been certified as having reduced at least 109,000 metric tons of methane, as that is fair, reasonable, and/or the only way to ensure full mitigation is secured. Separately, some commenters stated that the settlement should explicitly state that SoCalGas maintains full liability for all damages, environmental or otherwise, within the Aliso Canyon Facility that may have resulted from or are connected to the leak. (See e.g., Public Comment Nos. 42 and 83.)

The Mitigation Agreement sets out a long-term plan to fund, monitor, and ensure successful mitigation. As part of this accountability structure, SoCalGas will have obligations that go beyond simply paying for mitigation. SoCalGas will be responsible for providing sufficient funds to cause the construction and operation of at least twelve

dairy digester-pipeline projects. SoCalGas's legal obligation to mitigate the leak's emissions will not be released until CARB certifies that all projects are operational and, collectively, projected to reduce 109,000 metric tons of methane emissions within ten years. If any project fails to reach operation or if any project, once operational, is not projected to cause sufficient emissions reductions, SoCalGas will be required to invest in additional projects until it can meet this benchmark. Once this benchmark is met, SoCalGas will be released from its legal obligation, in part because the risk of project failure is lower after projects reach operation and also because there are safeguards to ensure that mitigation is successful. The purpose of the \$7.6 million Mitigation Reserve is to ensure that, in the event *actual* emissions reductions do not meet *projected* emissions reductions for the mitigation projects, funds remain to invest in additional mitigation projects. Based on these provisions of the Mitigation Agreement, it is unnecessary for SoCalGas to remain legally obligated until mitigation is achieved in full.

The Consent Decree, which includes the Mitigation Agreement, resolves only the claims brought by the Government Plaintiffs in connection with the leak at the Aliso Canyon Facility. The Government Plaintiffs believe this is a fair and balanced settlement that provides numerous benefits to Californians. The private plaintiffs' litigation continues, and the CPUC and other regulatory agencies are authorized to further enforce any violations disclosed by the Root Cause Analysis conducted by the CPUC.

iv. Selection and Role of Trustee and Administrator

Commenters noted concerns about SoCalGas's role as the Administrator during the construction phase for the dairy digester projects and whether it would use that authority to its advantage. A few commenters noted that the various administrative entities that will play a role in the issuance and administration of the loans should be selected by a neutral party such as the court, a court-appointed entity, or the AGO. (See e.g., Public Comment No. 42.)

Having an Administrator oversee the private investments and be subject to reporting requirements for transparency and accountability purposes is meant to ensure successful implementation. There will be a trustee for the Mitigation Trust, but the Administrator will engage in the day-to-day administration to ensure the loan terms are met before payments are made to projects. The trustee will initially be selected by SoCalGas subject to approval by CARB and the AGO. SoCalGas will be the initial Administrator of the Mitigation Account. SoCalGas will not be directing the investments to its own operations, as stated by some commenters, because the Mitigation Contribution may only be directed to project construction costs. The itemization of costs will be submitted to CARB and a summary will be provided on-line for public review.

The Administrator will have significant reporting duties to CARB, described in Section 8 of the Mitigation Agreement. Once the construction phase is complete, the projected emissions reductions of all projects must be certified by CARB. Once CARB determines that the collective projected emissions of all operational projects are sufficient to achieve full mitigation over a ten-year timeframe, SoCalGas will appoint a successor

Administrator, subject to CARB and AGO approval, to administer the repayment of the loans during the operation phase of mitigation. As part of the approval process of the trustee and successor Administrator, CARB and the AGO will ensure the parties selected to fill the roles (likely to be private financial institutions) are appropriate to implement the terms of the Mitigation Agreement. Further, CARB and the AGO will review and approve the Trustee Agreement, the Administrative Services Agreement, and the individual project loan agreements, and will have the appropriate authority to audit relevant aspects of the projects to ensure they comply with the Mitigation Agreement. CARB and the AGO will also have authority to initiate legal action to enforce the Mitigation Agreement and/or any auxiliary agreement, should the need arise.

v. Subsidy or Other Benefits to SoCalGas

Many commenters stated in various ways that this mitigation strategy is a subsidy to SoCalGas. Some stated that the Mitigation Contribution would be directed to SoCalGas or their operations, that the dairy digester projects are its “pet projects,” that SoCalGas will profit from the biomethane in some way including by the costs to transport it through its common carrier pipeline, or that SoCalGas will own the projects and the resulting biomethane and would inject it into the Aliso Canyon Facility. Some comments appeared to state that CARB would be directing government funds to SoCalGas as a result of this agreement. Other comments stated that the fact the projects may also receive CDFA DDRDP grant awards means that SoCalGas is receiving a subsidy towards its mitigation. (See e.g., Public Comment Nos. 21, 76, 83, and 84.)

This mitigation strategy is not a subsidy to SoCalGas. The company will be obligated to pay \$26.5 million as the Mitigation Contribution plus \$7.6 million for the Mitigation Reserve from non-rate payer funded sources. It is understood by CARB that all or part of these payments may be covered by SoCalGas’s insurance, but these private transactions do not diminish the public benefits secured by this funds transfer. The Mitigation Contribution may only be directed to project construction costs and may not be directed to SoCalGas or its operations.

Moreover, the projects and the biomethane they generate are owned by CalBio, the project developer, not by SoCalGas. The biomethane and their associated LCFS or other environmental credits may be sold by CalBio to the ultimate purchaser of the transportation fuel or as otherwise authorized by law. To the extent SoCalGas is such an ultimate purchaser of such end products, it stands equally in line with all other prospective purchasers and has no advantage over them. SoCalGas will have no financial or proprietary interest in the biomethane gas generated as a result of this mitigation strategy.

The common carrier pipelines are the most efficient method to transport the biomethane to its off-take point and delivery to vehicles. Common carrier pipelines must be owned by a utility and regulated by the CPUC. Although the common carrier pipelines for this

project will be built and owned by SoCalGas, SoCalGas derives no profit from transporting the gas through the pipelines.

Additionally, the mitigation projects are required to receive at least twenty percent investment from the Mitigation Contribution and are permitted to receive other private and public funds. Dairy biomethane pipeline projects face many economic barriers due to the high costs of building the pipeline and lack of operational history. These two features inhibit private investment, preventing the building of projects that would provide operational history for future private investment. The dairy digester projects are anticipated to demonstrate the financial viability and of these projects and contribute to the development of needed technology and expertise, stimulating future private investment in such projects and decreasing the need for public grants.

The high costs and novel nature of the dairy digester pipeline projects mean that, at this time, both private and public investment is necessary to cause these particular projects to be constructed and to operate. The full cost of a pipeline project could not likely be repaid, making full financing through a private loan (including through SoCalGas's Mitigation Contribution) infeasible. Many of the methane mitigation projects will receive partial public funding from CDFA's DDRDP grant program, which were awarded through a competitive bidding process. These grant awards are made available to the project owner after the project has completed construction and meets all applicable requirements, and as such reimburse costs already incurred by a project owner. The DDRDP grant monies awarded to CalBio are not a subsidy to SoCalGas. Rather, the total funding available to these projects enables construction of the pipeline infrastructure needed to ensure that the projects' biomethane will be used for transportation fuel and not for local electricity generation.

vi. Competitive Bidding Required for Public Funds

Several commenters stated it was unclear how the particular dairy projects were selected. One commenter stated that this mitigation strategy is an improper gift of public funds to the dairy digester developer and that without a competitive bidding process to select the dairy digester projects that receive loans from the Mitigation Contribution, this is essentially an illegal sole-source contract in violation of law and public policy. Comments also stated that the Mitigation Agreement stated a competitive solicitation would be used to identify and select eligible mitigation projects. (See e.g., Public Comment Nos. 71 and 84.)

As described in more detail above, based on the Governor's Proclamation, CARB developed the Mitigation Program pursuant to a publicly-vetted process, and based on an assessment of the criteria and objectives from the Mitigation Program, CARB determined that dairy digester pipeline projects were the most appropriate mitigation option. During the development of the Mitigation Agreement SoCalGas selected the specific projects that it determined would be able to achieve its obligation to cause full mitigation. The Mitigation Agreement describes how each project once in operation will be reviewed by CARB to determine if in totality all projects will reduce at least 109,000

metric tons of methane within ten years. The Mitigation Agreement contains various provisions regarding the process to identify and invest in additional methane emissions reduction projects through a competitive process run by the successor Administrator, should there be problems with the first set of projects.

The Mitigation Contribution that SoCalGas will pay as a result of this settlement is not public funds. SoCalGas is legally obligated to mitigate a certain amount of methane emissions. The parties negotiated the mechanism by which SoCalGas would discharge that legal obligation and agreed it would do so by financially enabling the construction of dairy digester projects that will reduce methane emissions. Working backward, the parties determined that the necessary financial contribution amounted to \$26.5 million. CARB is not itself contracting with CalBio to cause the projects' construction or otherwise contributing state resources to their construction costs, nor is this otherwise a public program. As such, no competitive bidding process is required. (See Cal. Const. Art. 16, § 6; Cal. Civ. Code § 1549; Pub. Contract Code §§ 10295 and 10335, *et seq.*; *cf. Domar Electric, Inc. v. City of Los Angeles* (1994) 9 Cal. 4th 161.)

Nor was there an improper gift of public funds. SoCalGas's payment will be deposited into a private trust and then distributed to private developers. This payment will benefit SoCalGas in no way; it will not be made to SoCalGas or otherwise made available to pay for its operations. The proceeds from the biomethane generated and sold will be owned by the developer, CalBio, and not by SoCalGas (nor by CARB).

After SoCalGas has discharged its obligation to mitigate the leak's emissions and the projects have all achieved full mitigation, the loan repayments (principal plus interest) will be directed to one of two separate accounts, the Aliso Fund and the Aliso Canyon Recovery Account.

The Mitigation Program states that a solicitation to select projects might take place if SoCalGas were to voluntarily undertake methane mitigation or if the funds were granted to the State of California. (Mitigation Program, page 22.) The document noted that the litigation spearheaded by the Government Plaintiffs could result in a different mitigation framework as a result of settlement negotiations, an outcome that has come to pass.

The use of a loan mechanism (rather than grants) provides an additional layer of accountability for the developer. Grant monies typically need not be repaid unless there is a violation of the contract terms. Here, all loans must be repaid, thus inducing the developer to develop projects that will operate and generate a revenue stream for at least the term of the loan, which is the same as the timeframe in which mitigation is expected to be achieved: ten years.

vii. Preferential Access to SoCalGas's Common Carrier Pipeline System

A few commenters stated that SoCalGas would treat these dairy digester projects different from others as a result of these dairies' participation in the mitigation, including by giving the dairies preferential access to its common carrier pipeline system for

purposes of biomethane injection and transportation. (See e.g., Public Comment No. 84.)

CARB is not in a position to respond to these comments. As such, the response to that concern that follows was prepared by SoCalGas:

The Mitigation Agreement does not and will not result in SoCalGas giving mitigation projects preferential access to the SoCalGas pipeline system. In fact, the Mitigation Agreement does not address terms of interconnection or access to the SoCalGas system. Both SoCalGas and projects selected under the Mitigation Agreement will have to follow and comply with SoCalGas' applicable CPUC-approved interconnection procedures and open access requirements. Similarly, other biogas projects seeking to interconnect to the SoCalGas system will have to go through the same interconnection process, just as they would absent the Mitigation Agreement.

4. Clarity Regarding Mitigation Agreement Implementation

i. Digester Developer Paying for Administrative Costs

A few commenters asked who would be responsible for paying the administrative costs associated with the Mitigation Agreement. The concern identified is that those costs would be taken from the Mitigation Contribution, reducing the amount available for the dairy digester projects. (Public Comment No. 42.)

The Mitigation Agreement requires that mitigation investments be used only for project construction costs. The dairy digester project developer is responsible for paying the relevant fees for the Administrator, Trustee, CARB-Accredited Verifier, and Independent Engineer, and will be required to do so pursuant to its loan documents. Even so, if the Mitigation Contribution proved insufficient, for whatever reason, the Mitigation Agreement provides mechanisms to ensure that full mitigation is achieved at SoCalGas's expense.

ii. Default on Loans and Problems Affecting Project Operation

Comments asked what would occur if projects defaulted on their loan obligations and what that would mean for the achievement of mitigation. (See e.g., Public Comment No. 42.)

Any default on loan obligations by the developer will result in recourse actions under the loan agreements, such as the acquisition of assets.

The projects are anticipated to achieve more than the required 109,000 metric tons of methane emissions reductions. This surplus will provide a buffer, so short down-times in project operations during the ten-year mitigation period are not likely to delay achievement of full mitigation, which is expected sometime in 2031. The \$7.6 million Mitigation Reserve is also available to ensure that full mitigation is timely achieved.

The dairy digester developer, CalBio, is incentivized to keep operating for the duration of the ten-year mitigation period, to generate biomethane that can be sold to transportation fuel purchasers so that it can repay its loans and generate a profit. This is the self-sustaining economic model that state agencies refer to when describing the value of dairy digester projects and their ability to incentivize significant methane reductions from as-yet uncontrolled sources in California. Once the loans are paid back, the project developer will be able to retain more of the revenue from the sale of the biomethane generated, and thus will have ongoing incentive to operate after mitigation is complete, and even to build and operate more digesters in California.

iii. Public Review of Reports and Mitigation Certification

A few commenters asked about transparency of mitigation implementation and one asked for the opportunity for the public to review and approve the Quantification Methodologies and other reports during the certification processes. Commenters noted that public participation is an important aspect of mitigation, including to ensure that it occurs as expected. (See e.g., Public Comment Nos. 76 and 83.)

It is important for CARB to ensure transparency and accountability in the implementation of mitigation, prevent fraud and corruption, and to ensure the terms of the Mitigation Agreement are met and mitigation is achieved. To that end, the details of how much of the Mitigation Contribution is applied to each project, how the Mitigation Contribution is spent, how any public monies received by the projects are spent, whether it is paid back, and the status of all projects' emissions reductions will be posted on CARB's website and available for public review. (Some information may be subject to confidentiality as trade secret or confidential business information, but the majority of this information will be available for public review.) This will bring accountability and transparency to a private-lending scenario that normally would be out of the public view, and is one of many tools provided by the Mitigation Agreement to ensure compliance with its terms.

The Mitigation Certification process will involve CARB staff reviewing the applicable Quantification Methodologies for each project and conducting on-site visits to confirm information, as appropriate. This certification process will be similar to the process CARB uses to verify LCFS carbon intensity pathways and Cap-and-Trade offsets, though in the case of mitigation implementation it will not be feasible to include public review and comment as requested by commenters, in part because CARB's review is required to be completed in a specific timeframe (see Mitigation Agreement, page 18). The review of Quantification Methodologies for each project and the on-site inspections will be performed by staff with expertise in the use and application of the metrics in the methodologies.

iv. Application of the Methane Emissions Discount Rate

Commenters asked how the discount rate from Exhibit 2 of the Mitigation Agreement operates and for the justification for the chosen rate. (See e.g., Public Comment No. 83.)

CARB sought to avoid delay in mitigation implementation because methane is a short-lived climate pollutant with a high global warming potential, so the leak's emissions must be offset as soon as possible. To motivate methane mitigation projects becoming operational well before CARB has authority to regulate dairy manure methane emissions (January 1, 2024), a project only receives credit for 100 percent of its methane emissions reductions if it is built before January 1, 2024. Thereafter, the methane emissions reductions associated with that project will be "discounted" in accordance with the discount rate found in Exhibit 2 of the Mitigation Agreement. Methane's presence in the atmosphere diminishes approximately 6 percent per year. As such, CARB applied a six percent discount rate per year for emissions reductions associated with projects built after January 1, 2024, and accelerated the schedule as if it had been in place since the leak began in 2015. Thus, a project built in February, 2024, will have only 45 percent of its emissions reductions count towards mitigation.

v. Treatment of Leak Emissions and Emissions Reductions in Inventories

One commenter indicated a preference for CARB to include the Aliso Canyon Facility leak emissions among routine emissions in the statewide GHG inventory. They indicated that not doing so would overestimate California's net progress toward its 2020 and 2030 GHG limits. (See e.g., Public Comment No. 52.)

CARB maintains California's GHG Inventory, which includes all known sources of GHG's and their estimated emissions. CARB's statewide GHG inventory follows the framework of the IPCC's GHG Inventory Guidelines. Emissions are inventoried by calendar year.¹³ The Aliso Canyon leak was a one-time event that occurred in 2015-2016. Because its emissions will be fully mitigated in future years under the Mitigation Agreement, these emissions are presented alongside but tracked separately from routine inventory data. The portion of the emissions released in 2015 is presented in the 2000-2015 inventory, and the portion released in 2016 is presented in the 2000-2016 inventory. To ensure public transparency, CARB has made emissions information publicly available on its webpages.

Because the 2020 and 2030 GHG limits are compared to emissions released during calendar years 2020 and 2030, respectively, emissions released from the Aliso Canyon leak in 2015 and 2016 do not affect California's demonstration of meeting the 2020 and 2030 GHG limits.

Although it was not commented upon, it is important to clarify within this discussion how CARB intends to treat the emissions reductions associated with mitigation when accounting for reductions that meet the SB 1383 methane reduction target. The emissions reductions associated with the methane mitigation projects, up to full mitigation, will not be counted towards the emissions reductions necessary to meet SB 1383's goal to reduce 40 percent of dairy methane emissions from 2013 levels by 2030. This is because the baseline year for this target is 2013 and the excess emissions

¹³ CARB GHG Inventory, available at <https://www.arb.ca.gov/cc/inventory/data/data.htm>

emitted during the leak occurred in 2015 and 2016, thus were not counted in 2013. This mitigation is a corrective effort to restore the status quo of California methane emissions as if the leak had not occurred. If the projects achieve the 109,000 metric tons of emissions reductions before their estimated timeline and before 2030, then any emissions reductions above that amount might be eligible to count towards the SB 1383 target.

vi. Public Comments Submission to the Court and Fairness Hearing

One commenter asked for all public comments to be submitted to the court and requested CARB not oppose a fairness hearing if one is requested. (Public Comment No. 83.)

All public comments submitted to CARB during the public comment period are appended in Exhibit 1. The Government Plaintiffs have filed a motion for entry of the Consent Decree and, through that filing, have requested a hearing be set for purposes of the Court's review of the Motion.

c. Mitigation Should be Achieved Through Alternative Projects

Most comments describing concerns about or a lack of support for the Mitigation Agreement stated that mitigation should be achieved through projects other than dairy digester projects. A number of comments from residents of Porter Ranch preferred mitigation to occur through local methane mitigation in Porter Ranch or at least the Los Angeles region. Others identified that gas demand reduction or electrification projects are the preferred mechanism for California to achieve its climate goals and so should be prioritized through this Mitigation Agreement.

Summary of comments:

Mitigation projects should include:

1. Dairy and livestock enteric emissions-reduction projects, perhaps through use of a seaweed-based feed researched by UC Davis.
2. Landfill organics diversion and publicly-owned treatment works (POTW) methane emissions-reduction projects.
3. Natural gas leak-reduction measures in the CPUC oil and gas transmission and distribution network.
4. Closing abandoned oil and gas wells in Los Angeles.
5. Water Heater Replacements and other demand-reduction and energy-efficiency options.
6. Demand-Reduction Electrification to better support California's climate goals.
7. Close the Aliso Canyon Facility, reduce demand from the Facility, or electrify compressor stations at the Facility.
8. Close or eliminate large-scale dairies.

9. Projects located in Los Angeles City or County or, more specifically, Porter Ranch.

Response:

During the development of the Mitigation Program, CARB considered numerous GHG and methane sources in identifying appropriate mitigation options for the Mitigation Program, and specifically considered the following sources:

- Dairy and livestock enteric emissions;
- Landfill organics (including via POTW);
- Oil and gas pipeline leaks;
- Abandoned oil and gas wells; and
- Water heater replacements.

CARB thus considered the methane sources identified in numbers 1-5 in the summarized list, above, as potential mitigation options. Numbers 6-11 were mitigation options that did not meet the criteria and objectives for purposes of being considered in the Mitigation Program. The responses below describe CARB's view on the feasibility of utilizing each option to achieve mitigation.

1. Dairy and Livestock Enteric Emissions

Comments noted that enteric emissions from dairy operations are also a significant unmitigated source of methane in the State (20 percent of statewide methane emissions), and there are options to reduce such emissions that should be developed, such as incorporating seaweed into dairy and livestock feed. (See e.g., Public Comment No. 91.)

The significance of the source led CARB to consider whether it was feasible to achieve mitigation through dairy and livestock enteric emissions-reductions projects. However, despite ever-improving efforts to identify and implement measures to reduce emissions from enteric sources, there is no proven large-scale option for mitigation of these emissions that is verifiable and capable of reductions in the near term. Ongoing research has identified a few potential enteric methane mitigation strategies. Among these are improvement in feed efficiency, selective breeding, and feed additives. Improvements in feed-use efficiency and selective breeding are incremental and will not provide the necessary mitigation in the near-term. Feed additives are not yet commercially available; they are going through FDA testing but are not likely to receive approval for several years. Some identified feed additives (such as seaweed) may have promise in reducing methane, but adjusting the feed of cows could directly impact milk flavor and have a number of other unintended consequences. There is limited data yet available to quantify the efficacy of these methods across varying conditions on a farm, and it is very difficult to measure enteric emissions, thus it would be difficult to verify mitigation through any of these methods. While there are many promising opportunities in this area, none meet all of the criteria and objectives of the Mitigation Program.

2. Landfill Organics and Publicly-Owned Treatment Works Emissions

Comments noted that there are technologically viable and cost-effective methods to reduce methane emissions from landfills and POTW's, including through digester projects to generate biomethane, which should be eligible for funding through the Mitigation Agreement. (See e.g., Public Comment No. 62.)

Diversion of organics from landfills and at publicly-owned treatment works to digesters to create biogas was another option CARB considered. This would have created benefits similar to dairy manure digesters in that it would reduce methane on-site and generate a renewable gas that could be used for transportation fuels. However, these emissions reductions would not be additional, due to a pending regulation. The California Department of Resources, Recycling and Recovery (CalRecycle) is developing a regulation, which is anticipated to be adopted in 2019 and will result in 75 percent of the organics that normally go to landfills in California to be diverted for other uses by 2025. Due to the implementation of this regulation next year, it would be infeasible to divert an additional amount of organics to cause reductions of 109,000 metric tons of methane reductions beyond what would be captured by the regulation and any reductions associated with the regulation could not be deemed additional reductions for purposes of mitigation.

3. Oil and Gas Pipeline Natural Gas Leaks

Many comments noted that the preferred approach should be to identify and control existing natural gas (methane) leaks from the oil and gas transmission and distribution system in California. (See e.g., Public Comment No. 9.) As described above on pages 15 and 16, methane leaks from oil and gas pipelines are being addressed through the CPUC proceeding pursuant to SB 1371. Thus, there is not a method to cause additional reductions beyond what is required by existing regulations.

4. Abandoned Oil and Gas Wells

Comments noted that there are sources of methane in Los Angeles that could be mitigated. CARB considered the option of closing abandoned oil and gas wells from previously functioning extraction projects, which are a known source of methane for which there are not alternative funding sources to close. However, abandoned wells likely do not emit a sufficient amount of methane in California to achieve full mitigation in the near term. Also, the wells are costly and complex to close and it is difficult to verify the business-as-usual emissions compared to the emissions reductions after closure. As such, this option does not meet all of the criteria and objectives of the Mitigation Program.

5. Water Heater Replacements and Demand-Reduction and Energy-Efficiency Options

Many comments requested mitigation funding to cause emissions reductions through the replacement of water heaters, which leak methane, particularly those in the Los Angeles region or Porter Ranch. (See e.g., Public Comment Nos. 39, 64, 91.)

CARB considered a program to replace natural-gas water heaters with electric heaters, but this option failed to meet all the objectives and criteria of the Mitigation Program. For one, to achieve full mitigation would require millions of units to be replaced at a total cost that would be an order of magnitude larger than this settlement. Other gas demand-reduction, electrification, or energy-efficiency projects are similarly too costly (or would take too long for de minimis reductions to accrue to achieve full mitigation) or cause reductions that are difficult to verify, thus preventing them from being options that could feasibly be used to achieve full mitigation in a reasonable timeframe. CARB acknowledges that gas demand reduction via demand-response or energy-efficiency projects is an important policy goal. Additionally, the Mitigation Agreement wholly supports this goal insofar as—after full mitigation is achieved—it redirects the mitigation funds (plus interest) into other projects, which may include demand-reduction, electrification, or energy efficiency projects.

6. Demand Reduction and Electrification to better support California’s climate goals

A few comments noted the need to electrify or reduce gas demand (natural gas, diesel, etc.) to reach California’s ever-strengthening renewable energy, climate, and air pollution goals. (See e.g., Public Comment Nos. 6, 16, no. 89.) They noted the dairy digester approach to mitigation will not serve to move California in this direction and might even entrench further gas use by providing a “renewable” source of energy instead of investing in costly but necessary infrastructure to reduce reliance on gas as an energy source. CARB further takes note of one commenter’s suggestion that SoCalGas representatives have described CARB’s Scoping Plan¹⁴ as disfavoring or under-emphasizing building electrification. (Public Comment No. 83.) Such representations of CARB’s views are not accurate.

As noted above, while electrification was not the most optimal option for mitigation in this context, CARB recognizes that electrification is a valid and important long-term policy goal, consistent with the State’s overall climate mandates. CARB, in fact, views electrification of buildings and industrial facilities as critically important to reach California’s long-term climate goals. Although electrification was not the primary near-term emissions reduction strategy identified in the Scoping Plan, it is a critical long-term strategy. It will take time to achieve, so cost-effective electrification opportunities should be sought now, and expanded going forward. Monies in the Aliso Fund (which will include repayments and proceeds of funds spent on methane mitigation) and SB 801 and other SEP monies can and should be used to support such efforts, as appropriate.

¹⁴ As required by law, CARB adopts a Scoping Plan every five years that describes the approach California will take to reduce GHG’s in accordance with targets set by the Legislature. The original goal to reduce GHG emissions to 1990 levels by 2020 (AB 32, Núñez, Stats. 2006) has been achieved and the new goal is to reduce GHG emissions 40 percent below 1990 levels by 2030 (Pavley, Stats. 2016). The 2017 Scoping Plan proposes to strengthen existing successful programs (such as Cap-and-Trade and the Low Carbon Fuel Standard) and further integrate efforts to reduce both GHG’s and air pollution (such as implementation of the requirements identified in AB 617 (Garcia, Stats. 2017) to improve local air quality).

7. Closure of the Aliso Canyon Facility, Projects to Reduce the Need for the Facility, or Electrification of Compressors at Facility

Comments requested that the settlement include closing the Aliso Canyon Facility, funding gas demand reduction projects within the Facility service territory, or electrifying compressors at the Facility as various way to minimize methane leaks and prevent another harmful leak. Commenters noted that the Aliso Canyon Facility has some degree of operational emissions and asserted that it should be closed to achieve methane mitigation. (See e.g., Public Comment Nos. 2, 25, 28, and 42.)

The purpose of the Mitigation Agreement is to achieve emissions reductions that are additional to reductions that SoCalGas might otherwise achieve, whether because it is required or financially incentivized to do so. The Aliso Canyon Facility's current emissions are in line with those from other storage facilities in the State.¹⁵ Emissions from leaks at Aliso Canyon are expected to be reduced as CARB, DOGGR, and CPUC implement regulations on leak repair requirements as well as daily or continuous leak monitoring requirements. Additionally, as the State further reduces its reliance on natural gas in line with overall state policy, it is anticipated that these emissions will be further reduced. CARB agrees that further efforts to reduce emissions from such facilities are necessary in the natural gas sector; indeed, decarbonization is the longer-term goal.

It is important to note that neither CARB nor any other of the Government Plaintiffs has primary regulatory control over SoCalGas operations at the Aliso Canyon Facility. It follows that shutting down the Aliso Canyon Facility was not a viable option for mitigating the leak either in the context of the Mitigation Program or the litigation.

Pursuant to SB 380 (Stats. 2016), in early 2017, the CPUC opened a proceeding to determine whether it is feasible to reduce or eliminate the use of the Aliso Canyon Facility while maintaining energy and electric reliability for the region.¹⁶ In mid-2017, the CEC wrote a public letter to the CPUC recommending that the CPUC work toward closing the Facility within 10 years.¹⁷ The first phase of the CPUC proceeding will determine the scenarios and assumptions that will be modeled to address the viability of closing the Aliso Canyon Facility. The modeling will be conducted in the second phase, and the results will inform decisions about the future of the Facility.

Separately, the CPUC, with other agencies, has issued periodic short-term analyses and recommendations regarding SoCalGas' system reliability in the winter and summer months. These reports include the existing and proposed mitigation measures to reduce demand upon the Aliso Canyon Facility. The impacts of these mitigation measures have

¹⁵ CARB Methane Emissions at California Natural Gas Storage Facilities, available at, <https://ww2.arb.ca.gov/research/methane/ng%20chart%20all.png>

¹⁶ California Public Utilities Commission, Order Instituting Investigation 17-02-002: <https://apps.cpuc.ca.gov/apex/f?p=401:57:0::NO>

¹⁷ California Energy Commission Chair Releases Letter Urging the Future Closure of Aliso Canyon (Jul. 19, 2017) available at <https://www.energy.ca.gov/releases/2017%20releases/2017-07-19-energy-commission-%20chair-releases-letter-ailso-canyon%20nr.pdf>

been documented by the CPUC. To date, the mitigation measures have been more effective in reducing demand in the summer than in the winter, when gas demand is highest.¹⁸

CARB does concur with comments that it is appropriate that the future of the Aliso Canyon Facility be evaluated, in part, in light of the State's many climate goals, including the Governor's recent directive to achieve carbon neutrality.¹⁹ Achieving these goals will require that the State further reduce its reliance on fossil fuels, including natural gas, and carefully consider the long-term ramifications of decisions regarding the future of the transmission and distribution system.

As described above, SB 1371 will require utilities to implement best practices to reduce methane leaks from their oil and gas transmission and distribution systems. SoCalGas is proposing alternative leak detection technology, instead of standard mobile platform monitoring, and a prioritization of monitoring leak-prone pipeline as opposed to a shorter leak survey schedule. CPUC is evaluating these proposals, with input from CARB, and will determine if they are appropriate. SoCalGas will be held to the standards required under SB 1371 and the resulting decision, which include leak detection and repair. In addition, at storage facilities, CARB requires quarterly leak detection inspections as well as daily or continuous wellhead leak monitoring and continuous ambient air monitoring.

As described above, the Quantification Methodologies prepared for each project will account for estimated leaks from the system up through the pipeline injection site, such that those emissions are subtracted from the projects' emission-reduction numbers.

Electrification of compressors at the Aliso Canyon Facility is an area worth exploring, but given the equipment turnover time for large compressors, it is not a near-term mitigation option.

8. Close or reduce the population size of large-scale dairies.

Alongside the concerns about dairies environmental impacts, some commenters suggested that large-scale dairies should be closed or have their herd sizes reduced to achieve methane mitigation.

Closing dairy farms or reducing their herd size is not within CARB's authority to achieve either through regulation or this settlement. Also, with the passage of SB 1383, the Legislature mandated that any regulations to reduce manure methane include provisions to minimize and mitigate potential emissions leakage to other states or countries. (Health & Saf. Code § 39730.7(b)(4)(D).) The intent is to avoid circumstances in which California's agricultural industry is impacted by California dairies moving operations to other states while the methane emissions continue in those areas. Any

¹⁸ CPUC, Mitigation Measures, Page 3, available at [https://www.cpuc.ca.gov/uploadedFiles/CPUC%20Public%20Website/Content/Safety/Aliso%20Canyon%20Mitigation%20Measures%20Impact%20Report%20\(May%202018%20Update\).pdf](https://www.cpuc.ca.gov/uploadedFiles/CPUC%20Public%20Website/Content/Safety/Aliso%20Canyon%20Mitigation%20Measures%20Impact%20Report%20(May%202018%20Update).pdf)

¹⁹ Governor's Exec. Order No. B-55-18 (Sept. 10, 2018), available at <https://www.gov.ca.gov/wp-%20content/uploads/2018/09/9.10.18-Executive-Order.pdf>

effort to reduce manure methane that might cause emissions leakage is out of step with this legislative intent if the demand for dairy products in and outside of California does not decrease. Evidence suggests that while dairy milk demand may be decreasing in some markets in the U.S., demand for dairy products (e.g., cheese, cottage cheese, and yogurt) is growing both in the U.S. and the world. Reducing the production of dairy products in California through a reduction in the number of dairy cows would not alleviate that demand, and production would foreseeably be increased in other states. This could lead to a significant economic impact within California, but would not result in a significant reduction in global methane emissions.

9. Mitigation Projects in Los Angeles Region and, Specifically, Porter Ranch

Many comments from individuals who identified themselves as Porter Ranch residents or workers, from organizations, and from state Legislators stated their desire for the Mitigation Agreement to cause methane mitigation or other environmental benefits in Porter Ranch, or at least the Los Angeles region, because those communities were directly impacted by the leak and that would be the fair result. Some comments stated generally that mitigation should be located in those areas and others identified particular or general project types that should be funded in those areas, such as replacing water heaters, solarizing homes, or any gas demand-reduction or electrification projects. A few comments noted that eventually the mitigation repayments would return to Los Angeles projects, but they preferred mitigation to occur first in Los Angeles or Porter Ranch. (See e.g., Public Comment Nos. 18, 20, 23, 42, 76.)

Some comments noted emissions reductions projects should be located in disadvantaged communities, either those that are low-income or disproportionately impacted by air pollution. A few comments explained that the huge health and economic burdens imposed upon these communities as a result of natural gas use and infrastructure is why it is so important to invest in clean energy infrastructure projects in these areas for these communities. Particularly in the near term as climate change is anticipated to exacerbate air pollution and its associated impacts.

CARB notes that many civic organizations and chambers of commerce throughout the South Coast Air Basin support the Mitigation Agreement (and Consent Decree generally) because it fosters environmental improvements throughout the region. (See e.g., Public Comment Nos. 13, 31, and 43.)

As an initial response, and as previously noted above, CARB supports the importance of electrification and other gas demand-reduction projects in Los Angeles as an effective method to reduce harmful GHGs, criteria pollutants, and toxic emissions. CARB agrees that electrification in many circumstances is more effective than substitution of fossil fuels for renewable gas, and has many ongoing policy and regulatory efforts to support net-zero energy solutions, including electrification.

The top priority for CARB is achieving full mitigation of the leak's significant methane emissions in accordance with the Governor's directive to CARB. CARB understands the concerns underlying the requests to mitigate the leak in Porter Ranch or Los Angeles

County because of the leak's impacts on those communities and the desire to reduce demand for natural gas regionally. CARB supports and is involved in numerous regulatory and policy efforts to reduce pollution and GHG emissions in Los Angeles County, which is heavily impacted by transportation emissions and climate change. However, the environmental impacts experienced by the residents neighboring the Aliso Canyon Facility are distinct from the leak's climate impacts. Specifically, the primary impact of methane is global in nature (rather than local or regional, as with pollutants like NO_x), and methane emissions accordingly can be reduced anywhere in the world to the same benefit. The climate impacts of the leak affected all Californians and all people worldwide equally. It is a marked success that CARB achieved a settlement that meets the Governor's goal to have mitigation occur in California, benefiting the California economy and contributing significantly to California's goal to attain carbon neutrality.

Additionally, as described above, dairy manure in the San Joaquin Valley is the most significant uncontrolled methane source in the State, and it can be controlled in a manner that is real, verifiable, permanent, and additional, at reasonable cost and within a reasonable timeframe.

A key feature of the Mitigation Agreement is the opportunity to reinvest the mitigation repayments (i.e., the loan principal plus interest) in public-benefit projects in Los Angeles. In total and as shown below, up to \$89 million will be directed to projects benefiting those impacted by the leak and those impacted by pollution in Los Angeles.

The initial commitment to local projects will be as follows:

- \$45.4 million to six specific projects identified in the SEP Agreement

By the end of the mitigation repayment period, additional funds are anticipated be directed to support local projects, as follows:

- \$26 million from Mitigation Contribution loan repayments to the SB 801 Aliso Canyon Recovery Account;
- \$10 million from Mitigation Contribution loan repayments to the Aliso Fund; and
- \$7.6 million (or what remains of the Mitigation Reserve), plus interest, to the Aliso Fund.²⁰

The initial six projects identified in the SEP Agreement were selected by the Government Plaintiffs because they addressed pressing pollution control issues, required substantial funding, and lacked alternative funding sources.

The Mitigation Agreement achieves methane emissions reductions via project loans, rather than grants, which allows for the unique and important co-benefit of being able to achieve full mitigation of the leak's methane emissions and then to allow the same

²⁰ The \$26 million to SB 801 and \$10 million to the Aliso Fund is based on the anticipation that the dairy digester project developer will repay the \$26 million Mitigation Contribution plus up to \$9.5 million in interest, for a total of \$36 million.

dollars, plus interest, to be used for future local environmental projects in the South Coast Air Basin. Alternative mitigation options did not provide such an opportunity.

The mitigation repayments will be available to projects through the Aliso Fund and the Aliso Canyon Recovery Account. Interested stakeholders can participate in the development of guidelines for the selection of projects in the South Coast Air Basin region that will receive Aliso Fund grants, or discuss with legislators how the Aliso Canyon Recovery Account funds should be appropriated in line with SB 801. This flexible structure allows other beneficial projects to be funded by the full implementation of this settlement even where those projects are not yet identified or even viable at this time.

CONCLUSION

By the Governor's Proclamation and by statute, CARB was directed and authorized, respectively, to remedy the climate harms caused by the Aliso Canyon leak's methane emissions. In fulfilling its responsibilities, CARB developed, following a publicly vetted process, the Mitigation Program that established a set of required criteria and objectives to guide its selection of appropriate mitigation projects. Using the criteria set by the Governor's Proclamation and the criteria and objectives established in the Mitigation Program, CARB and SoCalGas developed the plan to achieve full methane mitigation of the leak through the terms in the Mitigation Agreement, which is included in the proposed Consent Decree and settles the Government Plaintiffs' mitigation-related claims against SoCalGas. Certification, transparency and accountability measures in the Mitigation Agreement will ensure that mitigation is successfully achieved in a way that can be verified by both CARB and the public.

Comprehensive environmental compliance by the dairy farms will be ensured by participation of the dairies in the CDQAP and partnerships between CARB, the local air district, and the Water Board to address issues as they arise. The mitigation repayments will ultimately become available for a second use to cause environmentally beneficial projects in the South Coast Air Basin through the Aliso Canyon Recovery Account and SB 801, including many of the alternative projects commenters identified as being useful to achieve a variety of goals.

Ultimately, the Mitigation Agreement achieves CARB's underlying goal—to fully mitigate the leak's emissions—in a way that is wholly consistent with all of these criteria and objectives and that provides maximum benefits to the public.