

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**



FILED

Application of Southern California Gas Company (U
904 G) and Lakeside Pipeline LLC to Initiate
Reasonableness Review and Recovery of Lakeside Maas
Energy Works Dairy Biomethane Pilot Project Costs.

A.25-08-009
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OPENING BRIEF OF LAKESIDE PIPELINE LLC

DOWNEY BRAND LLP
Michael B. Day
Jedediah Gibson
Christopher M. Marelich
455 Market Street, Suite 1500
San Francisco, California 94105
Telephone: (415) 848-4800
Email: mday@DowneyBrand.com
cmarelich@downeybrand.com

Date: August 12, 2026

Attorneys for Lakeside Pipeline LLC

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SUMMARY OF RECOMMENDATIONS

In this Opening Brief, Lakeside Pipeline, LLC (Lakeside) respectfully asks the Commission to adopt the following recommendations:

1. Authorize Lakeside to recover \$6,691,208 above its initially authorized amount of \$9,327,295 and authorize Southern California Gas Company (“SoCalGas”) to recover \$7,831,000 above its initially authorized amount of \$10,844,000 for their respective portions of the Maas Energy Works Senate Bill (SB) 1383 Dairy Biomethane Pilot Project (“Project”).
2. Deny the Public Advocates Office at the California Public Utilities Commission’ (“Cal Advocates”) recommendation that the Commission disallow \$2,702,145 in costs above Lakeside’s initially authorized amount for the Project.

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A.25-08-009
(Filed August 15, 2025)

OPENING BRIEF OF LAKESIDE PIPELINE LLC

In accordance with the February 20, 2026 Assigned Commissioner’s Scoping Memo and Ruling, Lakeside Pipeline LLC (“Lakeside” or “Company”)¹ files this Opening Brief.² As set forth below in this Opening Brief, Lakeside requests that the Commission authorize the Company to recover \$6,691,208 above its initially authorized amount of \$9,327,295 and authorize Southern California Gas Company (“SoCalGas”) to recover \$7,831,000 above its initially authorized amount of \$10,844,000 for their respective portions of the Maas Energy Works Senate Bill (SB) 1383 Dairy Biomethane Pilot Project (“Project”). This Opening Brief is timely filed.

As discussed more thoroughly in Sections II–IV of this Opening Brief, the majority of the Project’s cost overruns were the result of project design changes that were prudent, reasonable, and based on information learned from the design and construction of similar biomethane projects that preceded the Project. Lakeside’s initial estimated project budget was required to be prepared and submitted within an extraordinarily short, 110-day time period, well before Lakeside had the opportunity to complete final engineering of the Project and secure the permits

¹ In certain prepared testimony, there are references made to Maas Energy Works, LLC or “MEW”, one of the partners comprising Lakeside Pipeline LLC and developer of the Lakeside Dairy Biomethane Pilot Project. For the remainder of this brief, “Lakeside” shall be used. The Lakeside Dairy Biomethane Pilot Project shall be referred to as “Project.”

² See Assigned Commissioner’s Scoping Memo and Ruling (February 20, 2026).

necessary to finalize the Project route. For each cost overrun, Lakeside has prepared compelling evidence showing that the Project design changes were prudent and reasonable based on information learned from other biomethane capture pilot projects, permitting requirements that were not known at the time of Lakeside's initial bid, and cost inflation for both materials and labor needed for the Project during the COVID-19 pandemic.

The Public Advocates Office at the California Public Utilities Commission ("Cal Advocates") recommends that the Commission disallow \$2,702,145 of cost overruns but has failed to produce evidence sufficient to contradict Lakeside's showing that the cost overruns were prudently incurred and reasonable. Instead, Cal Advocates advances a narrow theory to disallow Lakeside's requested recovery—the Commission should disallow recovery of cost overruns because those design changes made to the Project were not included within Lakeside's Project proposal to the Project Selection Committee.³ To support its theory, Cal Advocates mischaracterizes statements in Lakeside's proposal to the Selection Committee to suggest that there would be no need for any changes in design or scope of work from the initial proposal, and therefore, such costs should be disallowed.

The Commission should reject Cal Advocates' arguments. Decision ("D.") 17-12-004, the decision implementing dairy biomethane pilot projects requirements, confirmed that cost overruns beyond the original bid amount are subject to a reasonableness review.⁴ The standard is not, as Cal Advocates seems to suggest, simply a question of whether the actual cost of the Project directly aligns with the initial bid proposal to the Selection Committee. Because Lakeside has shown that Project cost overruns were prudently incurred due to necessary project design

³ See e.g., CA-01, p. 2-23, (lines 6–15).

⁴ Decision (D.) 17-12-004, Conclusion of Law 11, p. 22.

changes and cost inflation, the Commission should authorize Lakeside and SoCalGas to recover the Project cost overruns.

I. PROCEDURAL HISTORY

A. Events Preceding the Present Application.

In 2016, then Governor Jerry Brown signed Senate Bill (“SB”) 1383 into law.⁵ SB 1383 declares that “short-lived climate pollutants, such as black carbon, fluorinated gases, and methane . . . have a dramatic and detrimental effect on air quality, public health and climate change.” To address these potential harms, SB 1383 requires “[the California Air Resources Board (“CARB”)], no later than January 1, 2018, to approve and begin implementing that comprehensive strategy to reduce emissions of short-lived climate pollutants to achieve a reduction in methane by 40%, hydrofluorocarbon gases by 40%, and anthropogenic black carbon by 50% below 2013 levels by 2030.”⁶ It also requires the California Public Utilities Commission (“Commission”), in consultation with CARB and the Department of Food and Agriculture (“CDFA”), to direct gas corporations to implement “not less than five dairy biomethane pilot projects to demonstrate interconnection to the common carrier pipeline system” no later than January 1, 2018.⁷ Gas corporations are authorized to recover in rates the “reasonable cost of pipeline infrastructure developed pursuant to the pilot projects.”⁸

On June 22, 2017, the Commission issued Rulemaking (“R.”) 17-06-015 to implement the provisions of SB 1383 through an implementation framework covering four general categories: pilot selection, definition of infrastructure, cost recovery framework, cost cap and

⁵ Sen. Bill No. 1383 (2015–2016 Reg. Sess.).

⁶ Sen. Bill No. 1383 (2015–2016 Reg. Sess.).

⁷ Sen. Bill No. 1383 (2015–2016 Reg. Sess.).

⁸ Sen. Bill No. 1383 (2015–2016 Reg. Sess.).

data gathering.⁹ The Commission issued D.17-12-004 on December 18, 2017, which established the implementation and selection framework to implement the five dairy biomethane pilots. D.17-12-004 established that the biomethane producers would own and operate the biogas collection lines and treatment equipment, the implementation costs for which would be recovered from the transmission rates of utility ratepayers as reimbursement to biomethane producers.¹⁰ Costs are to be recorded as an operational expense in a utility balancing account up to the bid amount.¹¹ Costs above the bid amount are subject to a reasonableness review.¹²

On December 3, 2018, the Commission, CARB, and CDFA issued a joint press release identifying the selected six dairy biomethane pilot projects.¹³ One of the selected projects was the Lakeside Pipeline, to be built by Maas Energy Works, LLC (“MEW”).¹⁴ On December 13, 2018, SoCalGas filed Advice Letter 5398 to establish the Dairy Biomethane Pilot Balancing Account (“DBPBA”) to record expenditures for biogas collection lines and facilities for treatment, monitoring, metering, and compression of biogas before it enters the collection lines (see Lane 2)¹⁵ and a Dairy Biomethane Pilot Memorandum Account (“DBPMA”) to record costs associated with compressors and pipeline laterals (see Lane 4), points of receipt (Lane 5), and

⁹ Rulemaking (“R.”) 17-06-015, Order Instituting Rulemaking to Implement Dairy Biomethane Pilot Projects to Demonstrate Interconnection to the Common Carrier Pipeline System (June 22, 2017).

¹⁰ D.17-12-004, Appendix A, p. 10.

¹¹ D.17-12-004, Appendix A, p. 10.

¹² D.17-12-004, Appendix A, pp. 10–11.

¹³ See *CPUC, CARB, and Department of Food and Agriculture Select Dairy Biomethane Projects to Demonstrate Connection to Gas Pipelines* (Issued December 3, 2018), available at <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M246/K748/246748640.PDF>.

¹⁴ MEW is one of the partners comprising Lakeside Pipeline LLC. The other partners are two dairy farm owners and operators.

¹⁵ D.17-12-004, p. 16; see also SCG/Lakeside-01, p. JL-3 (lines 1–3). Lanes are primary components for dairy biomethane pilot projects.

pipeline extensions (Lane 6).¹⁶ The Commission approved Advice Letter 5398 on February 14, 2019, with an effective date of January 14, 2019.¹⁷

On March 5, 2019, SoCalGas submitted Advice Letter 5432 seeking Commission approval of contracts entered into with biomethane producers pursuant to D.17-12-004. The executed contracts, including the contract with Lakeside, were approved by the Commission on April 30, 2019, with an effective date of as April 4, 2019.¹⁸

B. Procedural History of Application 25-08-009.

On August 15, 2025, SoCalGas and Lakeside filed an Application to Initiate Reasonableness Review and Recovery of Lakeside Maas Energy Works Dairy Biomethane Pilot Project Costs (“Application”).¹⁹ On September 26, 2025, Cal Advocates filed a Protest to the Application.²⁰ The Southern California Generation Coalition filed a Response to the Application

¹⁶ SoCalGas Advice Letter (AL) 5398-G, Establishment of Balancing and Memorandum Accounts for SB 1383 Pilot Program Pursuant to D.17-12-004, available at:

<https://tariffsprd.socalgas.com/scg/filings/content/?utilId=SCG&bookId=GAS&flngStatusCd=Approved>.

¹⁷ SoCalGas Advice Letter (AL) 5398-G, Establishment of Balancing and Memorandum Accounts for SB 1383 Pilot Program Pursuant to D.17-12-004, available at:

<https://tariffsprd.socalgas.com/scg/filings/content/?utilId=SCG&bookId=GAS&flngStatusCd=Approved>.

¹⁸ SoCalGas AL 543, Establishment of Contracts with the Selected Dairy Biomethane Pilot Projects, Pursuant to Decision (D.) 17-12-004, available at

<https://tariffsprd.socalgas.com/scg/filings/content/?utilId=SCG&bookId=GAS&flngStatusCd=Approved>.

¹⁹ Application of Southern California Gas Company (U 904 G) and Lakeside Pipeline LLC to Initiate Reasonableness Review and Recovery of Lakeside Maas Energy Works Dairy Biomethane Pilot Project Costs, A.25-08-009. (August 15, 2025).

²⁰ The Public Advocates Office’s Protest to the Application of Southern California Gas Company and Lakeside Pipeline LLC to Initiate Reasonableness Review and Recovery of Lakeside Maas Energy Works Dairy Biomethane Pilot Project Costs (September 26, 2025).

that same day.²¹ SoCalGas and Lakeside filed a Joint Reply to the Protests on October 6, 2025.²² Following a November 24, 2025 Prehearing Conference, Assigned Commissioner issued a Scoping Memo and Ruling on February 20, 2026, setting forth five issues to be considered in this proceeding:

1. Whether the application demonstrates the project management was reasonable;
2. Whether Lakeside demonstrated the reasonableness of its costs incurred above the bid amount;²³
3. Whether SoCalGas demonstrated the reasonableness of its costs incurred above the bid amount;
4. Whether SoCalGas's proposed recovery in rates is reasonable; and
5. Impacts on environmental and social justice communities, including the extent to which the application impacts the achievement of any of the nine goals of the Commission's Environmental and Social Justice Action Plan.²⁴

II. STANDARD OF REVIEW FOR RECOVERY OF PILOT PROJECT COST OVERRUNS

While Lakeside's actual Project costs exceeded the initial proposal budget by \$6,691,208, these costs were reasonable given necessary changes to the Project's scope, technology used, planned route, as well as inflationary increases in labor and materials costs that were not known at the time of the initial bid proposal. As demonstrated below, Lakeside should be authorized to

²¹ Southern California Generation Coalition Response to Application of Southern California Gas Company (U 904 G) and Lakeside Pipeline LLC to Initiate Reasonableness Review and Recovery of Lakeside Maas Energy Works Dairy Biomethane Pilot Project Costs (September 26, 2025).

²² Reply of Southern California Gas Company and Lakeside Pipeline LLC to Protests to the Application to Initiate Reasonableness Review and Recovery of Lakeside Maas Energy Works Dairy Biomethane Pilot Project Costs (October 6, 2025).

²³ With respect to this scoped issue, the Assigned Commissioner has determined that reviewing the management of the full project may be relevant to determining the reasonableness of the costs incurred above the bid amount. See Assigned Commissioner's Scoping Memo and Ruling, p. 3 (February 20, 2026).

²⁴ Assigned Commissioner's Scoping Memo and Ruling, p. 3 (February 20, 2026).

recover all of its costs above the initial proposal budget by virtue of having produced a preponderance of evidence to support the reasonableness of the design changes and increased costs, thereby satisfying the Commission's standard for reasonableness.

A. Dairy Biomethane Pilot Project Cost Overruns are Subject to the Commission's Reasonableness Standard.

In establishing the Dairy Biomethane Pilot Program, the Commission made clear that developers may recover costs in excess of the original budget amounts so long as those costs were reasonable. As stated by the Commission in D.17-12-004:

To ensure only reasonable and verified costs of pipeline infrastructure developed pursuant to the Dairy Pilots are collected from ratepayers, biomethane producer-owned pipeline infrastructure costs should be recorded in a balancing account and costs above the bid amount should be subject to reasonableness review.²⁵

Pursuant to the cost recovery framework set forth in D.17-12-004, SoCalGas and Lakeside jointly filed the present application. Whether it is appropriate for SoCalGas and Lakeside to recover additional costs above the bid amount depends upon whether the record evidence establishes that these costs were reasonable.

B. Lakeside Must Demonstrate, by Preponderance of Evidence, that Recovery of Project Cost Overruns are Just and Reasonable

The Commission's reasonableness standard is set forth in the Public Utilities Code. Public Utilities Code section 451 requires that "all changes . . . received by any public utility . . . shall be just and reasonable."²⁶ Furthermore, under Public Utilities Code section 454, public utilities may not charge any rate "except upon a showing before the [C]ommission and a finding by

²⁵ See D.17-12-004, Conclusion of Law 11, p. 22; see also D.17-12-004, Appendix A, p. 2 ("[e]xpenditures above the authorized amount are subject to reasonableness review.").

²⁶ Pub. Util. Code § 451.

the [C]ommission that the new rate is justified.”²⁷ In utility ratemaking proceedings, the Commission determines whether costs are reasonable through a reasonableness review. Through this review process, the Commission and stakeholders examine costs and the prudence management actions leading to those costs.²⁸ Reasonable costs are “prudently incurred by competent management exercising the best practices of the era, and using well-trained, well-informed and conscientious employees and contractors who are performing their jobs properly.”²⁹ Prudence “is not a ‘perfection’ standard: it is a standard of care that demonstrates all actions were well planned, properly supervised, and all necessary records are retained.”³⁰ Prudent actions includes a “spectrum of possible acts consistent with the utility system need, the interest of the ratepayers, and the requirements of governmental agencies of competent jurisdiction.” and are expected to “accomplish the designed result at the lowest possible reasonable cost consistent with good utility practices . . . based upon cost effectiveness, reliability, safety, and expedition.”³¹ Importantly, the actions of a prudent manager are evaluated based on circumstances known to the manager at the time, not how the decision holds up in light of future developments.³²

The Commission’s standard of proof necessary to establish the reasonableness of costs is the “preponderance of evidence,” which requires proponents such as Lakeside to establish by

²⁷ Pub. Util. Code § 454.

²⁸ D.16-12-063, p. 8.

²⁹ D.19-02-004, p. 7.

³⁰ D.14-06-007, p. 36.

³¹ D.02-08-064, p. 7, citing D.90-09-088 (1990 Cal. PUC Lexis 847, *23–25, 37 CPUC 2d 488, 499), based on language in D.87-06-021, and quoted with approval in D.98-09-040 (1998 Cal. PUC Lexis 972 *34-34). See also D.16-12-063, pp. 9–10, citing D.02-08-064 and D.87-06-021. See also D.02-08-064, p. 6, citing D.87-06-021 (1987 Cal. PUC Lexis 588, *28-29, 24 CPUC 2d 476).

³² D.02-08-064, p. 5; D.21-12-035, p. 16, citing D.02-08-064, pp. 5–7. See also D.19-02-004, citing D.16-12-063.

presenting a greater quantity of evidence that its Project cost overruns were just and reasonable, in comparison to the evidence submitted against cost recovery.³³ In general ratemaking proceedings it is the responsibility of the utility to file an application to establish by a preponderance of the evidence that the costs associated with its development projects are just and reasonable. Here, however, SoCalGas and Lakeside have filed a joint application. Because Lakeside is the Project developer responsible for designated portions of the project it is best positioned to explain why its request to recover \$6,691,208 above its initial bid proposal is just and reasonable. To that end, Lakeside has submitted prepared testimony and actively participated in this proceeding in support of its request to recover the cost overruns from its portion of the Project. Lakeside addresses each category of cost overruns in Section III and IV of this brief.

C. Contrary to Cal Advocates' Arguments, the Recovery of Project Cost Overruns Turns on Whether They Were Reasonably Incurred, Not Whether They Were Anticipated in the Initial Proposal to the Selection Committee.

Cal Advocates recommends that the Commission disallow \$2,702,145 from Lakeside's requested cost recovery for Project cost overruns because it alleges Lakeside "proposed a low-cost, ready-to-build project to the Selection Committee" but then "redesigned and changed several fundamental aspects of the Project" after its bid was selected, including by changing the biogas treatment technology, pipeline route, and pipe size.³⁴ Cal Advocates' mischaracterization of Lakeside's proposal as a set-in-stone budget and its attempt to limit Lakeside's cost recovery to the designs and costs submitted to the Selection Committee simply does not align with the Commission's established standard of review for cost overruns. The Commission's standard of review for Project costs clearly enables dairy biomethane pilot project developers to recover up

³³ D.19-05-020, p. 7; D.15-11-021, pp. 8–9, D.14-08-032, p. 17.

³⁴ CA-01, p. 3 (lines 16–22).

to the bid amount and, in addition, recover costs above the bid amount upon a showing that those costs are reasonable. Specifically, the Commission states that “biomethane producer-owned pipeline infrastructure costs should be recorded in a balancing account and *costs above the bid amount should be subject to reasonableness review.*”³⁵

Lakeside notes that Cal Advocates’ previous attempt to supplement the Commission’s reasonableness review of cost overruns with additional criteria was specifically rejected by the Commission in Application (“A.”) 23-04-005, a proceeding in which MEW sought to recover costs above the proposal amount for the Merced California Exchange Dairy Biomethane Pilot Project (“Merced Pilot”).³⁶ In A.23-04-00-005, Cal Advocates argued that the Commission’s reasonableness review should limit recovery of cost overruns to only “unforeseen” costs.³⁷ The Commission dismissed Cal Advocates arguments, clarifying in D.24-10-004 that its reasonableness review standard “does not impose the requirement that costs must have been unforeseen to be recoverable.”³⁸ For similar reasons, the Commission should reject the Cal Advocates’ attempt in this proceeding to limit cost recovery to the initial designs and budget contained in the proposal for the Project. D.17-02-004 makes clear that a dairy biomethane developer’s proposed recovery of costs above the initial bid amount is subject to a reasonableness review. The same standard of review should apply in this proceeding to costs above the initial bid amount that Lakeside incurred in developing the Project.

³⁵ D.17-12-004, Conclusion of Law 11, p. 22.

³⁶ A.23-04-005: Application of Pacific Gas and Electric Company to Initiate Reasonableness Review of Merced Dairy Biomethane Pilot Project Cost (April 5, 2023).

³⁷ A.23-04-005: Opening Brief of the Public Advocates Office, p. 2 (January 12, 2024).

³⁸ D.24-10-004, Conclusion of Law 6, p. 48.

III. THE LAKESIDE PIPELINE PILOT PROJECT IS SUCCESSFUL AND THE COMMISSION SHOULD ALLOW RECOVERY OF INCREASED COSTS THAT WERE REASONABLY INCURRED.

A. Lakeside's Project Accomplished the Goals of the Legislature, the Selection Committee, and the Commission.

Lakeside overcame multiple obstacles including, but not limited to, increased labor and materials costs due to inflation caused by the global COVID-19 pandemic, challenges associated with the creation of California's emerging dairy biomethane industry, the need to design and develop entirely new biomethane systems and project components, and utilizing first-of-its-kind arrangements for the transportation of biomethane.³⁹ Each of these factors could have delayed the Project or jeopardized its feasibility. Despite these obstacles, Lakeside was able to construct and implement its Project. While the additional expenses to overcome obstacles were significant, the Project is nonetheless a success. In accordance with SB 1383, Lakeside has demonstrated successful interconnection of a biogas gathering system to the common carrier pipeline system.⁴⁰ Furthermore, it has far exceeded the initial forecasts of gas production and carbon reductions. The initial Project bid proposal estimated a cluster total gas production of 533,688 MMBTU/year from nine participating digesters with ten participating dairies.⁴¹ Excluding the Clear Lake digester, which was postponed by its owner, the estimated cluster gas production was 497,004 MMBTU/year.⁴² The costs relating to the Clear Lake digester are not included within this Application for reimbursement.⁴³ Based on 12 months of available historical gas production data

³⁹ SCG/Lakeside-02, p. DM-A-9 (lines 6–13).

⁴⁰ Health & Saf. Code § 39730.7 (d)(2).

⁴¹ SCG/Lakeside-02, p. DM-A-9, fn. 8.

⁴² SCG/Lakeside-02, pp. DM-A-9, fn. 8, DM-A-32, fn. 41.

⁴³ SCG/Lakeside-02, p. DM-A-32, fn. 41.

as of November 14, 2024, Lakeside has seen a cluster total gas production total of 585,412 MMBTU/year from eight participating digesters with nine participating dairies.⁴⁴

B. Lakeside's Incurred Costs Above its Bid Proposal Were Reasonable and Should be Recoverable.

Lakeside's cost estimates contained in its bid proposal submitted to the Selection Committee were the most accurate it could provide at the time. However, despite Lakeside's best efforts, the actual Project costs were higher due to a number of factors. These factors included the lack of existing operational dairy biogas pipeline projects that could provide firm cost estimates, the extremely limited period of time in which to prepare a project design and budget for submission (just 110 days after the Selection Committee issued its final solicitation); the inability to develop final engineering designs and secure a right of way over the collection pipeline route until well after the initial proposal was submitted, and significant increases in labor and material costs that occurred as a result of inflation during the global COVID-19 pandemic. Lakeside discusses each factor below.

1. No Similarly Operational Dairy Biogas Pipeline Injection Projects Existed in California at the Time Lakeside Submitted its Bid Proposal.

At the time Lakeside submitted its Project bid proposal to the Selection Committee in June 2018, there were no operational dairy biogas pipeline injection projects in California.⁴⁵ The only similar project nearby was the Calgren Dairy Fuels Project, a MEW-developed dairy biomethane pilot project that was the first of its kind developed in California.⁴⁶ However, even the Calgren Dairy Fuels Project was fundamentally different than the instant Project. Unlike the

⁴⁴ SCG/Lakeside-02, pp. DM-A-9, fn. 8, DM-A-32, fn. 41.

⁴⁵ SCG/Lakeside-02, p. DM-A-9 (lines 6–11).

⁴⁶ SCG/Lakeside-02, pp. DM-A-8 (lines 9–22), DM-A-9 (lines 12–17).

Project, the Calgren Dairy Fuels Project did not involve utility-ratepayer funding or prevailing wage requirements, it used different technology for Hydrogen Sulfide (H₂S) removal, and was subject to different oversight requirements.⁴⁷ Lakeside relied on relevant information from the Calgren Dairy Fuels Project as best it could in developing its original \$9,327,295 cost estimate for the Project, while also collaborating with other developers, contractors, and pipeline operators, and obtaining quotes and information provided by industry specialists.⁴⁸ Because no similar dairy biogas gathering pipeline existed in California, neither Lakeside nor its consultants had the benefit of recorded cost data from operating projects to help prepare their budget estimates for the Project.⁴⁹

2. Lakeside Was Unable to Prepare Final Engineering Project Details Due to the Compressed 110-Day Window to Prepare and Submit a Bid Proposal.

In D.17-12-004, the Commission created the dairy biomethane pilot project Selection Committee and described the process for the Selection Committee to issue a final solicitation for dairy pilots.⁵⁰ The Selection Committee issued its final solicitation for dairy biogas pipeline injection pilot projects on March 7, 2018, and required that all proposals were to be submitted within 110 days.⁵¹

Lakeside maintains that the Commission's reasonableness review of cost overruns should factor in the complexities of creating a comprehensive pilot project proposal within an extremely compressed 110-day window. This narrow window for bid preparation made it impossible to

⁴⁷ SCG/Lakeside-02, p. DM-A-5 (lines 5–10).

⁴⁸ SCG/Lakeside-02, p. DM-A-9 (lines 1–11).

⁴⁹ SCG/Lakeside-02, p. DM-A-9 (lines 8–11).

⁵⁰ SCG/Lakeside-02, p. DM-A-3 (lines 10–15).

⁵¹ SCG/Lakeside-02, p. DM-A-3 (line 15–17).

finalize and acquire easements for the entirety of the Project's route or develop final engineering of all the Project components. Despite Lakeside's best efforts, the limited window of time to prepare cost estimates for the Project bid proposal meant that certain costs which depended on final route alignments, precise design details, and land right negotiations would be subject to uncertainty, and would likely be modified as more complete and accurate information was developed as the Project proceeded.

As discussed above, Lakeside prepared its best estimate within the 110-day window based on industry specialist support, collaborative work with others in the industry, and its prior experience developing the Calgren Dairy Fuels Project. Yet the only truly firm facts informing Lakeside's cost estimation for the Project at the time of the proposal to the Selection Committee were the physical location of the pipeline, digesters, and the gas processing facility.⁵² At the time Lakeside was required to submit its proposal, it was still engaged in the long process of negotiations with landowners and local government agencies to determine the physical location of the pipeline route and the precise permit requirements Kings County would impose. Accordingly, Lakeside prepared its cost estimates utilizing the most feasible pipeline routes it was able to determine within the 110-day period, and relying on its prior experience, industry specialist support, collaborative efforts, and knowledge of the status of third-party negotiations for the pipeline right of way. The unique challenges imposed by the Selection Committee's limited 110-day window for bid preparation makes it clear that it was entirely reasonable for Lakeside to modify both its engineering designs and the alignment of the final route of the collection pipeline as a result of further engineering and development work as the Project proceeded.

⁵² SCG/Lakeside 02, p. DM-A-11 (line 13–17).

IV. LAKESIDE HAS DEMONSTRATED THE REASONABLENESS OF THE INCREASED COSTS OF THE PILOT PROJECT

Through its Application materials, data request responses, and prepared testimony, Lakeside has provided extensive documentation of the actual Project costs as impacted by inflation. For each design change between Lakeside’s bid proposal and its actual Project, Lakeside explains why it made the decision to change the design and the factors that influenced the decision-making process. In every instance, Lakeside has explained how these changes contributed to the success of the Project, and resulted in a more reliable system, with reduced maintenance costs, while reducing the likelihood of future system failures. In the subsections below, Lakeside addresses Cal Advocates’ recommended disallowance of cost overages incurred by Lakeside in three broad categories: (1) the howitzers⁵³ installed at each dairy for biogas processing to remove Hydrogen Sulfide (“H₂S”);⁵⁴ (2) the oxygen (“O₂”) injection equipment⁵⁵ and biogas blower systems installed at each digester;⁵⁶ and (3) the collection lines⁵⁷ used to transport dairy biogas to treatment facilities.⁵⁸ In total, Cal Advocates recommends that the Commission disallow \$2,702,145 of Lakeside Project cost overruns.

⁵³ A “howitzer” is a colloquial term in the biogas industry for one of a series of stainless-steel tubes filled with carbon media which are linked in series to filter hydrogen sulfide (H₂S) out of the renewable natural gas stream. See SCG/Lakeside-02, p. DM-A-17, fn. 23.

⁵⁴ Hydrogen Sulfide or H₂S is a highly toxic and flammable gas that can cause respiratory issues and other health effects even at small concentrations. See SCG/Lakeside-02, p. DM-A-19 (lines 9–11), fn. 27.

⁵⁵ “O₂ injection equipment” is used to inject purified oxygen under the digester cover to assist with chemical H₂S reduction upstream of the howitzer media. See SCG/Lakeside-02, p. DM-A-26 (lines 4–8).

⁵⁶ A “biogas blower system” is a low-pressure compressor to remove moisture from the biogas at the dairy, and then transport the biogas down to the collection pipelines to the centralized biogas cleanup facility. See SCG/Lakeside-02, p. DM-A-25 (lines 11–14).

⁵⁷ “Collection lines” refers to the approximately 23.4-mile gathering pipeline network that connect the eight participating dairies to the central treatment system. See SCG/Lakeside-06, p. DM-A-36 (lines 7–9).

⁵⁸ SCG/Lakeside-06, p. 2 (lines 8–33).

A. H2S Reduction – Howitzers

Cal Advocates recommends that the Commission should disallow a total of \$400,834 in cost overruns for biogas processing related to the construction and installation of howitzers from Lakeside's cost recovery request.⁵⁹ The total disallowance request is split between two categories: (1) \$256,819 in costs related to design changes to the howitzers; and (2) \$144,015 for increased costs due to inflation in materials and labor costs.⁶⁰ The Commission should reject Cal Advocates' recommendations. Pursuant to D.17-12-004, Lakeside may recover cost overruns if they were reasonable. Lakeside's testimony and exhibits demonstrate, by a preponderance of the evidence, that the howitzer design changes and associated costs to complete their installation at each dairy were reasonable.

1. Lakeside's Howitzer Design Changes and Associated Costs Were Reasonable, Necessary to Accomplish the Selection Committee's Stated Pilot Project Goals, and Align with Best Practices Learned From Other Biomethane Developers.

Cal Advocates attempts to justify its recommendation to disallow \$256,819 in costs overruns related to design changes Lakeside implemented for the howitzers by asserting that Lakeside has "not explained why the howitzer design proposed in its 2018 application was unable to ensure H2S removal."⁶¹ However, Cal Advocates fails to provide specific evidence to support its recommendation and relies instead upon fundamental mischaracterizations of Lakeside's bid proposal, Application, and prepared testimony.

Cal Advocates' testimony ignores relevant background that led to Lakeside's howitzer design changes. In creating its final solicitation, the Selection Committee specifically required

⁵⁹ SCG/Lakeside-06, p. 2 (lines 16–20).

⁶⁰ SCG/Lakeside-06, p. 2 (lines 16–20).

⁶¹ CA-01, p. 2-6 (lines 6–7).

that dairy biomethane pilot projects scrub H₂S at each dairy prior to entering the biogas collection lines for transport to the centralized treatment facility.⁶² This requirement was a departure from industry standard practices in 2018. Typically, for a dairy digester pipeline cluster, raw biogas would be sent to a centralized cleanup facility for clean-up using a caustic scrubber or other technology common to natural gas wells or other industrial scale facilities.⁶³ Even the Calgren Dairy Fuels Project, the sole example of a large dairy digester cluster in the state or nation at the time of Lakeside's bid proposal, was designed to remove the H₂S from the biogas in the gathering pipeline system at a central cleanup facility.⁶⁴ Lakeside sought third-party quotes from industry-leading suppliers for a design where howitzers would be situated at each dairy to remove H₂S in its initial bid proposal. Lakeside selected Energy Innovations, a specialty biogas equipment design and fabrication company with whom Lakeside had frequently worked with over 10 years on many biogas equipment projects to design custom biogas handling equipment packages.⁶⁵ Based on their breadth of experience, Energy Innovations was well positioned to aid Lakeside in creating Project cost estimates. Energy Innovations developed a prototype H₂S removal design that would make use of High Density Polyethylene ("HDPE") plastic.⁶⁶ Lakeside relied on Energy Innovations' prototype and cost estimate for each dairy's H₂S scrubber in developing its quote.⁶⁷

⁶² SCG/Lakeside-02, p. DM-A-19 (lines 9–11).

⁶³ SCG/Lakeside-02, p. DM-A-19 (lines 11–12).

⁶⁴ SCG/Lakeside-02, p. DM-A-19 (lines 13–18).

⁶⁵ SCG/Lakeside-02, p. DM-A-20 (lines 5–7, 15–17).

⁶⁶ SCG/Lakeside-02, p. DM-A-20 (lines 20–21); SCG/Lakeside-06, p. 6 (lines 4–12).

⁶⁷ SCG/Lakeside-02, p. DM-A-21 (lines 1–2).

Lakeside’s initial cost estimates for each dairy’s H₂S scrubber were the most accurate estimates it could provide to the Selection Committee at the time of the bid proposal. However, in the approximately three-year window between Lakeside’s 2018 bid proposal and 2021, other biomethane developers began constructing and operating facilities. These developers had learned that howitzers constructed of HPDE material were “not able to handle intense pressure changes which may occur with hard shutdowns.”⁶⁸ Based on the learned experience of other developers, Lakeside decided to fabricate howitzers of stainless steel instead of HPDE materials. Importantly, changing the howitzer design to stainless steel would benefit the Project by improving safety and performance of H₂S removal by reducing the risk of degradation of the HDPE materials that would result in failure or leakage of H₂S to open air.⁶⁹ Lakeside’s more durable howitzer design also helps to guard against the cost of repairing damaged howitzers and loss of production stemming from equipment failure.⁷⁰

In addition to utilizing stainless steel materials for the dairy howitzers, Lakeside made additional design changes such as adjusting the size and quantity of the howitzer tubes, changing inlet and outlet valve configurations, adding a gangway with safety gates to facilitate safe operator access, and making additional changes to support the stainless steel howitzer cannisters.⁷¹ Each of these design changes has been supported by substantial documentation for each of the dairies.⁷² Importantly, Cal Advocates does not directly address any of these

⁶⁸ SCG/Lakeside-06, p. 6 (lines 4–9) (citing SCG/Lakeside, p. DM-A-21 (lines 13–15)).

⁶⁹ SCG/Lakeside-06, p. 6 (lines 9–12).

⁷⁰ SCG/Lakeside-06, p. 6 (lines 9–12).

⁷¹ SCG/Lakeside-06, pp. 6 (lines 14–17).

⁷² Lakeside-02, Appendix A, Supporting Materials, Energy Innovation– Biogas Processing Cost Increase Justifications, pp. 1151, 1163, 1175, 1187, 1199, 1211, 1223.

additional howitzer design changes in its testimony.⁷³ Lakeside’s evidence in support of these additional changes to the howitzer systems is uncontested. Accordingly, the Commission should conclude that Lakeside has provided sufficient evidence to warrant a finding of reasonableness for these cost overruns.

At no point in its prepared testimony does Cal Advocates offer any evidence to suggest that the change to stainless steel for the construction of the howitzers is unreasonable. Nor does Cal Advocates dispute that stainless steel would provide greater reliability and safety benefits than HPDE.⁷⁴ Instead, Cal Advocates makes two broad assertions: (1) Lakeside made its howitzer design changes to comply with the Selection Committee’s original H2S removal requirements; and (2) Lakeside misled the Selection Committee regarding its proposed howitzer design. Neither assertion is correct. The howitzer design changes were not, as Cal Advocates suggests, “meant to satisfy the pilot project solicitation requirements to remove hydrogen sulfide (H2S) from the biogas before transporting the biogas.”⁷⁵ Lakeside fully understood the Selection Committee’s requirement to move H2S from biogas before it was transported from the dairy, and its initial howitzer design developed in partnership with Energy Innovations was specifically designed to meet that requirement.⁷⁶ The howitzer design changes, including the switch to stainless steel, were based on the learned experience from other biomethane developers constructing projects that did not exist at the time of Lakeside’s bid proposal in 2018, as well as to improve the long-term safety, performance, and operational efficiency of the Project.⁷⁷

⁷³ SCG/Lakeside-06, p. 8 (lines 23–30).

⁷⁴ SCG/Lakeside-06, p. 8 (lines 23–30).

⁷⁵ CA-01, p. 2-3 (lines 16–19).

⁷⁶ SCG/Lakeside-06, p. 5 (lines 15–30).

⁷⁷ SCG/Lakeside-02, pp. DM-A-21 (line 5)–DM-A-22 (line 12).

Elsewhere in its prepared testimony, Cal Advocates suggests that Lakeside misled the Selection Committee through its bid proposal by stating it would make use highly-commercialized technology to meet H₂S requirements, and by “[making] changes to its howitzer design for reasons that are inconsistent with its 2018 application statements” after the Project was selected.⁷⁸ Citing Lakeside Appendix A, Cal Advocates claims that Lakeside “represented to the Selection Committee [in its bid proposal] that it could meet the H₂S requirements using ‘highly commercialized’ technology with ‘thousands of installations worldwide’ due to their ‘high reliability.’”⁷⁹ Cal Advocates has misrepresented the contents of Lakeside’s bid proposal statements. A thorough reading of page 22 of Appendix A makes clear that the text quoted by Cal Advocates is describing well-established technology for removing additional H₂S at the Biogas Conditioning and Upgrading Facility, a central processing facility which uses much larger processing vessels that *were* in wide use. This well-established, widely-used technology is wholly separate from the small howitzers at each individual dairy that were required for this Project, and these dairy-located processors had not been highly commercialized previously. Cal Advocates cannot prevail with such an apples to oranges misinterpretation of Lakeside’s proposal.

As explained above, each howitzer design change was a reasonable choice to improve the Project design based on the experience gained from other biomethane developers operating similar howitzers after Lakeside submitted its 2018 bid proposal. Lakeside’s howitzer design changes were neither “inconsistent” with the 2018 bid proposal, nor did they represent an entirely different Project intended to mislead the Selection Committee. For these reasons, the

⁷⁸ CA-01, p. 3-6 (lines 6–7).

⁷⁹ CA-01, p. 2-4 (lines 14–17).

Commission should reject Cal Advocates' recommended disallowances for cost overruns stemming from howitzer design changes. Lakeside has provided logical explanations for each design change and thereby establishes a preponderance of evidence supporting recovery of the cost overruns associated with the howitzer design changes as reasonable.

2. Cost Overruns were Due in Part to Inflation in Materials and Labor Costs.

Lakeside has provided extensive and credible evidence that inflation in materials and labor costs for the howitzers contributed to cost overruns of \$144,015. As such, the Commission should explicitly find that these costs are reasonable and subject to recovery. In doing so, it should reject Cal Advocates assertions for why the Commission should disallow Lakeside's recovery of howitzer-related cost overruns.

(a) Lakeside's Invoices from Ramirez Service and Repair and Supplemental Materials Demonstrate the Actual Cost of Fabricating Howitzers.

In support of its recommendation, Cal Advocates asserts that Lakeside's invoices from Ramirez Service and Repair ("Ramirez") are insufficient to show that cost overruns were reasonable because they do not differentiate between equipment and labor costs, and that Lakeside has not shown that either materials or labor increased costs beyond the ten percent contingency covered by the Project.⁸⁰ Neither argument provide grounds to disallow Lakeside's cost recovery of howitzer-related Project cost overruns. Lakeside has provided invoices to Cal Advocates that capture the actual scope of work and associated cost of fabricating and installing the howitzers, including for Ramirez's services.⁸¹ There was no requirement from either the

⁸⁰ CA-01, p. 2-7 (lines 3–6).

⁸¹ SCG/Lakeside-06, p. 14 (lines 11–16, 18–19). Ramirez is the contractor responsible for fabricating the howitzers designed by Energy Innovations.

Selection Committee nor the Commission that subcontractors must bill for materials and labor separately.⁸² Nevertheless, Lakeside contacted Ramirez to request revised invoices that separately break out labor and materials costs, and these invoices are provided in pages 101 to 102 of Appendix A to Exhibit SCG/Lakeside-06.⁸³ These revised invoices separately show the cost of the stainless steel and other materials used for the howitzers and the labor involved in fabricating the units installed at each dairy. The Ramirez invoices do not include the total cost of the howitzer systems.⁸⁴ The costs not included in the Ramirez invoices relate to licensing fees paid to Energy Innovations' for their work in designing and engineering the howitzers, and additional work by Maas Motor Works⁸⁵ to integrate the howitzers into the greater biogas processing system, conducting operational testing, and management of the contractors working on the howitzer portion of the project, including Ramirez.⁸⁶

(b) Inflation of Materials and Labor Project Costs Contributed to Cost Overruns for the Howitzers.

Cal Advocates makes an additional argument that Energy Innovations and Lakeside have not demonstrated how COVID-19 inflation impacts increased materials and labor costs beyond the ten percent contingency allocated for the Project.⁸⁷ As a threshold issue, Lakeside did not add a ten percent contingency factor to the estimated costs in its bid proposal budget submitted to the Selection Committee.⁸⁸ Cal Advocates' argument is based on a false premise and should be

⁸² SCG/Lakeside-06, p. 14 (lines 7–9).

⁸³ SCG/Lakeside-06, p. 14 (lines 18–27) (citing Appendix A, Document 1.12, pp. 101–102).

⁸⁴ SCG/Lakeside-06, p. 14 (lines 18–27).

⁸⁵ Maas Motor Works is a subsidiary of Maas Energy Works, LLC who was responsible for managing the contracts to construct the howitzer units.

⁸⁶ SCG/Lakeside-06, p. 14 (lines 27–31).

⁸⁷ CA-01, p. 2-7 (lines 3–6).

⁸⁸ SCG/Lakeside-06, p. 16 (line 39)–17 (line 5).

rejected. The full extent of any Project cost overruns should be recoverable by Lakeside if they are found to be reasonable, in line with D.17-12-004. Notably, Cal Advocates offered no inflation index evidence of its own to support its recommendation that no inflation cost increases of any kind would be reasonable. Cal Advocates provided absolutely no justification to support a conclusion that the impact of inflation was zero percent during the construction of the Project. On the other hand, Lakeside provided both a detailed analysis of inflation impacts by an experienced supplier of specialty gas processing equipment and evidence of substantial increases in various relevant inflation indicators.

Although Energy Innovations did not actually build the howitzers due to an inability to dedicate sufficient production capacity when Project construction finally commenced, Lakeside believed it was prudent to have Energy Innovations analyze the impacts of inflation on howitzer design costs given their experience as one of the preeminent designers and manufacturers of custom biogas processing equipment.⁸⁹

In its analysis, Energy Innovations compared price and wage estimates for production inputs in 2018, when it originally bid for the howitzer fabrication, with the revised prices for the same products in 2021, when the howitzers were actually constructed.⁹⁰ Energy Innovations' analysis methodology was simple and straightforward—it started with the actual material price and wage inputs that Energy Innovations used to submit the initial bid for each dairy's system that was incorporated within Lakeside's bid proposal to the Selection Committee.⁹¹ Electric Innovations then isolated any design changes and associated cost impacts from total costs to

⁸⁹ SCG/Lakeside-06, pp. 14 (line 36)–15 (line 3); see also SCG/Lakeside, Appendix A, Supporting Materials 1.10 – Energy Innovations – Biogas Processing Cost Increase Justifications, pp. 1146–1243.

⁹⁰ SCG-Lakeside-02, p. DM-A-23 (lines 9–10).

⁹¹ SCG/Lakeside-06, p. 15 (lines 5–8).

calculate the remaining cost increases due to inflation of materials and labor. Finally Electric Innovations used historical cost data for the actual increase in material and wage expenses between 2018 and 2021 to prepare a measure of the specific inflation in the cost to produce the same systems.⁹² Electric Innovations concluded that the total inflation impacts across all dairies where howitzers were installed was \$144,015.⁹³

The inflation-related howitzer cost impacts identified by Energy Innovations are also supported by the evidence of broader global and state-specific inflation trends for construction-related costs that Lakeside submitted throughout this proceeding.⁹⁴ As Cal Advocates acknowledges, Lakeside first submitted its bid proposal in 2018, and the Project was constructed between the second quarter of 2020 and 2022.⁹⁵ Between mid-2018 to September 2022 when the Project was completed, the U.S. Consumer Price Index rose from 250 to approximately 300, a 20 percent increase.⁹⁶ In addition, the Producer Price Index for Goods used in non-residential construction rose a full 30% from May 2020 to May 2022, which is precisely when Lakeside was heavily engaged in multiple construction efforts related to the Project.⁹⁷

Pertinent to the inflation-related impacts for steel used for the howitzers, the Producer Price Index for Steel Mill Products indicates that steel prices saw a nearly 160 percent increase for steel products between early 2020 and the first half of 2022.⁹⁸ State-specific construction inflation measurements also document substantial inflation. The California Construction Cost

⁹² SCG-02, pp. DM-A-23 (line 13)–DM-A-25 (line 9); SCG/Lakeside-06, pp. 14 (line 33)–15 (line 21).

⁹³ SCG/Lakeside-06, p. 15 (lines 23–26).

⁹⁴ SCG/Lakeside-02, p. DM-A-15 (lines 2–5), fn. 21.

⁹⁵ SCG/Lakeside-06, p. 3 (lines 3–21).

⁹⁶ SCG/Lakeside-06, pp. 10 (line 24)–11 (line 7).

⁹⁷ SCG/Lakeside-06, pp. 11 (line 8) – 12 (line 2).

⁹⁸ SCG/Lakeside-06, p. 4 (lines 4–12).

Index (CCCI) uses a Building Cost Index (BCI) average for the San Francisco and Los Angeles markets, as produced by the Engineering News Record, to reflect changes in the cost of a fixed combination of construction labor and materials.⁹⁹ The CCCI jumped 13.4 percent between 2020 and 2021, and an additional 9.3 percent between 2021 and 2022.¹⁰⁰

Electric Innovations’ analysis was comprehensive, rational, and made use of extensive empirical evidence of inflation. In addition, that analysis is supported by multiple inflation indexes that show a substantial increase in relevant costs during the period that the Project was constructed. For these reasons, the Commission should reject Cal Advocates’ recommendation to disallow any of Lakeside’s inflation-related howitzer cost increases.

B. O2 Injection and Biogas Processing and Blowers

Cal Advocates recommends that the Commission disallow a total of \$1,664,067 in cost overruns for biogas processing related to the construction and installation of Oxygen (“O2”) injection equipment¹⁰¹ and biogas blower systems¹⁰² from Lakeside’s cost recovery request.¹⁰³ The total disallowance request is split between two categories: (1) \$1,182,709 in costs related to design changes to the O2 injection equipment and biogas blowers; and (2) \$481,358 for increased costs of materials and labor due to inflation.¹⁰⁴ Cal Advocates’ reasoning does not pass muster, nor do their assertions accurately reflect the reasons why Lakeside incurred cost overruns for O2 injection and blower systems. As described further below, Lakeside has shown, by

⁹⁹ SCG/Lakeside-06, p. 13 (lines 1–5).

¹⁰⁰ SCG/Lakeside-06, p. 13 (lines 1–16).

¹⁰¹ SCG/Lakeside-02, p. DM-A-26 (line 6–8).

¹⁰² SCG/Lakeside-02, p. DM-A-25 (line 10–14).

¹⁰³ SCG/Lakeside-06, p. 2 (lines 22–26).

¹⁰⁴ SCG/Lakeside-06, p. 2 (lines 22–26).

preponderance of the evidence, that O2 injection and blower systems cost overruns due to rational design changes and inflation were reasonable and should be recoverable in this proceeding.

1. **The Design Changes to the O2 Injection and Blower Systems Were Necessary to Successfully Implement the Project and the Increased Costs that Lakeside Seeks to Recover Are Reasonable.**

Cal Advocates does not address Lakeside's contentions that O2 injection and biogas blower system design changes were reasonable in light operational experiences learned after Lakeside submitted its bid proposal and that the changes provided significant operational and safety benefits to the Project. Instead, Cal Advocates cherry-picks four quotations from Lakeside's bid proposal to the Selection Committee to assert that the design changes to the O2 injection and biogas blower systems were somehow inconsistent with the bid proposal, and therefore the associated cost overruns should be disallowed from Lakeside's cost recovery request. The Commission should reject Cal Advocates' assertions. The measure of whether Lakeside should be able to recover cost overruns is whether they were reasonable in light of information available at the time the design change was made. The record demonstrates, by a preponderance of the evidence, that the design changes and associated costs were reasonable. Lakeside incorporated lessons learned on the Calgren Dairy Fuels Project to make specific design improvements that would improve long-term success of the Project to meet pilot program goals. Lakeside addresses each of the four identified design changes challenged by Cal Advocates in the subsections below.

(a) **Cal Advocates' Vague References to "Ambient Conditions" Do Not Invalidate Lakeside's Design Changes to Improve Project Efficacy, Safety, and Long-Term Cost Reductions.**

Cal Advocates asserts that Lakeside "should have been aware of the ambient conditions at the Project site" before making design changes to the O2 injection and blower systems

because Lakeside was both the developer and had stated in its bid proposal to the Selection Committee that successful digesters in California utilize “covered lagoon digester technology” because they are ideal given the state’s high ambient temperatures.¹⁰⁵ Cal Advocates’ assertions miss the mark. Lakeside was well aware of ambient conditions at the site and the historical range of temperatures in the area at the time of the bid proposal—Lakeside included a discussion of specific climate information for the Project area within the materials submitted to the Selection Committee.¹⁰⁶ Further, Cal Advocates conflates Lakeside’s statements about the impacts a hot climate may have on a particular component of the biogas blower systems, the digester for biogas production, with the impacts of a hot climate on other components of the same system.¹⁰⁷ While a hot climate is well-suited to help maintain the optimal temperature inside the digester, it can make it more difficult to maintain the optimal lower temperatures for gas processing equipment.¹⁰⁸

Climate statistics alone, however, do not invalidate the fact that actual operational experience implementing technologies may justify design changes, especially when those changes further the purpose of the Project by improving the efficiency of biogas blower systems. Lakeside based its budget for dairy-specific O₂ injection equipment and biogas blower systems on estimates provided by Energy Innovations.¹⁰⁹ While those estimates were the most reliable, industry-standard cost estimates Lakeside could provide at the time during the 110-days

¹⁰⁵ CA-01, pp. 2-10 (line 18)–2-11 (line 7) (citing Lakeside-02 Appendix A, Vol. 1, p. 18).

¹⁰⁶ SCG/Lakeside-06, p. 17 (lines 34–35); Lakeside-02, Appendix A, Vol. 1, pp. 28–29.

¹⁰⁷ CA-01, p. 2-11 (lines 3–7); see also Lakeside-02, Appendix A, Vol. 1, p. 18.

¹⁰⁸ SCG/Lakeside-06, pp. 17 (line 37)–18 (line 2).

¹⁰⁹ SCG/Lakeside-02, p. DM-A-27 (lines 4–11); see also Lakeside-02, Appendix A, Vol. 8, pp. 1129–1145.

available to assemble the bid proposal, operating experience from similar projects learned after the Selection Committee selected the Project necessitated certain design changes.¹¹⁰

Based on Lakeside’s experience implementing the Calgren Dairy Fuels Product, Lakeside made certain engineering design changes to increase operational efficiency, expand project longevity, advance safety, and decrease the Project’s lifetime costs.¹¹¹ Specifically, Lakeside learned that factors such as dust, direct sunlight, and other field conditions would stress the biogas gathering system such that it may result in dangerous heat levels, excessive oil usage, and decreased reliability and operating life span for the equipment.¹¹² As explained in Lakeside’s direct testimony, Lakeside found it was beneficial to increase the biogas system’s capacity to handle 125 percent of the flow needed at the digester, notwithstanding the increased upfront costs.¹¹³ This extra capacity reduced the stress on the entire system, thereby reducing the risk of failures that would require costly repairs and reduce production.

(b) Design Changes to Implement Improved Remote Management Systems were Prudent and the Associated Costs Should be Recoverable.

With regard to the Project’s remote monitoring system, Cal Advocates asserts that Lakeside “presented its chosen technologies as common, reliable, and low-cost,” but made changes to that system after the Selection Committee’s selection of the Project. Cal Advocates then points to statements in Lakeside’s bid proposal that the Project “will also install comprehensive remote monitoring hardware and software to give 24x7 access to all major system components” and “[e]ach building will be equipped with a gas monitoring system that

¹¹⁰ SCG/Lakeside-02, p. DM-A-27 (lines 11–14).

¹¹¹ SCG/Lakeside-02, p. DM-A-27 (lines 14–19).

¹¹² SCG/Lakeside-02, p. DM-A-27 (lines 17–22); SCG/Lakeside-06, p. 18 (lines 4–6).

¹¹³ SCG/Lakeside-02, p. DM-A-29 (lines 9–20).

present a visible alarm if biogas is present.”¹¹⁴ Cal Advocates mischaracterizes both Lakeside’s bid proposal, and Lakeside’s documented reasons for making changes to the remote monitoring system. While Lakeside’s bid proposal did propose to use supervisory control and data acquisition (“SCADA”) controls, it was never described as a proven technology for the particular Project’s application as Cal Advocates suggests.¹¹⁵ SCADA systems had never been tested for use in context of a dairy biomethane pipeline before Lakeside submitted its bid proposal, as neither Lakeside nor anyone else in California was operating a dairy digester pipeline cluster.¹¹⁶ Only after Lakeside submitted its bid proposal could Lakeside leverage lessons learned from its operation of the Calgren Dairy Fuels Project, the first-of-its kind dairy biomethane pilot project developed in California. Lakeside discovered that it would be necessary to upgrade SCADA controls to coordinate flows from multiple dairies all feeding into the same biogas pipeline.¹¹⁷ Without upgraded controls there would be operational difficulties that are particularly exacerbated by the size and complexity of the Project.¹¹⁸ The upgraded SCADA controls and gas monitoring detection system additions provide numerous benefits, including, but not limited to, increased Project safety, and an improved ability to collect data needed to inform operations and monitor gas quality.¹¹⁹ Energy Innovations has provided a detailed explanation of the justification for the monitoring system enhancements and the detailed scope of the system modifications within its workpapers in the Appendix.¹²⁰

¹¹⁴ CA-01, p. 2-11 (lines 17–25) (citing Lakeside-02, Appendix A, Vol. 1, pp. 71, 80).

¹¹⁵ Lakeside-02, Appendix A, Vol. 1, pp. 71, 80.

¹¹⁶ SCG/Lakeside-02, pp. DM-A-31 (line 21)–DM-A-32 (line 3).

¹¹⁷ SCG/Lakeside-02, p. DM-A-32 (lines 3–9); SCG/Lakeside-06, pp. 18 (lines 27–30).

¹¹⁸ SCG/Lakeside-06, pp. 18 (lines 27–30).

¹¹⁹ SCG/Lakeside-06, p. 19 (lines 14–24).

¹²⁰ Lakeside-02, Appendix A, Vol. 8, p. 1244.

(c) Lakeside Replaced High Density Polyethylene Biogas System Components with Stainless Steel In Order to Improve Project Performance and Safety, and the Associated Costs Should be Recoverable.

Cal Advocates suggests that Lakeside misled the Selection Committee by stating that, “[Covered Lagoon] systems are remarkably simple to operate and very cheap to maintain. For example the HPDE plastic can be patched and welded easily.”¹²¹ Like its other assertions, Cal Advocates misapplies Lakeside’s statements with respect to one Project component’s materials (e.g., HPDE used for digester lagoon covers) and attempts to extend them to other components. Lakeside’s statement was specific to HPDE to be used in the digester lagoon covers, and did not refer the use of HPDE in biogas processing vessels such as howitzer cannisters.¹²² As Lakeside learned from other biogas gathering systems in operation after it submitted its bid proposal, HPDE was ideal for use “in ambient pressure applications such as lagoon covers” but HPDE “presented a risk of degradation and eventual leaks” in “higher pressure gas handling equipment, containers, or frequently-serviced equipment.”¹²³ To that end, Lakeside made the operational decision to keep HDPE for some components but substituted stainless steel in other high-pressure gas biogas piping locations to reduce the need for future repairs and replacement of HDPE components that could require system shutdowns.¹²⁴

¹²¹ CA-01, pp. 2-11 (line 26)–2-12 (line 1).

¹²² SCG/Lakeside-06, p. 19 (lines 28–29).

¹²³ SCG/Lakeside-02, p. DM-A-28 (lines 11–14).

¹²⁴ SCG/Lakeside-02, p. DM-A-28 (lines 14–16).

(d) Lakeside’s Implementation of a More Efficient Method to Cool Biogas Was Prudent in Light of Learned Experience, and the Increased Costs Should be Deemed Reasonable.

Finally, Cal Advocates notes that Lakeside stated in its bid proposal that “. . . biogas will be cooled to condense water vapor out of gas . . . [using a] system [that] includes an Xchanger brand heat exchanger and associated chiller.”¹²⁵ Lakeside’s initial bid proposal did include an Xchanger brand heat exchanger and associated glycol-based chillers.¹²⁶ However, as a result of its subsequent monitoring of the Calgren Dairy Fuels Project operations, Lakeside learned that there were more efficient methods to chill biogas and that hot and dusty conditions negatively impacted the performance of glycol-based chillers.¹²⁷ Anecdotal evidence from Calgren Dairy Fuels Project management found that blower systems could become unreliable due to excessive heat tripping the systems’ overheating shutdown mechanism.¹²⁸ Documented pipeline pressure data confirmed the anecdotal evidence by showing that rising pipeline pressure contributed to system failure.¹²⁹ To avoid these potential problems with the Project, Lakeside concluded that air-to-air coolers used in combination with glycol-based chillers, rather than relying on glycol-based chillers alone, would improve the Project’s long-term operations and prevent impacts due to overheating.¹³⁰ Because Lakeside made prudent design changes to implement air-to-air coolers that would benefit the Project, it is appropriate to permit Lakeside to recover these reasonable additional costs.

¹²⁵ CA-01, p. 2-11 (lines 8–16).

¹²⁶ Lakeside-02, Appendix A, Vol. 1, p. 25; SCG/Lakeside-02, p. DM-A-28 (lines 17–21).

¹²⁷ SCG/Lakeside-06, p. 20 (lines 9–10).

¹²⁸ SCG/Lakeside-06, Appendix A, Document 1.5, p. 7.

¹²⁹ SCG/Lakeside-06, Appendix A, Document 1.5a, p. 9.

¹³⁰ SCG/Lakeside-06, p. 20 (lines 14-22).

(e) **Cal Advocates Fails to Address Other Reasonably-Incurred Cost Overruns Associated with O2 Injection Equipment and Biogas Blowing System Design Changes in its Prepared Testimony.**

Lakeside notes that Cal Advocates has not addressed a number of significant design changes made to improve the performance and safety of the O2 injection equipment and the biogas blowing system. Each design change was a direct result of the necessary-added infrastructure or lessons learned after Lakeside had submitted its initial bid to the Selection Committee. Lakeside incurred cost overruns to implement these design changes and has provided detailed evidence in its rebuttal testimony explaining why each design change and the associated costs were reasonable.¹³¹ These changes include:

- a reconfigured power distribution, enhanced control room design, and upgraded electrical equipment to meet the power needs of a larger system;
- a gas condensate separator made of HDPE to avoid condensation and water build up in the gas processing systems and the collection lines, which contributed to improved safety and costly maintenance down the line. There were no alternative competitive options in terms of cost efficiency;
- a critical safety feature to prevent pipeline backflow into the digester that could over-pressurize covered lagoons;¹³² and
- changes to the Project's scope of labor necessary to fabricate and commission H2S removal systems based on experience gained in the commissioning process at the Calgren Dairy Fuels Project.

Accordingly, the Commission should conclude that Lakeside has established the reasonableness of these additional costs by a preponderance of the evidence it submitted, evidence which is wholly uncontested by Cal Advocates.

¹³¹ SCG/Lakeside-06, pp. 21 (line 9)–22 (line 22).

¹³² SCG/Lakeside-06, p. 21 (lines 25–28) (noting that similar equipment was approved for recovery by the Commission in a reasonableness review of the Merced Dairy Biomethane Pilot Project).

2. Inflation Cost Impacts on Materials and Labor Costs to Construct O2 Injection Equipment and Biogas Blowing System Contributed to Cost Overruns.

Cal Advocates asks that the Commission disregard Energy Innovations’ analysis of inflation-related impacts on materials and labor costs to construct O2 injection equipment and biogas blowing systems. Cal Advocates has not provided any specific evidence to counter Energy Innovations’ analysis of inflation impacts for this equipment or Lakeside’s supporting evidence documenting inflation during the construction period. Instead, Cal Advocates simply makes broad claims that it is not reasonable to rely on Energy Innovations’ wage data because, “wages increased in the period after the Project was selected by the Selection Committee” and Lakeside failed to provide “any external evidence, economic analysis, [or] other sector-specific examples” of inflation cost increases.¹³³ Finally, and of particular concern, Cal Advocates seems to suggest that the Commission should consider whether costs were “unforeseen” within its reasonableness review of Lakeside’s cost overruns—“Energy Innovation’s statements further do not demonstrate that Lakeside was obligated to incur unforeseen costs in order to complete the Project . . . [t]herefore, the Commission should disallow all cost overruns.”¹³⁴ Cal Advocates is openly repeating the same argument it made in the Merced Pilot biomethane pilot project cost recovery, an argument that the Commission specifically dismissed in D.24-10-004.¹³⁵ Whether a cost increase was unforeseen at the time of the initial project bid does not determine whether a design change was reasonable based on the facts available when the design change was made.

Cal Advocates’ position on inflation is simply unfounded. Energy Innovations’ employed the same simple and verifiable methodology to examine inflation-related impacts on materials

¹³³ CA-01, p. 2-13 (lines 6–16).

¹³⁴ CA-01, p. 2-13 (lines 6–19).

¹³⁵ See D.24-10-004, Conclusion of Law 6, p. 48; see discussion Section II.C, *supra*.

and labor costs to construct O₂ injection equipment and biogas blower systems as it did in its analysis for the howitzers.¹³⁶ Energy Innovations prepared detailed tables of increased costs of the components of the O₂ injection equipment and biogas blower systems for each participating dairy.¹³⁷ Based on this analysis, Energy Innovations concluded that the total inflation increase for all blower and oxygen injection systems across all digesters was \$481,358.¹³⁸

In addition, Cal Advocates continues to simply ignore the fact that in its prepared direct and rebuttal testimony Lakeside has provided numerous examples of “external evidence, economic analysis, [and] other sector-specific examples” to support its showing of the impact of inflation.¹³⁹ For these reasons, the Commission should find that Lakeside has met its evidentiary burden by demonstrating, by a preponderance of the evidence, that the O₂ injection equipment and biogas system cost overruns due to design changes and inflation were reasonable.

C. Collection Line Construction Costs.

Cal Advocates recommends that the Commission disallow a total of \$637,244 in cost overruns for the construction of collection lines from Lakeside’s cost recovery request.¹⁴⁰ The total disallowance request is split between three categories: (1) \$416,000 in costs related to the use of larger diameter pipelines; (2) \$107,426 in costs related to the installation of four-inch (4”) diameter pipe; and (3) \$113,818 in costs related to changes in the routing and installation of the collection pipelines.¹⁴¹

¹³⁶ See Lakeside-02, Appendix A, Vol. 8, pp. 1154, 1166, 1178, 1181, 1190, 1193, 1202, 1205, 1214, 1217, 1226, 1229, 1238, 1241.

¹³⁷ SCG/Lakeside-02, Appendix A, Vol. 8, pp. 1146–1241.

¹³⁸ SCG/Lakeside-02, p. DM-A-33, (line 21)–DM-A-35 (line 2).

¹³⁹ See e.g., SCG/Lakeside-02, p. DM-A-15 (line 2)–DM-A-16 (line 7); SCG/Lakeside-06, p. 10 (line 34)–14 (line 15).

¹⁴⁰ CA-01, p. 2-14.

¹⁴¹ SCG/Lakeside-06, p. 2 (lines 28–33).

1. **Cost Overruns Associated with the Increase to Pipeline Diameter Were Reasonably Incurred and Should be Recovered in this Proceeding.**

Lakeside's design changes to increase the diameter of the Project's pipelines satisfies explicit Commission guidance to "accept the maximum possible biomethane production," improves pipeline performance and safety, reduces pipeline pressure, permits future expansion of the Project, and will accommodate operational ratings of the existing pipeline and digester designs. Lakeside's design changes and associated cost overruns were documented and reasonable in light of the lessons learned after Lakeside had submitted the bid proposal and the benefits the larger pipeline diameter size provides. For these reasons, it is reasonable for Lakeside to recover the associated cost overruns of increasing the pipeline diameter. In doing so, the Commission should reject Cal Advocates' assertion that \$416,000 in cost increases was unreasonable.¹⁴²

(a) **The Increased Pipeline Diameters Improved Project Performance and Satisfied Commission Directives.**

Lakeside's initial cost estimates approved by the Selection Committee included estimates for four-inch (4"), six-inch (6"), eight-inch (8"), and ten-inch (10") pipes. These estimates were only preliminary estimates, as Lakeside did not have sufficient time to finalize the engineering ahead of the 110-day window to submit a bid proposal to the Selection Committee. After engineering had been finalized, Lakeside determined that larger pipe sizes were necessary to ensure that the pipeline would be operated in the 3-15 pounds per square inch gauge ("psig") pressure range as approved by the Selection Committee and required by Kings County.¹⁴³ Beyond the need to operate in the 3-15 psig pressure range, Lakeside found that there were

¹⁴² CA-01, p. 2-13 (lines 3–11).

¹⁴³ SCG/Lakeside-02, p. DM-A-39 (lines 14–18).

overwhelming benefits of increasing pipeline diameters. First, larger pipelines mitigate pressure loss between the digester outlet and biogas treatment facility inlet that would have impacted performance at the initial design sizes.¹⁴⁴ Reduced pressure loss benefits the Project by allowing Lakeside to operate Project blower equipment at lower outlet pressures, thereby reducing energy usage and the risk of overheating that could lead to equipment failures, expensive repairs, and leaks of harmful gases.¹⁴⁵ Second, larger-diameter pipelines helped maintain the target pressure range. As a result, the as-built design allows Lakeside to maximize biomethane gas production, which directly aligns with one of the Commission’s key stated goals for the biomethane pilot project program—“[p]ipelines *must* be designed to accept the *maximum* possible biomethane production.”¹⁴⁶ Third, the increased pipeline diameter permits the Project to operate at ideal lower pressures.¹⁴⁷

In contrast, smaller-diameter pipelines operating at higher pressures that would require blower equipment to compensate by increasing the pressure rise output to ensure proper gas flow.¹⁴⁸ In turn, the smaller-diameter pipelines would require the system to consume more power, exacerbate overheating concerns that could result in system failure, and lower the cost efficiency of the overall biogas blowing system.¹⁴⁹ Lakeside testified that it would be more efficient to increase the diameters of pipelines used throughout the biogas system than to change

¹⁴⁴ SCG/Lakeside-02, p. DM-A-40 (lines 1–3).

¹⁴⁵ SCG/Lakeside-02, p. DM-A-40 (line 17)–DM-A-41 (line 8).

¹⁴⁶ SCG/Lakeside-02, p. DM-A-40 (lines 3–9) (citing SB 1383 Dairy Biomethane Pilot Project Selection Committee Score Card, p. 5, emphasis added, available at https://www.cpuc.ca.gov/-/media/cpucwebsite/files/uploadedfiles/cpuc_website/content/utilities_and_industries/energy/energy_programs/gas/natural_gas_market/finalselectioncomscorecardsum.pdf; Lakeside-02, Appendix A, Vol. 8, p. 1273).

¹⁴⁷ SCG/Lakeside-02, p. DM-A-40 (lines 9–11); SCG/Lakeside-06, p. 25 (lines 12–14).

¹⁴⁸ SCG/Lakeside-06, p. 25 (lines 18–19).

¹⁴⁹ SCG/Lakeside-06, p. 25 (lines 19–24).

equipment at each dairy pipeline inlet, increase pipeline wall thickness, or modify other related equipment impacted by higher pressures.¹⁵⁰ Finally, the Project was built with the intention of further expansion in line with the Selection Committee’s stated goals, and the larger-diameter pipelines enable the Project to accommodate other dairies in the area.¹⁵¹ Cal Advocates did not respond directly to any of Lakeside’s explanations for the benefits of increasing the diameter of the collection pipelines.

(b) Lakeside has Provided Substantial Engineering “Evaluation” or “Evidence” that the Pipe Diameter Increases were Necessary.

Cal Advocates’ assertion that Lakeside “does not provide any engineering evaluation . . . supporting the need for increased pipe diameters for pipe segments that were not at risk of exceeding 15 psig,” is simply incorrect and should be dismissed.¹⁵² Cal Advocates ignores the substantial materials that Lakeside has provided throughout this proceeding to support its pipeline diameter changes. Lakeside’s initial bid materials submitted to the Selection Committee included an engineering evaluation based on the preliminary information available at the time.¹⁵³ Based on similar preliminary information, Lakeside submitted additional engineering drawings to Kings County in its Encroachment Permit Application.¹⁵⁴ Lakeside also provided extensive engineering drawings in its rebuttal testimony reflecting the as-built pipeline with the increased

¹⁵⁰ SCG/Lakeside-02, p. DM-A-40 (lines 12–16); SCG/Lakeside-06, p. 25 (lines 24–28).

¹⁵¹ See discussion Section III.A, pp. 11–12, *supra*; SCG/Lakeside-02, p. DM-A-41 (lines 9–13) (citing SCG/Lakeside-02, Appendix A, Vol. 1, pp. 19, 35, 36, 37, and 105 [“[p]rovide a clear description about what the Pilot Project is currently committed to accomplish and *future plans*.” (emphasis added).]).

¹⁵² CA-01, p. 2-14 (lines 22–24).

¹⁵³ SCG/Lakeside-06, p. 26 (lines 24–28).

¹⁵⁴ SCG/Lakeside-02, Appendix A, Vol. 7, pp. 1091–1119.

pipeline diameters complete with additional engineering and strength analyses and evaluations.¹⁵⁵

Furthermore, Lakeside’s engineering team prepared a flow analysis to demonstrate why it was necessary to increase the diameter of pipelines throughout the system. The LSP Hydraulic Model – Current Production & Original Pipe Size, models the theoretical pipeline pressure of the initial bid proposal design and compares it against the as-built design with larger pipelines. To control variables between the two pipeline diameters, the LSP Hydraulic Model uses the as-built pipeline route, assumes gas flows at the highest value of the weekly average gas flows using historical data from each digester, and includes the Mattos digester because that was a contemplated “expansion dairy” by the Selection Committee.¹⁵⁶ The LSP Hydraulic Model shows that using the original, smaller-diameter pipeline diameters would cause pipeline pressures in excess of safety standards and the 15 psig threshold proposed to the Selection Committee.¹⁵⁷

Contrary to Cal Advocates’ assertions, Lakeside has provided extensive engineering evaluations throughout this proceeding supporting the decision to increase the pipeline diameter sizes. Because Cal Advocates has not provided evidence to dispute Lakeside’s testimony and analysis of pressures on the as-built system, the Commission should conclude that Lakeside has shown, by a preponderance of the evidence, that cost overruns associated with increasing the pipeline diameter were reasonably incurred and should be recovered in this proceeding.

¹⁵⁵ SCG/Lakeside-06, pp. 26 (line 30)–27 (line 2); Lakeside-06, Appendix A, pp. 21–97.

¹⁵⁶ SCG/Lakeside-06, p. 27 (lines 4–32); Lakeside-06, Appendix A, p. 99.

¹⁵⁷ SCG/Lakeside-06, pp. 27 (lines 34)–28 (line 2); see also Lakeside-06, Appendix A, p. 99 (based on the LSP Hydraulic Model, J3 Node, J12 Node, J4 Node, and J5 Node show pipeline pressure of 17.3 psig, 20.5 psig, 23.3 psig, and 39.9 psig, respectively.).

(c) Cost of Pipeline Changes Were Reasonably Calculated

Cal Advocates asks that the Commission disallow \$416,000 of cost overruns associated with using larger-diameter pipelines than those initially proposed. Curiously, Lakeside is only seeking approval of \$229,515 in cost increases related to pipe diameter changes. The difference between these figures is due to Cal Advocates' flawed methodology to calculate material costs. Cal Advocates' conclusion is based, in part, on their data requests and Lakeside's subsequent responses. Cal Advocates notes that they asked Lakeside to "[i]dentify which pipeline segments were at risk of exceeding the 15 psig" in question¹⁵⁸ However, Cal Advocates then relies upon Lakeside's response to question 5.a. of their first data request to determine pipeline material costs. Question 5.a of Cal Advocates' first data request asks Lakeside to provide "the material cost of pipeline per linear foot for each pipeline *used* in the project."¹⁵⁹ Cal Advocates then uses the as-built pipeline materials costs provided in response to question 5.a., and the extrapolated pipeline lengths and diameters from the map of the originally proposed pipeline route provided in response to question 3.b.i, to calculate changes in materials costs for the pipeline segments not identified as at-risk resulting in what Cal Advocates refers to as the "true average material cost" for the original proposed route.¹⁶⁰ In doing so, Cal Advocates uses *as-built* actual materials costs for individual pipeline sizes to determine the materials costs associated with the *originally proposed pipeline route*.¹⁶¹ Cal Advocates' analysis is a flawed exercise in hindsight by using as-built costs to estimate materials costs in the original bid proposal. Lakeside's cost estimates for

¹⁵⁸ CA-01, pp. 2-14 (lines 26)–2-15 (line 1) (citing CA-01, Appendix B, Attachment 2-2, Lakeside DR 001, Request 3(b)(i).).

¹⁵⁹ SCG/Lakeside-06, p. 28 (lines 11–13).

¹⁶⁰ SCG/Lakeside-06, p. 28 (lines 18–21).

¹⁶¹ SCG/Lakeside-06, p. 28 (lines 21–25).

the pipeline and materials in its bid proposal were based on a preliminary design and cost estimates and did not reflect the actual material prices from the invoices that Lakeside actually received to construct the as-built pipeline.¹⁶²

In support of its disallowance request, Cal Advocates asserts that the costs associated with increasing the diameters of pipeline segments that were not “at-risk” are unreasonable, and should not be recovered. Cal Advocates’ assertion relies upon an erroneous assumption that pressurization within the pipeline system is strictly limited to each individual segment of the pipeline. A pipeline system is precisely that—a *system*. Cal Advocates’ assertion presumes that all pipes showing less than 15 psig can be reduced in diameter without impacting the remainder of the pipeline system. Pressure builds up over distance, and the entire *system* must be designed in a way to avoid over-pressure operations at any one point.¹⁶³ As described above, Lakeside’s analysis of the initially proposed pipeline design showed that there was a clear risk of pressure increases and a need to increase pipeline diameters throughout the pipeline system. The LSP Hydraulic Model supports Lakeside’s conclusion that operating the pipeline system with the originally proposed pipe sizes would have exceeded pipeline pressure safety thresholds approved by the Selection Committee.¹⁶⁴ For these reasons, Cal Advocates’ assertion that cost recovery should be limited to individual pipeline segments that it identified as “at-risk” should be dismissed.

Cal Advocates has not presented evidence or analysis of an alternative pipeline system design that would have avoided over pressurization using the initially-proposed pipeline

¹⁶² SCG/Lakeside-06, p. 28 (lines 25–28).

¹⁶³ SCG/Lakeside-06, p. 29 (lines 18–28).

¹⁶⁴ See discussion Section IV.C.1.b, *supra*.

diameter sizes. Neither has Cal Advocates explained how limiting the increased pipeline diameters to just a portion of the pipeline system that Cal Advocates considers “at risk” could meet the same reduced pressure goals as the as-built pipeline system with larger pipeline diameters throughout. Because Lakeside built a pipeline system consistent with engineering recommendations to maximize performance and efficiency and that adhered to the Selection Committee’s approved safety thresholds for operating pressures, it should be permitted to recover cost overruns associated with increasing the pipeline diameter.

The Commission should also reject Cal Advocates’ assertion that Lakeside should not be permitted to recover costs associated with the “pipe segments downstream of the two non-pilot dairies starting at Poplar Lane Dairy.”¹⁶⁵ The Project and its pipeline system was built to accommodate additional usage from nearby dairies who were not yet interconnected, including the two “non-pilot dairies” that Cal Advocates references in its prepared testimony. Lakeside constructed the Project to enable future expansion in line with the Selection Committee’s stated goals.¹⁶⁶ Because the increased pipeline diameters for segments downstream of the “two non-pilot dairies” help further the Selection Committee’s goals, Lakeside should be permitted to recover the costs to construct them.

2. Costs Associated Due to Pipeline Route Changes were Reasonable.

Cal Advocates recommends that the Commission disallow \$113,818 in cost increases related to pipeline route changes, as the costs paid for an “additional 2,053 feet of pipeline length constructed for the final route compared to the route in the proposed bid.”¹⁶⁷ Cal Advocates relies upon the same inappropriate arguments previously employed with respect to the howitzers

¹⁶⁵ SCG/Lakeside-06, p. 29 (lines 37–40); see also CA-01, p. 2-16 (lines 7–9).

¹⁶⁶ SCG/Lakeside-02, Appendix A, Vol. 1, pp. 19, 35, 36, 37, and 105.

¹⁶⁷ CA-01, p. 2-21 (lines 15–17).

and biogas equipment. Cal Advocates points to statements made by Lakeside within its bid proposal to the Selection Committee based on information available at the time and contrasts those statements with changes in the Project's design in light of additional information obtained from after the initial proposal was submitted. Ignoring the impact of new information, Cal Advocates suggests that the cost increases associated with those changes are unreasonable and should be disallowed.¹⁶⁸

Cal Advocates identifies the following statement within Lakeside's bid proposal that was a response to the Selection Committee's request for a diagram or drafting showing expected pressures and temperatures at various points in the biogas collection lines:

The project will install HPDE biogas collection lines between the hub and the individual digesters. All the necessary land is controlled by dairy farms and so no third party or public easements are required to complete the pipeline, except where crossing country roads.¹⁶⁹

Lakeside's statement was accurate based on information known at the time. All land necessary to construct the original proposed pipeline route was controlled by dairy farms and Lakeside's ongoing negotiations at the time with those farmers indicated that no easements would be required. However, because of the limited 110-day window to prepare a bid proposal, Lakeside did not have full site control for the entire collection pipeline right of way when it submitted its bid proposal.¹⁷⁰ After Lakeside submitted its bid proposal, further settlement negotiations with farmers revealed that constructing every portion of the pipeline using the initial pipeline route would not be possible.¹⁷¹ Lakeside was unable to use an important piece of land

¹⁶⁸ CA-01, p. 2-21 (lines 15–17).

¹⁶⁹ SCG/Lakeside-02, Appendix A, Vol. 1, p. 21.

¹⁷⁰ SCG/Lakeside-02, pp. DM-A-37 (line 20)–DM-A-38 (line 2).

¹⁷¹ SCG/Lakeside-06, p. 31 (lines 2–3).

owned by one dairy farmer despite Lakeside’s best efforts and multiple rounds of meaningful dialogue with that farmer.¹⁷² As such, it became necessary for Lakeside to change its pipeline route to circumvent that dairy farmer’s property.

The statement in Lakeside’s bid proposal that “no third party or public easements are required to complete the pipeline” was based on Lakeside’s reasonable belief at the time, given the status of Lakeside’s ongoing negotiations with dairy farmers to secure the pipeline route. Lakeside was not, as Cal Advocates alleges, “aware of the need for third-party easements prior to the submission of its proposal to the Selection Committee.”¹⁷³ Throughout the period before Lakeside submitted its bid proposal to the Selection Committee, it had received agreement from multiple dairy farmers to participate in the project.¹⁷⁴ While some dairy farmers were initially skeptical, they became more receptive to the Project’s benefits and agreed to participate in the Project after Lakeside shared detailed plans and progress.¹⁷⁵ Further, Lakeside found that dairy farmers were more willing to join the Project after seeing their neighbors sign up.¹⁷⁶ At the time Lakeside submitted its bid proposal, it was reasonable for Lakeside to believe that it could reach a similar understanding with all the farmers, including the one who eventually declined to participate in the Project. Despite the challenges of engaging with dairy farmers and preparing a bid proposal in 110 days based on those preliminary negotiations, Lakeside was successful in implementing the Project. The increased length of the as-built collection pipeline system was less

¹⁷² SCG/Lakeside-06, p. 31 (lines 3–6, 29–37).

¹⁷³ CA-01, p. 2-22 (lines 18–19).

¹⁷⁴ SCG/Lakeside-02, pp. DM-A-30 (line 37)–DM-A-31 (line 18).

¹⁷⁵ SCG/Lakeside-06, p. DM-A-31 (lines 26–38).

¹⁷⁶ SCG/Lakeside-06, p. DM-A-31 (lines 26–38).

than two percent over what was initially proposed, which represents a very small increase in the pipeline system compared to the original preliminary design.

3. Lakeside's Cost Increases Due to Use of 4" Pipelines is Reasonable and Should be Recoverable.

Cal Advocates' assertion that \$107,426 of cost increases due to Lakeside's construction of 3,190 feet of 4" collection lines were unreasonable should be rejected. Cal Advocates' assertion is based on a cluster map that was provided in response to Cal Advocates' first data request that sets out as-built and original pipeline designs and included within Lakeside's prepared direct testimony materials.¹⁷⁷

The map that Cal Advocates references contains an inadvertent error. The map identifies the as-built 4" segment of the pipeline as an 8" pipeline. The single 4" pipeline segment, which constitutes less than three percent of the total collection pipeline length, was omitted when Lakeside put the map together. Cal Advocates did not issue further data requests addressing this omission. As part its rebuttal testimony, Lakeside provided a corrected draft of the cluster map that identifies the 4" segment of the pipeline that was constructed.¹⁷⁸ The 4" pipelines were utilized in the as-built pipeline system, not as part of a plausible future connection between the Clear Lake Dairy and Decade Centralized.¹⁷⁹

Materials provided as part of Lakeside's direct testimony reflect the corrected maps. Invoices from Cal Valley Construction, the pipeline installation contractor, demonstrate that

¹⁷⁷ SCG/Lakeside-02, Appendix A, Vol. 8, pp. 1272–1273; see also CA-01, Appendix B, Attachment 2-2, Lakeside Response to Lakeside DR 001, Attachment "Cal Advocates – MEW -DR Q3C – Pipeline Route Map."

¹⁷⁸ SCG/Lakeside-06, p. 32 (lines 33–36); see also Lakeside-06, Appendix A, p. 98.

¹⁷⁹ Compare SCG/Lakeside-02, Appendix A, Vol. 9, p. 1365 with CA-01, pp. 2-20 (line 17)–2-21 (line 11).

Lakeside was billed for the installation of 3,190 feet of 4” pipe.¹⁸⁰ Similarly, invoices from P&F Distributors, the pipeline materials supplier, documents orders for 4” HPDE pipe that totaled 3,200 feet.¹⁸¹

4. Cal Advocates Does Not Address Other Factors Contributing to Collection Line Cost Increases, These Uncontested Costs Should be Recovered by Lakeside.

Lakeside’s direct testimony discusses other factors that contributed to cost increases beyond the initial cost estimate for collection lines. As these factors have not been addressed or contested in any manner by Cal Advocates, the Commission should find that Lakeside has demonstrated, by a preponderance of the evidence, that cost increases for collection lines due to these factors are reasonable. Lakeside briefly discusses each factor below:

- Project Labor Agreement and Prevailing Wage Costs: Lakeside requests a total cost recovery of \$1,636,079 for Project Labor Agreement (“PLA”) related costs, split between prevailing wage impacts (\$1,115,737) and scope of work and contracting impacts (\$520,342). Lakeside’s initial bid proposal did not include prevailing wage rates because the pilot project solicitation did not require them or require applicants to consult with unions, Lakeside had never worked with unions on similar projects, and had not received contact from unions during its prior work. Only after the Project’s selection did the outside counsel for a consortium unions demand that Lakeside enter into a PLA.¹⁸² It should be noted that the Commission previously permitted the recovery of union labor- and PLA-related cost increases for the Merced Pilot when it became apparent that union cooperation became necessary to complete the Merced Pilot.¹⁸³
- Surveys: Lakeside incurred a cost overage of \$75,646 to conduct surveys. These surveys were conducted at the request of banks financing the Project and the United State Department of Agriculture. These additional surveys were not

¹⁸⁰ SCG/Lakeside-06, p. 33 (lines 4–8) see also CA-01, Appendix B, Attachment 2-2, Lakeside Response to Lakeside DR 006, Confidential Question 6 Attachments, p. 615.

¹⁸¹ SCG/Lakeside-06, p. 33 (lines 8–9); see also CA-01, Appendix B, Attachment 2-2, Lakeside Response to Lakeside DR 006, Confidential Question 6 Attachments, pp. 63, 83.

¹⁸² See discussion SCG/Lakeside-02, pp. DM-A-42 (line 8)–DM-A-46 (line 8).

¹⁸³ D.24-10-004, Conclusion of Law, p. 48.

anticipated at the time Lakeside submitted its bid proposal, and were necessary to obtain debt financing necessary to complete the Project.¹⁸⁴

- Engineering: Lakeside incurred a cost overage of \$30,641 for engineering of the pipeline. These additional engineering costs were made to ensure Lakeside could successfully implement the Project in light of the necessary route changes, design changes, and obstacles discussed throughout this brief.¹⁸⁵
- Potholing: Lakeside incurred cost overages of \$449,860 as a result of additional potholing. Lakeside's bid proposal relied on standard wage rates and a belief that the Project would be handled by non-union contractors, who handle potholing at little cost. However, Lakeside was later put in a position where it had to rely on union labor as a result of the negotiations and eventual signing of the PLA. The union contractors with whom Lakeside eventually worked with had higher wages, requirements, and practices that drove up potholing costs.¹⁸⁶
- Canal Crossing: Lakeside achieved \$20,000 in cost savings in this category, but has mentioned it here to flag the category's impact on the overall as-built collection line costs. Acting as a prudent manager, Lakeside was able to optimize route modifications in a way to avoid obstacles and mitigate substantial costs.¹⁸⁷
- Street Crossing and Borings: Between the street crossing and boring categories, Lakeside incurred \$388,633 in cost overages. The overages were a result of two items that were not known at the time of Lakeside's bid proposal: construction method alteration and impacts from the PLA. Kings County's environmental studies, released after Lakeside submitted its bid proposal, revealed a need to route around certain land areas to avoid potential environmental impacts and to bore all crossing of Kings County's roads. Further, the need to pay prevailing wages under the PLA increased Lakeside's expenses relative to initial bid proposal estimates.¹⁸⁸
- Line Crossings: Lakeside incurred a total of \$761,750 in line crossing costs, which it has allocated between two categories: (1) \$304,700 in costs due to design improvements, changes, and finalizations; and (2) \$457,050 in costs due to prevailing wage and other PLA requirements. Lakeside did not include line crossing costs as a separate cost category within its initial bid based on its prior experience developing biogas projects. On prior installations, contractors with whom Lakeside worked would prepare a fixed bid that included the costs of

¹⁸⁴ SCG/Lakeside-02, p. DM-A-46 (line 9)–DM-A-47 (line 6).

¹⁸⁵ SCG/Lakeside-02, p. DM-A-47 (lines 7–18).

¹⁸⁶ SCG/Lakeside-02, pp. DM-A-47 (line 19)–DM-A-9 (line 2).

¹⁸⁷ SCG/Lakeside-02, p. DM-A-49 (lines 3–10).

¹⁸⁸ SCG/Lakeside-02, pp. DM-A-49 (line 11)–DM-A-51 (line 21).

installing the biogas line over any other lines. However, as a result of the PLA and union contracts, Lakeside was required to pay incremental costs every time the pipeline crossed a line. In addition, and despite Lakeside's best efforts to ascertain the number of lines it may encounter throughout the Project, Lakeside encountered numerous unregistered lines during potholing and hydro-excavating that exacerbated cost.¹⁸⁹

- Traffic Control: Lakeside incurred \$122,207 in traffic control costs, which Lakeside has allocated between Kings County requirements and PLA costs. Lakeside did not include traffic control costs within its bid proposal as it was not a specific requirement in Tulare County (where another Lakeside project was located) when Lakeside had to install pipelines on rural roads. After the Project was selected by the Selection Committee, Kings County issued its final Encroachment Permit that imposed a traffic control requirement on the Project and country roads the Project would be built across. Subsequently, the PLA and union rules barred Lakeside from utilizing non-union labor to perform traffic control. Lakeside was required to hire a dedicated contractor to perform traffic control work for the duration of the relevant pipeline installation.¹⁹⁰
- Dust Control: Lakeside incurred \$415,020 in dust control costs, which Lakeside has attributed to be split evenly between Kings County requirements and PLA costs. Lakeside did not include dust control costs within its bid proposal because it was not a specific requirement in Tulare County (where another Lakeside project was located). Further, based on Lakeside's prior experience developing biogas projects with non-union labor, non-union contractors would take cost-effective means like watering to address any potential nuisance from dust. After the Project was selected by the Selection Committee, Kings County issued its final Encroachment Permit that required dust control. Subsequently, the PLA and union rules meant that Lakeside would need to hire a dedicated contractor whose sole purpose was to perform dust control work.¹⁹¹
- Mobilization, Standby Costs, and T&M Fees: Lakeside incurred \$423,138 in costs for mobilization and demobilization fees, standby costs, and miscellaneous T&M fees. In its bid proposal, Lakeside did not include these costs as a separate cost category. Because they represented such a small fraction of Lakeside's anticipated installation costs, they were accounted for as part of the pipeline installation rates. However, contractor requirements caused by the executed PLA, COVID-19 supply chain issues, and other typical project delays, such as a dairy farmer's need to irrigate a field that would not allow Lakeside to install the pipelines, led to cost increases.¹⁹²

¹⁸⁹ SCG/Lakeside-02, p. DM-A-52 (line 1)–DM-A-53 (line 23).

¹⁹⁰ SCG/Lakeside-02, p. DM-A-54 (line 1)–DM-A-55 (line 8).

¹⁹¹ SCG/Lakeside-02, p. DM-A-55 (line 9)–DM-A-56 (line 7).

¹⁹² SCG/Lakeside-02, pp. DM-A-56 (line 8)–DM-A-58 (line 2).

Each of these cost increases were both reasonable and necessary to ensure the success of the Project, and a direct result of factors that were not known at the time of Lakeside's bid proposal. Because Cal Advocates has not directly addressed these factors, the Commission should find that Lakeside has established the reasonableness of these costs by a preponderance of the evidence, and authorize Lakeside to recover the cost overages.

V. CONCLUSION

Under the Commission's standard of review applicable to cost overages a developer incurs in constructing dairy biomethane pilot project, Lakeside has demonstrated, by a preponderance of evidence, that all cost increases experienced for this project—including reasonable changes to the project's design as well as reasonable increases in material and labor costs due to inflation—were reasonable. Further, no party in this proceeding has raised any environmental or social justice issues with respect to the Project. For these reasons, the Commission should grant recovery of all the increased costs documented by Lakeside.

Respectfully submitted this 12th day of August, 2026, at San Francisco, California.

DOWNEY BRAND LLP
Michael Day
Jed Gibson
Chris Marelich
455 Market Street, Suite 1500
San Francisco, California 94105
Telephone: (415) 848-4800
Email: mday@DowneyBrand.com

By /s/ Michael Day

Michael Day

Attorneys for Lakeside Pipeline, LLC