

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



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Standards and Requirements, Pipeline Open Access
Rules, and Related Enforcement Provisions.

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**SOUTHERN CALIFORNIA GAS COMPANY (U 904 G) AND
SAN DIEGO GAS & ELECTRIC COMPANY (U 902 G)
DRAFT RENEWABLE GAS PROCUREMENT PLAN**

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**Southern California Gas Company
and San Diego Gas and Electric
Draft Renewable Gas Procurement Plan
December 2022**

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I. Introduction

a. Background

i. D.22-02-025 Final Decision

On February 25, 2022, the California Public Utilities Commission (Commission or CPUC) issued D.22-02-025 (the Decision), implementing Senate Bill (SB) 1440, Biomethane Procurement Program, by setting biomethane (renewable natural gas (RNG) and/or bio-synthetic natural gas (bio-SNG)) procurement targets for each investor-owned utility providing gas service in California, Southern California Gas Company (SoCalGas), San Diego Gas & Electric Company (SDG&E), Pacific Gas and Electric Company (PG&E), and Southwest Gas Corporation (Southwest Gas) (collectively, Joint Utilities)), to reduce short-lived climate pollutant emissions.

1. General Background

In compliance with Ordering Paragraph (OP) 31 of the Decision, SoCalGas¹ is filing its Draft Renewable Gas Procurement Plan (RGPP) for CPUC review and approval. SoCalGas's RGPP establishes its biomethane procurement strategy through 2030 and the anticipated bill and rate impacts associated with that procurement.

On May 20, 2022, the Joint Utilities filed a joint advice letter (AL)² providing the RGPP template in compliance with OP 12 in the Decision. The RGPP template was intended to standardize future RGPP filings of the Joint Utilities and to evaluate feasibility and provide guidance on compliance mechanisms necessary to successfully meet the Decision's 2025 short-term biomethane procurement target of 17.6 billion cubic feet (Bcf) annually, produced from eight million tons of organic waste.³ The template serves as an outline to these respective RGPP filings, with further details addressing elements described in the Decision and input provided during the April 22, 2022, RGPP workshop, where applicable. SoCalGas's draft RGPP follows this template, which was

¹ SoCalGas's Gas Acquisition department will be responsible for biomethane procurement obligations on behalf of SoCalGas and SDG&E.

² AL 1213-G (Southwest Gas), AL 5981-G (SoCalGas), AL 3088-G (SDG&E), AL 4612-G (PG&E).

³ D.22-02-025 at 30-31, and OP 14.

approved by the Commission on June 15, 2022. All biomethane procurement, consistent with this Draft RGPP, will be conducted in accordance with the Standard Biomethane Procurement Methodology (SBPM), a cost-effectiveness framework developed by the Joint Utilities and approved by the CPUC on December 28, 2022.

2. Purpose of the Renewable Gas Procurement Plan (RGPP)

The RGPP filing provides the CPUC with a high-level overview of the approach that each of the Joint Utilities will follow to meet the procurement obligations established by the Decision. SoCalGas's RGPP filing provides insights into its procurement methodology, strategic overview of the biomethane market in California, identified risks considering the maturity level of market, implementation of the SBPM, cost containment considerations and an overview of contract provisions that will address the compliance requirements established by the Decision. The Decision requires, among other items, the following under OP 31:

[The Joint Utilities] shall file their Renewable Gas Procurement Plans (RGPPs) in this proceeding or a successor proceeding no later than January 1, 2023. Motions to update the draft RGPPs to account for changed circumstances and/or updated information shall be made no later than 45 days from the date that the draft RGPPs were filed, after which a Proposed Decision shall be issued providing specific instructions to each of the utilities for what to modify or include in their final RGPP. No later than 30 days from the effective date of a final decision, the utilities shall submit their final RGPPs as Tier 1 Advice Letters. The current or successor proceeding to commence in 2025 shall explore whether to make RGPP updates annual or otherwise submitted according to a specific recurring timeline in addition to exploring other topics. Concurrent with the filing of the Tier 1 Advice Letter,

the Joint Utilities shall each update their currently required annual reports, as required under Decision (D.) 15-06-029, as modified by D.16-12-043, to include details of actual biomethane procurement levels, ratepayer bill impacts, incremental capital infrastructure and/or operations and maintenance costs for the prior year compared to the estimated levels that were approved in their respective RGPPs. Their respective RGPPs shall evaluate feasibility and provide guidance on compliance mechanisms necessary to successfully meet the short-term target adopted in Section 3.3.2.1.

b. Environmental and Social Justice

i. Environmental and Social Justice Principles/Commitments

1. SoCalGas's Sustainability Commitment

Sustainability at SoCalGas means innovating our business to create lasting benefits for stakeholders by doing the right thing, championing people, and shaping the future. ASPIRE 2045⁴ is our strategy to further integrate sustainability across our business by accelerating the transition to clean energy, protecting the climate and improving air quality in our communities, increasing clean energy access and affordability, advancing a diverse, equitable, and inclusive culture for all, and achieving world class safety. It is aligned with the key sustainability pillars of our parent company, Sempra,⁵ as well as many of the United Nations Sustainable Development Goals,⁶ and it is supportive of the goals set forward in this Decision.

The transition to clean energy is an environmental and social imperative. We aim to accelerate the energy transition by increasing the delivery of clean fuels such as

⁴ For more information, see SoCalGas's ASPIRE 2045 Sustainability Strategy, available at: https://www.socalgas.com/sites/default/files/2022-02/SoCalGas_Sustainability_Strategy_final.pdf

⁵ See Sempra's 2021 Corporate Sustainability Report, available at: <https://esg.sempra.com>

⁶ See *The 17 Goals* published by the United Nations Department of Economic and Social Affairs Division of Sustainable Development, at: <https://sdgs.un.org/goals>

renewable natural gas; adapting our system for hydrogen; and supporting customer decarbonization. We aim to protect California communities by achieving net zero greenhouse gas (GHG) emissions and helping to improve local air quality. For SoCalGas, sustainability is our path to a brighter future for our customers, our employees, our business, our state, and beyond.

2. SoCalGas's Safety Commitment

As the nation's largest gas distribution utility, with over 8,000 employees serving approximately 22 million energy consumers, safety is a core value and foundational to our business. This commitment to safety is embedded in our culture and our employees are dedicated to safely operating the gas system and serving Southern California.

Our mission is to build the cleanest, safest, most innovative energy company in America. To SoCalGas, safety is more than just the absence of incidents, safety is the presence of controls for known hazards, actions to anticipate and guard against unknown hazards, and the commitment to continuously improve our ability to recognize and mitigate hazards. Safety requires strong ongoing leadership commitment and active engagement and ownership from all employees.

SoCalGas's safety culture fosters a work environment where employees at all levels, across work locations and departments are committed, engaged, and empowered to continuously improve the safety of how we operate. Just as importantly, our culture and practices encourage employees to raise safety concerns and "stop the job" if someone is ever uncomfortable with a situation. As an organization, SoCalGas embraces a safety managements system (SMS) approach for comprehensively managing safety. We take pride in our work and ownership for employee and contractor safety, customer and public safety, and the safety of the gas delivery system. SoCalGas is committed to procuring renewable gas from biomethane facilities that operate in a manner consistent with our safety values.

c. Disclaimer Section

i. Applicable Non-compete and Confidentiality Rules

SoCalGas will fully comply with all applicable state and federal rules, regulations, and laws pertaining to anti-competitiveness and antitrust issues and will conduct any activities pursuant to the RGPP in a manner which does not grant undue preference to or confer an undue competitive advantage to its affiliates pursuant to the CPUC's affiliate compliance rules and SoCalGas's Affiliate Transactions Compliance Plan. The information and data used and created in the preparation of this RGPP may be confidential in nature, and any confidential information included in the RGPP is filed concurrent with a Motion to File Under Seal.

II. Procurement Targets

a. Biomethane Procurement Targets

The Decision establishes two procurement targets: the short-term target and the medium-term target. The Joint Utilities' short-term target is the procurement of biomethane produced from eight million tons of diverted organic waste from landfills or 17.6 billion cubic feet (Bcf) of biomethane annually by the year 2025.⁷ The medium-term procurement target, named the Renewable Gas Standard (RGS) in the Decision, is approximately 72.8 Bcf annually.

i) Short-Term

SoCalGas's and SDG&E's collective share of the short-term target is biomethane produced from 4.5 million tons of diverted-organic waste or a volumetric target of 9.9 Bcf annually (0.027 Bcf/day).⁸ Per the Decision, and in accordance with Pub. Util. Code Section 651 (b), the short-term target for the Joint Utilities will aim to procure biomethane that achieves eight million tons of organic waste⁹, diverted annually from California landfills.¹⁰

The Joint Utilities shall not open procurement opportunities to additional biomethane sources allowed to satisfy the medium-term target until the Joint Utilities can demonstrate that they have diverted their respective shares of eight million tons of organic waste. If the 2025 diverted organic waste target is met, then the option of additional procurement from other eligible biomethane feedstocks is permitted during this timeframe.¹¹

⁷ See D.22-02-025, OP 14 at 60.

⁸ See D.22-02-025, OP 16: SoCalGas and SDG&E are responsible for procuring 49.26% and 6.77%, respectively, of the Joint Utilities' short-term target of 17.6 Bcf of biomethane. Therefore, SoCalGas's and SDG&E's combined short-term target is $(49.26\% + 6.77\%) \times 17.6 \text{ Bcf} = 9.9 \text{ Bcf}$ of biomethane. A similar calculation leads to the 4.5 million ton of diverted-organic waste projected achievement of the target.

⁹ "Organic waste includes food, green material, landscape and pruning waste, organic textiles and carpets, lumber, wood, paper products, printing and writing paper, manure, biosolids, digestate, and sludges." See CalRecycle: <https://www.calrecycle.ca.gov/organics/slcp/collection>

¹⁰ See D.22-02-025 at 30.

¹¹ See *Id.*, at 31.

To facilitate tracking progress toward meeting the target, the tonnage of diverted organic waste used in the production of biomethane will be provided to SoCalGas by biomethane suppliers. SoCalGas will capture this value in a registry such as the Midwest Renewable Energy Tracking System (M-RETS.).

M-RETS contributes to the biomethane procurement process by adding the capability to track and verify biomethane production, providing protections against the double-counting of biomethane environmental attributes, and facilitating transparency of the process for regulators. M-RETS requires verifiable details of biomethane projects to be submitted in order to register the projects. It also requires records of injections into a pipeline of the biomethane produced by the project. From these records, M-RETS will generate unique environmental attribute credits in its platform for each dekatherm of biomethane called “Renewable Thermal Certificates” (RTCs). These RTCs can be transferred from an account holder (i.e., producer) in M-RETS to SoCalGas’s account in M-RETS. SoCalGas may then permanently retire these RTCs in M-RETS, thereby meeting a portion of the target equal to the volume of biomethane or tonnage of organic waste corresponding to the retired RTCs. M-RETS will allow access to the CPUC to view data on this process for regulatory oversight purposes.

ii) Medium-Term

SoCalGas’s and SDG&E’s collective share of the medium-term target, also referred to as the RGS, is approximately 43.4 Bcf annually (0.119 Bcf/day)¹². The Decision requires the medium-term target to be met by year-end 2030. This target is inclusive of biomethane and bio-SNG procured to meet the short-term target.

Upon meeting the short-term target, the Joint Utilities may consider procurement of biomethane from other feedstocks, such as landfill, agricultural waste (except purpose-

¹² See D.22-02-025, OP 18: SoCalGas and SDG&E are responsible for procuring 52.02% and 7.60%, respectively, of the Joint Utilities’ medium-term target of 72.8 Bcf of biomethane. Therefore, SoCalGas’ and SDG&E’s combined short-term target is $(52.02\% + 7.60\%) \times 72.8 \text{ Bcf} = 43.4 \text{ Bcf}$ of biomethane.

grown crops),¹³ dairy, and other livestock. Dairy and other livestock biomethane procurement is limited to 4% of the medium-term target volume and may be procured prior to the meeting of the short-term target. Only procurement from dairy facilities that commenced operations after December 31, 2021, will be counted toward this target.¹⁴

b. Discussion of Target Level Adjustments per D.22-02-025

Pursuant to the Decision, in 2025 the Commission will review the medium-term target. Considerations will include “progress made toward achieving the short-term target, additional analysis on technical and economic feasibility, market conditions, procurement rules, eligible time periods for contracts and contract duration, and outcomes from the Long-Term Gas Planning Order Instituting Rulemaking 20-01-007.”¹⁵

c. Other Mechanisms to Help IOUs Meet Targets

The Decision allows for flexible compliance methods to assist the Joint Utilities in meeting their short-term and medium-term targets. Some of the concepts applicable to the flexible compliance mechanism are described below.

- 1) Banking: Biomethane procurement in any year will be applied first to that year’s annual target. Any excess procurement may be carried over for use toward meeting future years’ targets.¹⁶
- 2) Borrowing: Any excess procurement in a year may be used to make up a procurement deficit from a previous year. An annual procurement deficit of up to twenty-five percent of that year’s annual target may be carried over to the next three years without explanation.¹⁷
- 3) Sale of Excess Supplies: Any volumes procured in excess of an annual target may be traded with another member of the Joint Utilities.¹⁸

¹³ See D.22-02-025, OP 22 at 62.

¹⁴ See D.22-02-025, OP 19 at 61.

¹⁵ *Id.*, OP 21 at 61.

¹⁶ *Id.*, OP 24 at 62.

¹⁷ *Id.*, OP 25 at 62.

¹⁸ *Id.*, OP 26 at 62.

4) Joint Utilities may procure on each other's behalf.¹⁹

d. Market Feasibility/Analysis

Various reports indicate a positive trend in the growth and consolidation of the RNG market in the United States in 2023 and beyond. “This consolidation has stoked increasing interest around the space throughout 2022, with flagship operators increasing growth ambitions as new investment enters the arena.”²⁰ Major investors in this space agree, however, that the industry could benefit from streamlining. The fragmented landscape of RNG makes survival and innovation more challenging for market participants. Landfill operators, dairy farmers, traditional energy companies and the transportation sector and utilities they serve, are intertwined into a complex regulatory environment, making transactions more burdensome for potential investors. Further consolidation could unite the stakeholders and provide the stability necessary to encourage new investments.

In North America, members of the Coalition for Renewable Natural Gas (CRNG) trade group “intend to have 500 RNG facilities operational by 2025 and 1,000 facilities online by 2030, building to a long-term goal to capture and control methane from 43,000 aggregated organic waste sites across the continent by 2050.”²¹ According to facility data provided by the CRNG, there are currently 487 biomethane facilities in the United States and Canada collectively, of which 153 are located in California. Of the 153 facilities located in California, 75 of them are operational.

To meet the short-term target of 17.6 Bcf annually, as mandated by the Decision, and assuming that on average a diverted organic waste facility produces 400 MMBtu per day, we estimate 125 operating facilities will be needed. This will require 50 additional operating facilities, considering 75 facilities are already operational. From the 125 operating facilities, 70 would be needed for SoCalGas and SDG&E, collectively. As it relates to the 2030 medium-term targets, assuming an average production rate of 550

¹⁹ *Id.*, OP 27 at 62.

²⁰ Platts, S&P Global Commodity Insights, Volume 39, Issue 239, December 14, 2022, at 3.

²¹ *Id.* at 5.

MMBtu per day for a biomethane facility, 376 facilities (inclusive of short-term targets) for California (224 facilities for SoCalGas and SDG&E, collectively) will be needed. A recent study²², shows that there are currently 1,146 landfills and composting facilities in California. This confirms that there is enough feedstock in the State to support the expected growth of biomethane facilities in California needed to meet the medium-term target.

SoCalGas's Request for Information (RFI), conducted in April 2022 indicated that 72% of participants could deliver biomethane by 2024 or after. According to the specific feedback received from RFI respondents, permitting, pipeline interconnections, and costs associated with project development in California were considered to be the biggest hurdles for most project developers. An expeditious regulatory approval process should help streamline the procurement process and recovery of the associated costs and, provide this evolving market with the stability and certainty it needs.

²² Duren, R.M., Thorpe, A.K., Foster, K.T. et al. California's methane super-emitters. *Nature* 575, 180–184 (2019).

III. Procurement Methodology

a. General Description of Procurement Methodology

SoCalGas²³ plans to issue at least one annual solicitation for biomethane contracts, however, bilateral contracts may also be used. In its formal solicitation process, SoCalGas will issue a formal Request for Offer (RFO) on its procurement website to solicit offers from biomethane suppliers. Each RFO will establish a framework setting out the protocols for compliance purposes, including eligibility requirements, terms and conditions, a standard biomethane contract, schedule, bid evaluation and selection criteria, which are described in more detail below. SoCalGas will host a pre-bid conference for all participants considering making an offer into the solicitation prior to the submittal deadline. Selected contracts will be presented to SoCalGas's Procurement Advisory Group (PAG) for feedback and subsequently submitted to the Commission for final approval. All contracts will include a provision that Commission approval is a condition precedent to the obligation to perform under the contract.

Alternatively, bilateral negotiations involve direct communication between SoCalGas's procurement team and the biomethane suppliers to agree upon key contract terms and conditions. PAG updates will also include status updates on bilateral negotiations.

Regardless of the procurement methodology (bilateral vs. solicitation) and prior to contract submittal to the Commission, all available projects will undergo the process described below.

Initial Considerations: This step will include the internal evaluation of the available projects considered for contract recommendation based upon the following criteria:

- Gathering of information on candidate projects.

²³ D.07-12-019 authorized the consolidation of the core portfolio for SoCalGas and SDG&E into one single portfolio managed by SoCalGas.

- Determination that the project is cost-effective while meeting the requirements of the Decision.
- Verification that the project is viable with respect to financing, permitting, timing, likelihood of completion, confidence in the operating management team, and compliance with applicable internal controls and risk management policies.
- Assessment of whether the incremental costs of biomethane from a project adhere to predetermined thresholds for expected impacts to bundled core customer bills. Projects with incremental costs exceeding these thresholds may receive additional scrutiny (*e.g.*, gathering and analysis of additional market information.)
- Determination that biomethane costs comply with the standard cost control mechanisms.

Negotiation of Terms and Conditions: This step will comprise negotiations with the project developer to agree on key terms and conditions. Some of the considered items include, but are not limited to, the variation in actual flows (normal daily, seasonal, or abnormal), the maintenance schedule, firmness of the supply, and process to rectify discrepancies.

Contracting: This step will include the finalization of all terms and conditions to be included in a procurement contract. The contract will be final upon Commission approval.

PAG: Once a contract has been fully negotiated between SoCalGas and the biomethane supplier, it will be presented to the PAG for feedback. Details are provided in section III below.

b. Project Priorities and Evaluation per D.22-02-025:

i. SBPM Cost-Effectiveness (See Appendix A)

The cost-effectiveness test is defined in the Decision as the SBPM. Essentially, the SBPM objectively scores the degree of cost-effectiveness of biomethane purchases relative to conventional natural gas, taking into account the reduction of greenhouse gas (GHG) emissions and other avoided costs associated with the production of biomethane;

thus, the terms “SBPM” and “cost-effectiveness test” are used interchangeably. In addition to assessing cost-effectiveness, the SBPM also takes into consideration whether a project meets the minimum non-monetary requirements outlined in the Decision.

The SBPM will be the first and most important tool to assess whether a project should be considered for procurement. It will be a determinative tool to identify the projects that meet the Decision’s biomethane procurement requirements, while comparing the relative cost-effectiveness of each qualifying project. This tool will enable the utilities to prioritize procurement contracts among qualifying projects. Accordingly, there may be instances where the purpose of the cost-effectiveness test would be to objectively compare a proposed project to the biomethane market to make a determination whether the project should be considered for procurement.

Additionally, biomethane production in the State of California for non-transportation use is nascent and there is currently no biomethane market to use as a price reference. Therefore, the economics of the market will be shaped as the biomethane market evolves. These market signals will be based on information gleaned from origination efforts (market research, RFIs, RFOs, bilateral discussions, and market participation) in the same manner that conventional natural gas market characteristics are identified through conventional procurement activities.

A detailed explanation of the SBPM is provided in Joint Utilities AL 4626-G (See Appendix A). The general model will be utilized by the Joint Utilities that are procuring biomethane pursuant to the Decision. Some of the parameters within the SBPM may differ among members of the Joint Utilities, depending on each utility’s internal priorities and procurement strategies. In application, the SBPM focuses on comparing the cost-effectiveness of projects versus one another and the expected future market. The cost-effectiveness test will also help determine whether projects meet the requirements of the Decision, and if so, what their priority should be. The determinative considerations are cost of the biomethane combined with other non-economic (environmental, social, and community) benefits.

ii. Non-Economic Benefits

While many environmental, social, and community benefits are identified and utilized in the SBPM framework, some additional non-economic benefits may not readily fit into the structure. The additional value of these benefits will nonetheless be recognized in the project selection process and will help determine which projects should be considered for procurement. For example, a project may function as a proof of concept that encourages financial backing for other similar projects of its kind, thereby leading to further growth and development of the biomethane market. Evaluating the indirect benefits from such projects will be an essential step of the procurement decision-making process.

iii. Criteria Used in the RGPP to Verify Project Viability, High Uptime, and Accurate Deliverability of Promised Volume of Biomethane

Project viability is one of the key factors that must be considered when evaluating whether a project should be recommended for procurement. A project may be effectively disqualified from consideration due to a lack of viability despite being cost-effective and having a favorable environmental benefits profile. Project viability may be impacted by a deal structure that materially increases the probability of exceeding risk thresholds or planned impacts to customer bills. Ideally, known risks to the viability of a project will be identified prior to selecting a project for procurement.

In addition to project viability, project uptime and consistent delivery of contracted biomethane volumes are desirable characteristics of biomethane projects to be considered for procurement. When possible, a project's expected uptime and deliverability (*e.g.*, performance history of the supplier or of the specific project) will be considered in the project selection process.

iv. Procedure Needed to Ensure Additionality and Verifiability

Newly developed greenfield projects will meet the additionality requirement by default. However, if the biomethane is procured from existing facilities, procedures described in the SBPM will confirm that the additionality requirement is met. Furthermore, additionality will be verified annually, through attestations from the biomethane suppliers.

c. Contract Approval Process

i. Reference Ordering Paragraph (OP) 13 of D.22-02-025 (*i.e.*, the three-tier Advice Letter approval process)

OP 13 in the Decision requires the CPUC to process individual contracts to procure biomethane through a three-tier AL approval process. Prior to AL submittal, the projects will have undergone the scrutiny described above. The AL filing process entails a three-tier process based on contract pricing. (See Appendix B.)

d. Procurement Advisory Group (PAG)

Upon reaching acceptable deal terms, proposed contracts will be presented to the PAG as defined in the Decision and guided under the PAG Guidelines. PAG participation is voluntary and serves as a vehicle for informal oversight and transparency for procurement. The PAG meetings will be held with SoCalGas's core procurement team and will allow for prompt feedback on biomethane procurement materials and processes. Membership of the PAG, subject to approval by the Energy Division, will include Energy Division staff and non-market participants with relevant industry awareness who will preview the contracts prior to SoCalGas's filing of the respective ALs. PAG members will receive an overview of procurement activities related to SB 1440 procurement targets, review the application of cost-effectiveness model and resulting project ranking criteria and contract selection results.

IV. Risk Environment

a. Discussion of Risk Environment

The main purpose of market risk management is to identify and mitigate the impacts of performing market activity while achieving portfolio objectives. This approach promotes efficient decision-making while creating realistic expectations in the market. The key objective of this section is to examine risks identified in the California biomethane market today. Given the long-term aspect of this procurement mandate, this list will not be inclusive and will evolve as the market develops further. SoCalGas plans to closely monitor the market as it evolves to strategically mitigate newly identified risks.

Biomethane Commodity: Market risk is the risk of erosion of cash flows or asset values from positions in physical commodities or energy derivatives caused by fluctuations in prices, volumes exchanged, basis differentials, forward price curves, price volatilities, interest rates or passage of time. Because biomethane projects in California are part of an emergent, nascent, and illiquid market, SoCalGas anticipates achieving procurement targets primarily through the execution of long-term, fixed-price contracts. Execution of long-term, fixed-price contracts will allow developers to seek and obtain financing for greenfield projects and upgrade operations at existing biomethane production facilities. Price risk and credit risk are a few of the risks associated with biomethane commodity and its development.

Supply Variability: Counterparty performance, delivery and volumetric risks are a few of the identified risks associated with supply variability. These variabilities could result from feedstock quality changes of a facility (due to occurrences outside the control of the facility owner and operator) or challenges with feedstock deliverability (associated with a facility's upstream contracts with waste haulers.) Due to supply variability, SoCalGas anticipates that a potential disruption of firm supply availability could delay or, in some cases, prevent the counterparty from meeting contractual obligations and meeting its delivery obligations. Operational challenges or other dynamic factors associated with biomethane production per feedstock variability could also result in supply inconsistencies.

Regulatory Developments: The biomethane market in California requires regulatory certainty to be able to support the CPUC's procurement requirements with long-term contracts and by the prescribed target dates. The market continues to evolve, requiring the regulatory framework to also evolve with it, and it is critical to successful market development that the governing regulatory entities (such as the CPUC) approve changes that support market development and promote project viability. To the extent practical, a forward-looking approach should be adopted that does not jeopardize the ability of a previously approved facility to help meet the procurement targets of its off taker.

Regulatory uncertainty is a key concern for many project developers. Hence, continued legislative and regulatory support could positively impact this dynamic market.

Project/Interconnection Development: Greenfield projects under development require numerous permits, financing, and pipeline interconnections to achieve key milestones of project development such as construction completion before achieving their commercial operating date (COD). If these requirements are not achieved in a timely manner, a project's viability to meet its COD may be hindered, which could challenge the off-takers ability to meet its procurement obligations. Hence, streamlining the permitting approval process, prioritizing interconnection development, and standardizing key processes may significantly help project developers meet their obligations.

Credit and Financial Impacts: Debt equivalence, liquidity and cash flow constraints are a few of the identified potential financial risks that need to be consistently monitored as SoCalGas starts growing its biomethane long-term portfolio. For example, rating agencies may include long-term fixed financial obligations such as biomethane supply purchase agreements in their credit risk analyses. These obligations may be treated as additional debt during the rating agencies' financial assessments. Additionally, the timing between cash outlays for biomethane supply versus the collection of these costs in rates may constrain liquidity and cashflow support of on-going trading activities if not monitored effectively. As SoCalGas executes an increasing number of long-term biomethane procurement contracts we will continue to abide by our credit risk

governance framework, which includes review of counterparty credit exposure, long-term cashflow needs and financial implications of long-term procurement.

Technology Challenges: As described in Section II, biomethane producers are required to track volumetric injections into pipelines through platforms such as M-RETS. This tracking will be used to calculate potential gas production based on tons of organic waste.²⁴ Similarly, SoCalGas intends to use M-RETS or a similar tracking platform for an environmental attribute registry as well as tracking organic waste tonnage. Third-party systems can experience technical challenges that could make them unreliable. To the degree such challenges are experienced, our reliance on using such systems could complicate the compliance process and transparent tracking of the procurement targets.

²⁴ See D.22-02-025 at 50.

V. Cost Control Mechanisms

Consistent with the Commission's Affordability Rulemaking, cost considerations are a critical component of the biomethane procurement process at SoCalGas. Joint Utilities developed a framework to procure cost-effective biomethane supplies for their customers. The SBPM serves as the first guardrail to help measure the value of each contract, given its socioeconomic benefits.

As described in Section III, the SBPM will assess the monetary as well as non-monetary benefits of a project. Establishing a standardized process across utilities provides a consistent procurement approach to prioritize contracts that are cost-effective, meet the project viability criteria, and offer environmental benefits consistent with the goals set in the Decision that also cover each gas utility's needs.

In addition, all biomethane procurement contracts will be submitted to the Commission for approval by AL at tiers determined by the cost of each contract. The three-tier AL process provides a market signal to market participants as it reflects the average market cost associated with biomethane and could be utilized as a second guardrail for cost containment. The suggested tiers may serve as a guiding tool to assess available projects, which include (1) Tier 1 AL, capped at \$17.70/MMBtu, (2) Tier 2 AL, reflecting contracts priced higher than \$17.70 but not exceeding \$26/MMBtu, and (3) Tier 3 AL set for any contracts priced above \$26/MMBtu.

While SoCalGas believes that the three-tier AL process is useful, it will be important for the CPUC to establish a process by which the thresholds associated with each advice letter tier are updated to reflect relevant market information. For example, the \$26/MMBtu was calculated in 2020 dollars using the federal Interagency Working Group's (IWG) social cost of methane²⁵ in 2020 under the 3% discount rate scenario. This cost reflects "the value of all climate change impacts, including (but not limited to) changes in net agricultural productivity, human health effects, property damage from

²⁵ Social cost of methane measures the monetary value of the net harm to the society associated with adding a small amount of methane to the atmosphere in a year.

increased flood risk natural disasters, disruption of energy systems, risk of conflict, environmental migration, and the value of ecosystem services.”²⁶ Considering its significant impact in addressing GHG emissions, SoCalGas recommends that this cost be inflation-adjusted to its present value as of the date of the AL filing for all three AL tiers. Similarly, SoCalGas recommends that this value be inflation-adjusted over the contract flow period to more accurately reflect its value. A robust process should be established to true-up these thresholds at least annually so that the social cost of methane reflects the most up-to-date analysis.

As noted previously, in 2025, the Commission will revisit the procurement targets and adjust as necessary in response to market conditions. We believe that this evaluation should consider a review of the market at that time including executed contracts, opportunities and challenges that hinder project viability, market liquidity, environmental benefits, and overall market conditions. This approach will also provide an opportunity to determine the optimal price for biomethane and to assess the approach to an overarching cost containment mechanism for customers.

SoCalGas recommends relying on the continuous monitoring of bill impacts at the time of contract execution, both on a per contract basis and cumulatively as SoCalGas progresses toward achieving the 2025 procurement goal. This will allow for the biomethane market to naturally evolve, grow, and pave the path to achieving California’s environmental goals. It is also worth noting that biomethane procurement is expected to be exempt from California’s cap-and-trade compliance obligation.²⁷ Therefore, the increase of biomethane procurement will reduce the cap-and-trade compliance expense and alleviate the cost of biomethane to core customers.

²⁶ See D.22-02-025 at 9.

²⁷ Emission sources without a compliance obligation are in Section 95852.2(a)(8) of the cap-and-trade regulation: Biomethane and biogas from the following sources: (A) All animal, plant and other organic waste; or (B) Landfills and wastewater treatment plants.

To further align ourselves with the Commission’s directives, while prioritizing affordability for our customers, SoCalGas plans to be fully engaged in the new rate-setting proceeding addressing cost allocation issues with regard to biomethane procurement. The draft Order Instituting Rulemaking (OIR) to address Biomethane Procurement Cost Allocation issued in December 2022 will address above market cost allocation to core and non-core customers. While the Decision authorizes the Joint Utilities to recover biomethane procurement costs from their bundled core gas customers, the environmental benefit of decreasing Short Lived Climate Pollutants (SLCP) emissions from organic waste streams is shared by all customers. This new OIR will consider the transportation and distribution costs avoided by procuring biomethane produced in California in place of fossil gas produced out-of-state. These avoided costs, as well as any avoided cap-and-trade costs that result from biomethane procurement, should be considered in determining the customer cost allocation for biomethane procurement. Another issue the draft OIR considers is potential allocation of a portion of the Joint Utilities’ above-market biomethane procurement costs to Core Transport Agent (CTA) customers, unless or until the legislature imposes a similar biomethane procurement obligation on the CTAs.

SoCalGas is committed to taking the necessary steps to develop a biomethane portfolio comprised of cost-effective biomethane contracts on behalf of its customers.

VI. General Contract Requirements

a. General Contract Requirements per D.22-02-025

Consistent with industry, and the sale and purchase of natural gas, SoCalGas will utilize the North American Energy Standards Board's (NAESB) Base Contract with an RNG addendum, also referred to as RNG Transaction Confirmation, to contract with biomethane suppliers. The NAESB Contract is a standard form contract developed by the NAESB that is widely used throughout the natural gas industry. The Transaction Confirmation, subject to the Base Contract between the parties, will include special provisions related to biomethane procurement. Some of these including special provisions that cover the compliance requirements established by the Decision are specified below.

Verifiability: In order to ensure that the gas delivered is biomethane, suppliers will be required to provide RTCs representing the environmental attributes for one MMBtu of renewable energy and issued by M-RETS, or other approved tracking system, for all biomethane purchased under the contract. The RTCs are to be provided to SoCalGas by the 25th day of the month following the delivery month. Otherwise, delays could adversely impact the payment or make the contract void or voidable, notwithstanding delivery of physical gas.

Feedstock Requirements: Suppliers will be required to provide information on the feedstock the biomethane is derived from so that SoCalGas can (a) monitor throughout the life of the contract any changes in the SBPM cost-effectiveness score that was used in the initial evaluation of the biomethane, (b) monitor that the biomethane is produced from organic waste diverted from landfills, a requirement applicable to the short-term procurement target, (c) track the tonnage of diverted organic waste, and (d) monitor that biomethane purchased from landfill feedstock is limited to facilities that do not accept new organic waste and that implement advanced landfill gas capture automation and monitoring technology to decrease fugitive methane emissions, as directed by the Decision and applicable to medium-term procurement targets. These verifications will be

captured through a notarized attestation by the supplier on an annual basis. In addition, the supplier will be required to provide the project's current carbon intensity (CI) on an annual basis. This value must be verified by an accredited verification entity. The CI score along with other factors will be used to assess the cost-effectiveness score of the project. If it is determined that the cost-effectiveness score has changed, the contract price may be renegotiated to reflect the new economics. Otherwise, SoCalGas may terminate the contract. Moreover, the supplier will be required to provide SoCalGas with a monthly report on the tipping weight.

Deliverability and/or Performance Obligations: Biomethane purchased under the contract is to be delivered on a firm basis. This means that deliveries may only be interrupted during force majeure events without being subject to performance remedies. If the supplier fails to deliver the biomethane contract quantity for reasons not excused by force majeure, SoCalGas has the right to purchase replacement biomethane and recover any unfavorable difference between the cost of the replacement biomethane and the contract price from the supplier. If replacement biomethane is not available, then the market price of biomethane will be used to calculate the amount, if any, that is owed to SoCalGas.

Quality and Operational Recommendations: Suppliers will be required to provide SoCalGas an annual notarized affidavit attesting to the following quality and operational requirements by the Commission. In the event the supplier fails to provide this attestation, SoCalGas will have remedies that may include contract termination.

Hydrogen Sulfide Limit: Suppliers will be required to monitor and limit the hydrogen sulfide in the Projects gathering lines to ten parts per million.

Prohibition of Diesel Vehicles: All Class 8 trucks purchased or leased for use in the production of RNG at the Project after February 25, 2022, will have to be near-zero emissions (NZE) or zero emissions (ZE) vehicles. All NZE vehicles will be required to comply with the California Air Resource Board (CARB) regulations for ultra-low nitrous

oxide vehicles, and all gas-powered vehicles exclusively should use bio-compressed natural gas.

On-Site Generator Restrictions: The supplier will be required to use only non-combustion technologies for electric generation at the Project site.

Restricted Dairy Supply: The project facility will be required to operate in a manner that does not cause adverse impacts to water and air quality. The supplier will be required to confirm that the project facility has not been subject to citations for a violation of rules, regulations, laws, or other requirements for the protection of air or water quality or that the project facility has no outstanding order that requires it to remedy a discharge of air or water pollutants received from a state or local regulatory agency.

Electric Generation Infrastructure: The supplier will be required to confirm that there is no combustion generating any electricity on the project site using its biogas after the execution date of the contract. All electric generation after this date will use either biomethane or biogas that has been partially treated to reduce constituents of concern such as siloxanes and hydrogen sulfide, in a non-combustion technology (*e.g.*, on-site fuel cell stack).

Tipping Fees: Consistent with the Decision, the supplier will bear the risk of any changes in tipping fees.

Methane Leak Standard: On a quarterly basis, suppliers will provide SoCalGas with a written report on the results of a methane leak survey of the project facilities performed by a mutually agreed upon third party verifier. The supplier will repair any methane leaks detected during the quarterly survey within ten business days and provide documentation to SoCalGas substantiating the repairs shortly thereafter. Should the supplier fail to provide the methane leak survey results or the repair documentation, or fails to repair detected methane leaks, SoCalGas will have the right to refuse delivery of the biomethane until the documentation is received or the repair is made.

b. Standardized Elements of Contracts

In addition to the provisions above, reflecting some of the key requirements set by the Decision, SoCalGas's contracts for the procurement of biomethane will contain standard contract terms and conditions such as credit requirements, force majeure, terminations rights, confidentiality, warranties, and reporting. All contracts will include a condition precedent that require the Commission's approval before obligation to perform under the contract becomes due. In the event the Commission recommends modifications that change the commercial aspects of the transaction the parties will either renegotiate these terms in good faith or terminate the contract.

VII. ANNUAL REPORTING

Pursuant to the Decision, annual reporting previously required by D.15-06-029, as modified by D.16-12-043, is updated to include accounting for detailing actual biomethane procurement levels, ratepayer bill impacts, and incremental capital-related costs and/or operations and maintenance costs for the prior year compared to the estimated levels that were approved in their respective RGPPs.

In opening comments on the Administrative Law Judge's Ruling Seeking Comments Regarding Continued Biomethane Procurement Reporting issued on July 18, 2022, the Joint Utilities recommended (a) continuation of the biomethane interconnection and incentive report currently due annually on January 15 through January 2027, (b) commencement of the new biomethane procurement report on May 1, 2024 and submission of this report annually on May 1 thereafter, and (c) separate submission of these two biomethane reports, as each report serves different purposes and/or timing considerations.

The Joint Utilities recommended that the first annual RNG Procurement report should be submitted on May 1, 2024, for the full 2023 calendar year and annually each May 1 thereafter. The Commission should assess the continuation of the utilities' annual RNG Procurement reporting obligation when the Commission commences its planned review in 2025, after the utilities submit at least one annual RNG Procurement report. Submission of the annual RNG Procurement report in May will allow each utility to complete end-of-year invoicing, settlement, reconciliation, and quality assurance of procurement data prior to finalizing its report to the Commission.

Pursuant to the Decision 22-12-057, issued on December 19, 2022, the Joint Utilities shall file annual reports with the following biomethane information starting May 1, 2024: (a) details of actual biomethane procurement levels; (b) ratepayer bill impacts; (c) incremental capital infrastructure and/or operations and maintenance costs for the prior year compared to the estimated levels that were approved in their respective RGPPs; (d) impacts on disadvantaged communities; (d) related vehicle emissions; (e)

emissions regarding carbon monoxide, carbon dioxide, and hydrogen sulfide; (f) water and air quality impacts from a state or local regulatory agency on nearby communities; (g) air and water pollution and purpose-grown crops control standards attestation; (h) waste byproducts used; (i) and methane leaks and related information.

Appendix A: Standard Biomethane Procurement Methodology (SBPM)

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



December 28, 2022

PG&E Advice Letter 4626-G
SoCalGas Advice Letter 6003-G
SDG&E Advice Letter 3089-G
SWG Advice Letter 1222-G

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Subject: Staff Disposition of PG&E Advice Letter 4626-G, SoCalGas Advice Letter 6003-G, SDG&E Advice Letter 3089-G, SWG AL 1222-G Standard Biomethane Procurement Methodology Pursuant to Decision 22-02-025.

Dear Mr. Dietz:

Pacific Gas and Electric Company (PG&E), Southern California Gas Company (SoCalGas), San Diego Gas & Electric Company (SDG&E), and Southwest Gas Corporation (SWG) (collectively, the Joint Utilities), submitted a jointly filed Advice Letter (AL) 4626-G, AL 6003-G, AL 3089-G, and AL 1222-G, pursuant to Ordering Paragraph 2 of Decision (D.) D.22-02-025, which orders the utilities to file Tier 2 ALs within three months of hosting public workshops to establish a Standard Biomethane Procurement Methodology. The Joint Utilities have explained to our satisfaction that they have met the requirements set forth in D.22-02-025. PG&E AL 4626-G, SoCalGas AL 6003-G, SDG&E AL 3089-G, and SWG AL 1222-G are approved with an effective date of December 22, 2022.

Attachment A contains a detailed discussion of the AL, protests, reply, and staff's determination that the AL is compliant with D.22-02-025.

Please contact Christopher Arroyo of the Energy Division staff at christopher.arroyo@cpuc.ca.gov, if you have any questions.

Sincerely,



Leuwam Tesfai
Deputy Executive Director for Energy and Climate Policy/
Director Energy Division

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Service List R.13-02-008

ATTACHMENT A
Background and Disposition for
PG&E Advice Letter 4626-G
SoCalGas Advice Letter 6003-G
SDG&E Advice Letter 3089-G
SWG AL 1222-G

Background

On February 24, 2022, the California Public Utilities Commission (CPUC) approved Decision (D.) 22-02-025, adopting a biomethane procurement program for California's four large Investor-Owned Utilities (IOUs). Ordering Paragraph (OP) 2 of that Decision states:

Within three months of the cost-effectiveness test workshop, Southern California Gas Company, Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southwest Gas Corporation shall include results of the workshop and address feedback received at the workshop in Tier 2 Advice Letters establishing a Standard Biomethane Procurement Methodology.

The requisite workshop was held on April 5-6, 2022.

Pacific Gas and Electric Company (PG&E), Southern California Gas Company (SoCalGas), San Diego Gas and Electric Company (SDG&E), and Southwest Gas Corporation (SWG) (collectively, the Joint Utilities), submitted a jointly filed Advice Letter (AL) 4626-G, AL 6003-G, AL 3089-G, and AL 1222-G on July 5, 2022 in response to the above requirement.

The Joint Utilities were timely in submitting their jointly filed AL 4626-G, AL 6003-G, AL 3089-G, and AL 1222-G (collectively, PG&E AL 4626-G et al) to establish a cost-effectiveness test for a Standard Biomethane Procurement Methodology (SBPM).

Protest by Environmental Defense Fund

On July 25, 2022, Environmental Defense Fund (EDF) submitted a protest letter in response to PG&E AL 4626-G et al. OP 9 of D.22-02-025 states that the SBPM must include "a provision requiring livestock and dairy biomethane facilities that contract with a gas IOU to operate in a manner that does not cause adverse impacts to water and air quality." To comply with this provision, PG&E AL 4626-G et al proposes an annual officer attestation that each contracted "facility complies with all applicable federal, state, and local air and/or water pollution control standards or requirements, describing any incident of noncompliance, the cause, and when and how it was resolved." EDF believes this proposed verification method does not meet the requirements in D.22-02-025 since the CPUC's decision states that any SBPM must go beyond simply meeting the threshold statutory requirements and should consider a variety of factors, including short-lived climate pollutant (SLCP) reductions, carbon intensity, and air quality impacts for disadvantaged communities. EDF recommends that the facility, if selected for evaluation, submit an analysis of water and air quality impact and demographics and distances from communities near the project.

EDF states that the CPUC’s decision requires procurement decisions to consider the non-energy and non-greenhouse gas impacts of biomethane production, including wastewater treatment facilities and landfills. Additionally, the statute requires the CPUC to find a cost-effective means, implying that non-monetary factors such as the impacts to water and air quality should be active and important considerations in the SBPM. A passive binary verification suggested in AL may work as an initial screen for determining whether a facility could be evaluated but its insufficient.

EDF’s position is that the SBPM should be modified to include: (1) an annual attestation that livestock and biomethane facilities comply with all applicable federal, state, and local air and/or water pollution control standards or requirements, (2) an annual attestation and verification that organic waste and wood waste are diverted from landfill, (3) hydrogen sulfide verification should be revised to include “supporting testing reports” that hydrogen sulfide is “under” 10 parts per million (ppm), (4) a specific data source for the hub spot price, (5) the identification of which criteria will require certification and reporting to address counterparty noncompliance, and (6) an annual attestation instead of a one-time attestation for producers that use their own biogas for “on-site combustion generation of electricity” is capped at current generation levels.

Protest by Food and Water Watch and Leadership Council for Justice and Accountability

On July 25, 2022, Food and Water Watch and Leadership Council for Justice and Accountability (FWW/LCJA) submitted a protest letter in response to PG&E AL 4626-G et al. FWW/LCJA state that the AL does not comply with requirement set in D. 22-02-025. To comply with the livestock biomethane no adverse impact safeguard, the AL states it would establish a prerequisite framework intended to screen out procurement options before applying the SBPM’s cost-effectiveness analysis. FWW/LCJA support this approach to the extent it creates a threshold prerequisite, but believe that the proposed method of verification inappropriately uses permit compliance as compliance with the CPUC’s environmental justice safeguard. Permit oversight and compliance does not preclude a large dairy or other livestock facility from affecting local water and air quality.

FWW/LCJA’s position is that the SBPM does not adequately control for air and water quality impacts, nor does it effectuate environmental justice safeguards. FWW/LCJA believes that the IOUs must conduct additional controls, including: (1) annually solicit assurance from the Regional Water Board and Regional Air District to know that the particular facility is not adversely impacting air or water quality, (2) hold annual listening sessions near each dairy and biomethane production facility, and (3) condition continued biomethane procurement on the producers’ maintenance of no adverse impact.

Response from Dairy Cares

On July 25, 2022, Dairy Cares submitted a response to PG&E AL 4626-G et al. Dairy Cares states that D.22-02-025 requires the IOUs to avoid procuring dairy biomethane from sources that have unresolved environmental citations and ensure that digester projects are not operated in a manner that adversely impacts local air or water quality. They note that PG&E AL 4626-G et al would establish an annual attestation for eligible biomethane producers to attest that the digester project complies with local laws. They further state that the requirement for an annual attestation is commercially reasonable insofar as it provides a biomethane producer an opportunity to verify and comport with the requirements of OPs 9 and 20 throughout the duration of the contract. Dairy Cares believe that an ongoing requirement will help

ensure that dairy biomethane producers build digester projects with environmental controls and not adversely affect local communities.

Dairy Cares state that air and water quality impacts should be limited to the biomethane production facility such that the rest of a larger livestock facility is excluded and encourage the IOUs to ensure that solicitation guidelines provide potential bidders with an opportunity to document the various environmental benefits of dairy digester projects and how projects will improve existing baseline environmental conditions caused by manure and other waste streams.

Joint Utilities' Reply to Protest and Response Comments Submitted by Environmental Defense Fund, Food and Water Watch and Leadership Counsel for Justice and Accountability, and Dairy Cares

On August 1, 2022, the Joint Utilities filed a reply to the protests by EDF and FWW/LCJA and the response from Dairy Cares of PG&E AL 4626-G et al. First, they state their support of additional reporting requirements for air and water quality. However, the Joint Utilities believe the reporting requested by parties is better suited for each utility's respective Procurement Advisory Group (PAG), and every two years thereafter along with the annual attestation.

Second, they state that FWW/LCJA's requested reporting from the Regional Water Board and Regional Air District that the facility is not adversely impacting air or water quality may become un-workable and the bi-annual reporting proposed above along with participation in the PAG are adequate in gathering information on environmental impacts. The Joint Utilities do not support this recommendation as it is unclear if they have any authority to require annual efforts by those entities.

Third, the Joint Utilities address the LCJA/FWW comment that the facility in question should not be limited to, for example, a biogas upgrading facility, but should include the factory farms where manure feedstock is generated and then used for biomethane production. The Joint Utilities state that they do not intend to expand the scope of the SBPM or Renewable Gas Procurement Plan (RGPP) beyond the dairy biomethane facilities.

Fourth, the Joint Utilities contend that EDF's proposed modifications for additionality, purpose-grown crops, hydrogen sulfide limits, and capping on-site combustion generation of electricity are better suited for the valuation phase of the procurement process in each utility's RGPP and contracts with each facility.

Fifth, the Joint Utilities are opposed to EDF's recommendation for more transparency regarding the SBPM's all-in cost of conventional gas. The Joint Utilities explain that each utility has proprietary forward price curves used for valuing prospective procurement contracts and argue that using public data sources could undermine the Joint Utilities' ability to procure the most cost-effective biomethane. Further, they point out that each utility's PAG will have an opportunity to review the proprietary forward price curves.

Finally, EDF states that the Joint Utilities have not yet addressed the cure periods and consequences of failing to meet the requirements of the program after contract execution. The Joint Utilities responded that each gas utility will address cure periods and remedies in the terms and conditions of the executed

contract between the gas utility and the biomethane project/facility developer. Confidential contract terms will be presented to each utility's PAG for review.

Disposition

Energy Division Staff (Staff) reviewed PG&E AL 4626-G, SoCalGas AL 6003-G, SDG&E AL 3089-G, and SWG AL 1222-G, protests from EDF and FWW/LCJA, the response from Dairy Cares, and the Joint Utilities' reply to protest and response comments. Staff find that PG&E AL 4626-G et al complies with the requirements ordered in D.22-02-025.

More specific to the protests regarding livestock and dairy biomethane facilities, the SBPM fulfills OP 9 by including a provision to prevent adverse impacts from livestock and dairy biomethane facilities (SBPM Prerequisites: "Livestock and dairy biomethane facilities that contract with a gas IOU shall operate in a manner that does not cause adverse impacts to water and air quality"). The SBPM further addresses the prohibition on procurement from facilities with unresolved citations or outstanding orders to remedy violations (SBPM Prerequisites: "Biomethane procurement volumes produced from a dairy facility and delivered after 2025 must not have an unresolved citation for violation of rules or requirements for protection of air or water quality from state or local regulatory agencies"). The Joint Utilities satisfactorily argue that the requests in the protests are better suited for either the PAG, the procurement contract between the utility and the biomethane producer, and/or the valuation phase of the procurement process in each utility's RGPP.

EDF raises the issue of the SBPM's analysis with respect to nearby communities. They state that the cost-effectiveness test should factor in "*demographics* of and *distances* from communities near the project" (EDF protest at 4, emphasis added). Staff finds that the SBPM already considers distances between communities and the project (SBPM Part B, "Project in a remote location"). There may be an opportunity for consideration of demographics and other disadvantaged community recognition using CalEnviroScreen. However, the substance of a CalEnviroScreen analysis is also better suited for the PAG.

EDF requests changes to multiple attestations (e.g., organic waste diversion affirmation, restrictions on hydrogen sulfide, and capping on-site generation of biogas) and clarifications regarding contract specifics (e.g., conventional natural gas prices and counterparty noncompliance). Staff agree with the Joint Utilities that these matters are better addressed in each utility's PAG, in contractual agreements between utilities and biomethane producers, or in the valuation phase of the procurement process in each utility's RGPP. Should these other venues prove unable to resolve EDF's concerns, the Commission will revisit the procurement process and order any necessary refinements as part of the new proceeding to be opened pursuant to OP 21 of D.22-02-025.

Staff conclude that matters raised in protests do not require further refinement to the SBPM and can be addressed by each utility's PAG, in contractual agreements between utilities and biomethane producers, and/or in the valuation phase of the procurement process in each utility's RGPP. Therefore, the protests filed by EDF and FWW/LCJA are rejected and PG&E AL 4626-G et al. is approved.

July 5, 2022

Advice 4626-G

(Pacific Gas and Electric Company ID U 39 G)

Advice 6003-G

(Southern California Gas Company ID U 904-G)

Advice 3098-G

(San Diego Gas and Electric Company ID 902-G)

Advice 1222-G

(Southwest Gas Corporation ID 905-G)

Public Utilities Commission of the State of California

Subject: Standard Biomethane Procurement Methodology Pursuant to Decision 22-02-025.

Purpose

Pursuant to Decision (D.) 22-02-025 (Decision) Implementing Senate Bill (SB) 1440 Biomethane Procurement Program, Ordering Paragraph (OP) 2, Pacific Gas and Electric Company (PG&E), Southern California Gas Company (SoCalGas), San Diego Gas and Electric Company (SDG&E), and Southwest Gas Corporation (SWG) (collectively, the Joint Utilities) submit their Standard Biomethane Procurement Methodology (SBPM) via a Tier 2 Advice Letter.

Background

On February 25, 2022, the California Public Utilities Commission (Commission) issued D.22-02-025. This Decision implements SB 1440 by setting biomethane (renewable natural gas (RNG) and/or bio-synthetic natural gas (bio-SNG)) procurement targets for the Joint Utilities' core customers to reduce short-lived climate pollutant emissions and adopts provisions to achieve additional co-benefits, as well as timetables for each investor-owned utility providing gas service in California to achieve specified procurement targets.

On April 5-6, 2022, the Joint Utilities hosted a two-day workshop on cost effectiveness for the SBPM in compliance with OP 1.¹ The workshop included panelists from the Joint Utilities, environmental advocates, social justice advocates, biomethane producers and consumer advocates.² Following each panel's presentations, a Question & Answer session was conducted, and participants were invited to submit questions and/or provide comments.^{3,4}

The 2-Day workshop addressed the following questions:

Question 1: What specific items should be required in the SBPM cost-effectiveness test?

Question 2: How should Carbon Intensity (CI) be measured in the SBPM cost-effectiveness test?

Question 3: What criteria shall be used in a modified GREET model⁵ and who shall be tasked with developing the model?

Question 4: What cost control mechanisms such as above market cost caps or rate increase limits should be used for each gas investor-owned utility (IOU)?

Question 5: What criteria shall be used in a preliminary cost effectiveness test while a modified GREET model is being developed?

Question 6: Discussion of environmental justice and community benefits related to biomethane procurement.

Question 6a: How do IOUs ensure that dairy biomethane facilities are not causing adverse impacts to water and air quality?

¹ OP 1 states, "Southern California Gas Company, Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southwest Gas Corporation shall host a workshop on cost-effectiveness within 45 days of the effective date of this decision. The workshop agenda shall be based on the discussion in Sections 3.3.1, 3.3.2.2, and 3.3.2.3 of this decision." The Joint Utilities provided Notice of the SBPM Workshop to the Service list for R.13-02-008 on March 25, 2022.

² D. 22-02-025 at 27.

³ On March 25, 2022, the Joint Utilities provided a courtesy Notice of Availability of SBPM April 5-6 Workshop to the Service List of Rulemaking (R.)13-02-008.

⁴ SBPM Workshop Presentations were circulated to the service list for R.13-02-008 and are available at <http://pgera.azurewebsites.net/Regulation/ValidateDocAccess?docID=698193>.

⁵ The GREET model is The Greenhouse gases, Regulated Emissions, and Energy use in Technologies Model as developed by Argonne National Laboratory with sponsorship by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy <https://greet.es.anl.gov/>.

Question 6b: How do IOUs ensure that dairy biomethane facilities maintain a reasonable herd size which could be managed under responsible practices for the land application of manure (unless the facility sells the waste byproduct as soil amendment to other parties)?

Question 6c. What other requirements could the Joint IOUs establish to ensure the implementation of best industry practices?

For antitrust compliance purposes, each utility will propose utility-specific cost control mechanism(s) for the project and/or program within their individual Renewable Gas Procurement Plan filing. The project-specific cost control mechanisms were discussed during the April 5-6 Cost Effectiveness workshop and the Renewable Natural Gas program cost control mechanisms were discussed at the April 22 Renewable Gas Procurement Plan (RGPP) workshop.

OP 2 directed the Joint Utilities to submit a Tier 2 Advice Letter establishing their SBPM within 3 months of the cost effectiveness workshop as follows:

Within three months of the cost-effectiveness test workshop, Southern California Gas Company, Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southwest Gas Corporation shall include results of the workshop and address feedback received at the workshop in Tier 2 Advice Letters establishing a Standard Biomethane Procurement Methodology.

The Joint Utilities' SBPM is provided as Attachment A. The Joint Utilities have developed an SBPM capturing many of the attributes of the cost-effectiveness test developed by NW Natural for its 2018 Integrated Resource Plan.⁶ As in NW Natural's cost-effectiveness test, the SBPM compares the cost of procuring a quantity of RNG from a qualified⁷ project and the cost of procuring the same amount of natural gas from conventional sources. Additionally, the SBPM considers RNG project CI, costs to society at large, compliance costs under California's Cap-and-Trade regulation, and other environmental and non-monetary factors over the delivery period of the proposed RNG contract, which may be up to 15 years per the Decision.

Overall, the SBPM cost-effectiveness score consists of two main parts: (a) the first part quantifies costs using key factors such as RNG contract price, the price of conventional natural gas, Cap-and-Trade compliance costs, CI, social cost of greenhouse gas (GHG)

⁶ <https://edocs.puc.state.or.us/efdocs/HAH/um2030hah144246.pdf>

⁷ The SBPM is only applied to projects meeting a set of requirements specified in the Decision. References follow: D.22-02-025, OP 9, 10, 14, 19, 20, 22, 33, 35, 37, 38, 39, 40, 49. D.22-02-025 at 33 requires that landfill projects must "stop accepting new organic waste and implement advanced landfill gas capture automation and monitoring technology to decrease fugitive methane emissions".

emissions, and natural gas transportation costs; (b) the second part captures other environmental and non-monetary factors such as the environmental benefits of carbon capture, use and storage (CCUS), waste hauler zero emission vehicles, and other benefits raised in the Decision and the SBPM workshop. The scores from each part are then combined to arrive at a final cost-effectiveness score for the project which will help prioritize projects during the project evaluation phase of SB 1440 procurement efforts.⁸ The final step in selection of projects for procurement will be based on the criteria described in each IOU's RGPP.

The Joint Utilities' SBPM is informed by input gathered during the 2-day workshop, and to the extent practical recommendations and feedback from the workshop is incorporated into the SBPM. Attachment B contains a Report on the SBPM Workshop, recommendations from the workshop and how the Joint Utilities addressed workshop participants' recommendations.

Additionally, the Decision requires, among other items, the following elements to be included in the SBPM:

*OP 3. Southern California Gas Company, Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southwest Gas Corporation **shall include in their Standard Biomethane Procurement Methodology strategies to maximize benefits to environmental justice and disadvantaged communities.** (See pg. 5 and 9-10 of Attachment A)*

*OP 4. Southern California Gas Company, Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southwest Gas Corporation **shall include in their Standard Biomethane Procurement Methodology a provision giving higher priority to biomethane producers that demonstrate that their waste byproduct will be turned into soil amendment or other reuse, as well as added prioritization for facilities whose waste byproduct has had perfluoroalkyl or polyfluoroalkyl substances removed from it.***

*OP 5. Southern California Gas Company, Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southwest Gas Corporation **shall include in their Standard Biomethane Procurement Methodology a provision giving higher priority to biomethane producers who demonstrate that the waste haulers delivering to their biomethane production facility will adhere to the same prospective exclusive use of near zero emission or zero emission vehicles that the facilities themselves are required to adhere to.***

⁸ A confidential version of Attachment A has been provided to the Commission's Energy Division along with a supporting Confidentiality Declaration from each utility.

OP 8. Southern California Gas Company, Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southwest Gas Corporation **shall include in their Standard Biomethane Procurement Methodology a provision giving higher priority to biomethane producers who prevent CO₂ from venting into the atmosphere using Carbon Capture and Use or Storage projects.**

OP 9. Southern California Gas Company, Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southwest Gas Corporation **shall include in their Standard Biomethane Procurement Methodology a provision requiring livestock and dairy biomethane facilities that contract with a gas IOU to operate in a manner that does not cause adverse impacts to water and air quality.**

OP 10. Southern California Gas Company, Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southwest Gas Corporation **shall require biomethane producers to track volumetric injections of biomethane into pipelines through the Midwest Renewable Energy Tracking System (M-RETS) platform and/or another platform identified in the SBPM workshop to be hosted no later than 45 days from the date of adoption of this decision (see Section 3.3.1).**

OP 32. Southern California Gas Company, Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southwest Gas Corporation **shall include in the Standard Biomethane Procurement methodology assessments of the ways in which their biomethane procurement practices affect the environment and increase or decrease the welfare of local communities, including the positive or negative ways in which modifications to a wastewater treatment plan or landfill to increase biomethane production affect those communities.**

OP 49. Southern California Gas Company, Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southwest Gas Corporation **shall require biomethane producers to include a methane leak standard in the Standard Biomethane Procurement Methodology life cycle carbon intensity accounting in the modified Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation Model.** In the procurement contract, the utilities shall establish a procedure for immediate methane leak remediation at the production facility or along that gas pipeline interconnection as the preferred response, and specify required actions if there is no immediate remediation, such as timeline for repair, a graduated fee schedule to promote timely repair, or payment reductions, etc.

(Emphasis added.)

Tariff Revisions

The submittal would not increase any current rate or charge, cause the withdrawal of service, or conflict with any rate schedule or rule.

Protests

Anyone wishing to protest this submittal may do so by letter sent electronically via E-mail, no later than **July 25, 2022**, which is 20 days after the date of this submittal. Protests must be submitted to:

CPUC Energy Division
ED Tariff Unit
E-mail: EDTariffUnit@cpuc.ca.gov

The protest shall also be electronically sent to the Joint Utilities via E-mail at the address shown below on the same date it is electronically delivered to the Commission:

For PG&E: Sidney Bob Dietz II
Director, Regulatory Relations
c/o Megan Lawson

E-mail: PGETariffs@pge.com

For SoCal Gas: Attn: Gary Lenart
Regulatory Tariff Manager

E-mail: GLenart@socalgas.com
E-mail: Tariffs@socalgas.com

For SDG&E: Attn: Greg Anderson
Regulatory Tariff Manager

E-mail: GAnderson@sdge.com & SDGETariffs@sdge.com

For SWG: Valerie J. Ontiveroz
Regulatory Manager/California
Southwest Gas Corporation

E-mail: valerie.ontiveroz@swgas.com
E-mail: regserve@swgas.com

Any person (including individuals, groups, or organizations) may protest or respond to an advice letter (General Order (GO) 96-B, Section 7.4). The protest shall contain the following information: specification of the advice letter protested; grounds for the protest; supporting factual information or legal argument; name and e-mail address of the protestant; and statement that the protest was sent to the utility no later than the day on which the protest was submitted to the reviewing Industry Division (General Order 96-B, Section 3.11).

Effective Date

Pursuant to GO 96-B, Rule 5.1, and OP 2 of D.22-02-025, this Advice Letter is submitted with a Tier 2 designation. The Joint Utilities request that this Tier 2 Advice Letter become effective upon approval.

Authorization

This Advice Letter is submitted by PG&E on behalf of, and with the authorization from, SoCalGas, SDG&E, and SWG.

Notice

In accordance with GO 96-B, Section IV, a copy of this advice letter is being sent electronically to parties shown on the attached list and the parties on the service list for **R.13-02-008**. Address changes to the GO 96-B service list should be directed to PG&E at email address PGETariffs@pge.com. For changes to any other service list, please contact the Commission's Process Office at (415) 703-2021 or at Process_Office@cpuc.ca.gov. Send all electronic approvals to PGETariffs@pge.com. Advice letter submittals can also be accessed electronically at: <http://www.pge.com/tariffs/>.

/S/

Sidney Bob Dietz II
Director, Regulatory Relations

Attachments

cc: Service List R.13-02-008



ADVICE LETTER SUMMARY

ENERGY UTILITY



MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No.: Pacific Gas and Electric Company (U 39-G)

Utility type:

☐ ELC ☒ GAS ☐ WATER
☐ PLC ☐ HEAT

Contact Person: Stuart Rubio

Phone #: (415) 973-4587

E-mail: PGETariffs@pge.com

E-mail Disposition Notice to: SHR8@pge.com

EXPLANATION OF UTILITY TYPE

ELC = Electric GAS = Gas WATER = Water
PLC = Pipeline HEAT = Heat

(Date Submitted / Received Stamp by CPUC)

Advice Letter (AL) #: 4626-G et al.

Tier Designation: 2

Subject of AL: Standard Biomethane Procurement Methodology Pursuant to Decision 22-02-025

Keywords (choose from CPUC listing): Compliance, Procurement

AL Type: ☐ Monthly ☐ Quarterly ☐ Annual ☒ One-Time ☐ Other:

If AL submitted in compliance with a Commission order, indicate relevant Decision/Resolution #: D.22-02-025

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL: No

Summarize differences between the AL and the prior withdrawn or rejected AL: N/A

Confidential treatment requested? ☒ Yes ☐ No

If yes, specification of confidential information: See Confidential Declaration

Confidential information will be made available to appropriate parties who execute a nondisclosure agreement. Name and contact information to request nondisclosure agreement/ access to confidential information: Chris Fan, ckf4@pge.com

Resolution required? ☐ Yes ☒ No

Requested effective date: 7/5/22

No. of tariff sheets: 0

Estimated system annual revenue effect (%): N/A

Estimated system average rate effect (%): N/A

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected: N/A

Service affected and changes proposed¹: N/A

Pending advice letters that revise the same tariff sheets: N/A

¹Discuss in AL if more space is needed.

Protests and correspondence regarding this AL are to be sent via email and are due no later than 20 days after the date of this submittal, unless otherwise authorized by the Commission, and shall be sent to:

California Public Utilities Commission
Energy Division Tariff Unit Email:
EDTariffUnit@cpuc.ca.gov

Contact Name: Sidnev Bob Dietz II. c/o Megan Lawson
Title: Director, Regulatory Relations
Utility/Entity Name: Pacific Gas and Electric Company

Telephone (xxx) xxx-xxxx: (415)973-2093
Facsimile (xxx) xxx-xxxx:
Email: PGETariffs@pge.com

Contact Name:
Title:
Utility/Entity Name:

Telephone (xxx) xxx-xxxx:
Facsimile (xxx) xxx-xxxx:
Email:

CPUC
Energy Division Tariff Unit
505 Van Ness Avenue
San Francisco, CA 94102

Clear Form

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

**DECLARATION SUPPORTING CONFIDENTIAL DESIGNATION
ON BEHALF OF
PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)**

1. I, Chris Fan, am a Regulatory Principal of Core Gas Supply of Pacific Gas and Electric Company (“PG&E”), a California corporation. Fong Wan, the Senior Vice President of Energy Policy and Procurement of PG&E, delegated authority to me to sign this declaration. My business office is located at:

Pacific Gas and Electric Company
77 Beale Street, Mail Code B5A
San Francisco, CA 94105

2. PG&E will produce the information identified in paragraph 3 of this Declaration to the California Public Utilities Commission (“CPUC”) or departments within or contractors retained by the CPUC in response to a CPUC audit, data request, proceeding, or other CPUC request.

Name or Docket No. of CPUC Proceeding (if applicable): D. 22-02-025

3. Title and description of document(s): Joint IOU SPBM – Attach A – CONF
4. These documents contain confidential information that, based on my information and belief, has not been publicly disclosed. These documents have been marked as confidential, and the basis for confidential treatment and where the confidential information is located on the documents are identified on the following chart:

Check	Basis for Confidential Treatment	Where Confidential Information is located on the documents
<input type="checkbox"/>	<p>Customer-specific data, which may include demand, loads, names, addresses, and billing data</p> <p>(Protected under PUC § 8380; Civ. Code §§ 1798 <i>et seq.</i>; Govt. Code § 6254; Public Util. Code § 8380; Decisions (D.) 14-05-016, 04-08-055, 06-12-029)</p>	
<input type="checkbox"/>	<p>Personal information that identifies or describes an individual (including employees), which may include home address or phone number; SSN, driver's license, or passport numbers; education; financial matters; medical or employment history (not including PG&E job titles); and statements attributed to the individual</p> <p>(Protected under Civ. Code §§ 1798 <i>et seq.</i>; Govt. Code § 6254; 42 U.S.C. § 1320d-6; and General Order (G.O.) 77-M)</p>	
<input type="checkbox"/>	<p>Physical facility, cyber-security sensitive, or critical energy infrastructure data, including without limitation critical energy infrastructure information (CEII) as defined by the regulations of the Federal Energy Regulatory Commission at 18 C.F.R. § 388.113</p> <p>(Protected under Govt. Code § 6254(k), (ab); 6 U.S.C. § 131; 6 CFR § 29.2)</p>	
<input checked="" type="checkbox"/>	<p>Proprietary and trade secret information or other intellectual property and protected market sensitive/competitive data</p> <p>(Protected under Civ. Code §§3426 <i>et seq.</i>; Govt. Code §§ 6254, <i>et seq.</i>, e.g., 6254(e), 6254(k), 6254.15; Govt. Code § 6276.44; Evid. Code §1060; D.11-01-036)</p>	Joint IOU SPBM – Attach A – CONF document in entirety
<input type="checkbox"/>	<p>Corporate financial records</p> <p>(Protected under Govt. Code §§ 6254(k), 6254.15)</p>	

☐

Third-Party information subject to non-disclosure or confidentiality agreements or obligations

(Protected under Govt. Code § 6254(k); see, e.g., CPUC D.11-01-036)

☐

Other categories where disclosure would be against the public interest (Govt. Code § 6255(a))

5. The importance of maintaining the confidentiality of this information outweighs any public interest in disclosure of this information. This information should be exempt from the public disclosure requirements under the Public Records Act and should be withheld from disclosure.
6. I declare under penalty of perjury that the foregoing is true, correct, and complete to the best of my knowledge.
7. Executed on this 1st day of July 2022 at San Francisco, California.



Chris Fan
Regulatory Principal
Pacific Gas and Electric Company

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

**DECLARATION OF RAYMOND SASAKI
REGARDING CONFIDENTIALITY OF CERTAIN DATA/DOCUMENTS
PURSUANT TO D.17-09-023**

I, Raymond Sasaki, do declare as follows:

1. I am the Director of Gas Acquisition, designated by Elsa Valay-Paz, Vice President of Gas Acquisition for Southern California Gas Company ("SoCalGas"). I have been delegated authority to sign this declaration by Elsa Valay-Paz, Vice President of Gas Acquisition. I have reviewed the "Joint IOU SBPM – Attach A – CONF" to SoCalGas and San Diego Gas & Electric Company's ("SDG&E") "Standard Biomethane Procurement Methodology Pursuant to Decision 22-02-025", submitted concurrently herewith. In addition, I am personally familiar with the facts in this Declaration and, if called upon to testify, I could and would testify to the following based upon my personal knowledge and/or information and belief.

2. I hereby provide this Declaration in accordance with Decision ("D.") 17-09-023 and General Order ("GO") 66-D to demonstrate that the confidential information ("Protected Information") provided in Attachment A submitted concurrently herewith is within the scope of data protected as confidential under applicable law.

3. In accordance with the narrative justification described in Attachment A below, the Protected Information should be protected from public disclosure.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct to the best of my knowledge.

Executed this 1st day of July 2022, at Los Angeles, California.

By: _____



Raymond Sasaki
Director of Gas Acquisition

ATTACHMENT A

SoCalGas and SDG&E Request for Confidential on the following information in Joint IOU SBPM – Attach A – CONF of Advice Letter 6003/3098-G

Location of Protected Information	Legal Citations	Narrative Justification
Highlighted/shaded items contained in Joint IOU SBPM – Attach A – CONF	<p>CPRA Exemption, Gov't Code § 6254.7(d) (Trade Secrets)</p> <p>CPRA Exemption, Gov't Code § 6254(k) ("Records, the disclosure of which is exempted or prohibited pursuant to federal or state law")</p> <ul style="list-style-type: none">• Cal. Evid. Code § 1060• Cal. Civil Code §§ 3426 <i>et seq.</i>	Data is commercially sensitive, the disclosure of which would provide market participants and SoCalGas' competitors insight into SoCalGas' procurement and decision-making process, which would place Gas Acquisition at an unfair business disadvantage. This could ultimately result in increased cost to core ratepayers.

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

**DECLARATION OF VALERIA S. ANNIBALI
REGARDING CONFIDENTIALITY OF CERTAIN INFORMATION**

I, Valeria S. Annibali, do declare as follows:

1. I am the Manager/Sustainable Gas Supply, designated by Frank J. Stanbrough, Vice President/Administration for Southwest Gas Corporation ("Southwest Gas") to submit this declaration. In addition, I am personally familiar with the facts and representations in this Declaration and, if called upon to testify, I could and would testify to the following based upon my personal knowledge and/or belief.
2. I have reviewed the following document and information:
 - Joint IOU SBPM – Attachment A – CONF
3. I provide this Declaration in accordance with Decision ("D.") 16-08-024 to demonstrate that the confidential information ("Protected Information") provided in the subject attachment are within the scope of data protected as confidential under applicable law, and pursuant to Public Utilities ("PUC") Code § 583 and General Order ("GO") 66-D.
4. Specifically, information included in the above-referenced attachment contains, including but not limited to, metrics associated with gas procurement practices, the disclosure of which may give vendors a competitive advantage and result in increased costs to ratepayers. Accordingly, the subject information is eligible for confidential treatment pursuant to Government Code § 6254(e), (k), and 6254.15, 6276,44, Evid. Code §1060, and D.11-01-036 as the subject document contains commercially sensitive information.
5. In accordance with the legal authority described herein, the Protected Information should be protected from public disclosure.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct to the best of my knowledge.

Executed this 5th day of July 2022, at Las Vegas, Nevada.



Valeria S. Annibali
Manager/Sustainable Gas Supply

Attachment A

**Standard Biomethane
Procurement Methodology**

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A. CPUC Decision Requiring the Creation of a Standard Biomethane Procurement Methodology (SBPM)

On February 24, 2022, the California Public Utility Commission (CPUC) issued Decision (D.) 22-02-025¹ (henceforth, the Decision) implementing Senate Bill (SB) 1440 (Hueso, 2018). The Decision ordered Southern California Gas Company, Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southwest Gas Corporation (henceforth, the Joint Utilities) to hold a workshop on cost-effectiveness and to establish an SBPM, a model for assessing the cost-effectiveness of renewable natural gas (RNG) supplies, addressing feedback received at the workshop.² The Joint Utilities have developed the SBPM described in this document to satisfy this order, addressing workshop feedback and various requirements of the SBPM described in the Decision.

B. The Joint Utilities' SBPM

The Joint Utilities have developed an SBPM capturing many of the attributes of the cost-effectiveness test developed by NW Natural for its 2018 Integrated Resource Plan.³ As in NW Natural's cost-effectiveness test, the SBPM compares the cost of procuring a quantity of RNG from a qualified⁴ project and the cost of procuring the same amount of natural gas from conventional sources. Additionally, the SBPM considers RNG project carbon intensity (CI), costs to society at large, compliance costs under California's Cap-and-Trade regulation, and other environmental and non-monetary factors over the delivery period of the proposed RNG contract, which may be up to 15 years per the Decision.

Overall, the SBPM cost-effectiveness score consists of two main parts: the first part quantifies costs using key factors such as RNG contract price, the price of conventional natural gas, cap-and-trade compliance costs, carbon intensity, social cost of greenhouse gas (GHG) emissions, and natural gas transportation costs. The second part captures other environmental and non-monetary factors such as the environmental benefits of carbon capture, use and storage (CCUS), waste hauler zero-emission vehicles, and other benefits raised in the Decision and the SBPM workshop. The scores from each part are then combined to arrive at a final cost-effectiveness score for the project which will help prioritize projects during the project evaluation phase of SB 1440 procurement efforts. The final step in the selection of projects for procurement will be based on the criteria described in each investor-owned utility's (IOU's) Renewable Gas Procurement Plan (RGPP).

C. SBPM Prerequisites: Mandatory Conditions

Prior to being evaluated for cost-effectiveness, projects must meet all the following requirements specified in the Decision which will be enforced contractually:

¹ <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M454/K335/454335009.pdf>

² D.22-02-025, Ordering Paragraph (OP) 1 and 2.

³ <https://edocs.puc.state.or.us/efdocs/HAH/um2030hah144246.pdf>

⁴ The SBPM is only applied to projects meeting a set of requirements specified in the Decision. References follow: D.22-02-025, OP 9, 10, 14, 19, 20, 22, 33, 35, 37, 38, 39, 40, 49. D.22-02-025, p. 33 requires that landfill projects must "stop accepting new organic waste and implement advanced landfill gas capture automation and monitoring technology to decrease fugitive methane emissions".

Prerequisites	Method of Verification	Frequency
Livestock and dairy biomethane facilities that contract with a gas IOU shall operate in a manner that does not cause adverse impacts to water and air quality (OP 9)	Officer attestation that facility complies with all applicable federal, state, and local air and/or water pollution control standards or requirements, describing any incident of noncompliance, the cause, and when and how it was resolved.	Annual
Producers shall track volumetric injections of biomethane into pipelines through M-RETS (OP 10)	Officer attestation providing active M-RETS account number.	One Time
Biomethane procurement volumes procured and delivered up to 2025 will be produced from organic waste, including wood waste, diverted from landfills (OP 14)	Officer attestation that biomethane must be produced from organic waste, including wood waste, diverted from landfills.	One Time
Biomethane procurement volumes procured and delivered after 2025 may include production from a Dairy facility as long as its operation commenced after December 31, 2021 (OP 19)	Officer attestation with facility's first flow date.	One Time
Biomethane procurement volumes produced from a dairy facility and delivered after 2025 must not have an unresolved citation for violation of rules or requirements for protection of air or water quality from state or local regulatory agencies (OP 20)	Officer attestation that facility complies with all applicable federal, state, and local air and/or water pollution control standards or requirements, describing any incident of noncompliance, the cause, and when and how it was resolved.	Annual
Biomethane is not produced from purpose-grown crops (OP 22)	Officer attestation that biomethane is not produced from purpose-grown crops.	Annual
Producer agrees to limit hydrogen sulfide in gathering lines to 10 parts per million (OP 35)	Officer attestation that hydrogen sulfide is limited to 10 parts per million in gathering lines.	One Time
Producer agrees to specify in contract how tipping fees may modify contract terms, if at all (OP 37)	Officer attestation that modifying tipping fees may modify contract terms.	One Time
Producer agrees that any Class 8 trucks purchased or leased for use in the production of biomethane after the effective date of the Decision are near zero-emission (NZE) or zero-emission (ZE) vehicles (OP 38)	Officer attestation and requirement that producer will provide notification and information about new Class 8 trucks.	Annual

Producer agrees to prospectively cap on-site combustion-based generation of electricity using their own biogas beyond current generation levels (OP 39)	Officer attestation that on-site combustion generation of electricity using their own biogas is capped at current generation levels.	One Time
If facility has yet to purchase or plan and construct electric generation infrastructure, facility shall agree to use only non-combustion technologies for on-site electric generation (OP 40)	Officer attestation that only non-combustion technologies will be used for on-site electric generation.	One Time
Producer agrees to include a methane leak standard in CI accounting (OP 49)	Officer attestation showing methane leak factor included in validated CI calculator.	One Time
Medium-term (2030) procurement only: landfill facility does not accept new organic waste and is implementing advanced landfill gas capture automation and monitoring technology to decrease fugitive methane emissions (Decision, p. 33)	Officer attestation that landfill facility does not accept new organic waste and is implementing advanced landfill gas capture automation and monitoring technology to decrease fugitive methane emissions.	Annual

A project that does not meet all the pre-requisites as outlined in table above will be deemed as not qualified per the Decision and will be excluded from the contract evaluation process.

D. SBPM, Part A: Comparing Monetary Costs

Part A⁵ of the SBPM scores the degree of cost-effectiveness of a project based on quantifiable, economic factors. This score is calculated as a ratio of the desired contract price of the supplier and a calculated break-even price:

$$score_A = \frac{Contract\ Price}{Break-Even\ Price}$$

The break-even price is obtained by balancing the all-in cost of RNG against the all-in cost of conventional natural gas.

$$All-In\ Cost\ of\ RNG = All-In\ Cost\ of\ Conventional\ NG$$

where the all-in costs of each include the following:

Components of All-In Cost of RNG:

- 1) Contractual fixed price of the RNG
- 2) Variable transportation costs to deliver the RNG to IOU systems
- 3) IOU infrastructure investment costs
- 4) Social Cost of GHG (based on CI)

Components of All-In Cost of Conventional Natural Gas:

- 1) Baseload prices of conventional natural gas for the equivalent term of the RNG contract

⁵ A full explanation of the methods used in Part A is presented in the appendix.

- 2) Variable transportation costs to deliver conventional natural gas to IOU systems
3) Cap and trade compliance costs
4) Social Cost of GHG (based on CI)

This scoring method compares the cost of purchasing RNG from a project to the cost of alternatively purchasing conventional natural gas. As a ratio, the score also allows for the comparison of the cost-effectiveness of projects with a variety of feedstocks, carbon intensities, and sizes. Lower scores indicate the project is relatively more cost-effective than projects with higher scores.

The Decision states, “The true cost of gas procurement includes the costs to society at large due to the environmental impacts of its production.”⁶ The SBPM utilizes the social cost of GHG emissions, which represents the additional cost to society at large based on life-cycle analyses of each fuel, and the monetary costs of the emissions of each fuel provided by the United States Government’s Interagency Working Group on Social Cost of Greenhouse Gases (IWG).⁷

E. SBPM, Part B: Other Environmental & Non-Monetary Factors

RNG production yields other costs and benefits which, although not easily quantified, are still relevant for cost-effectiveness. Part B of the SBPM accounts for the factors listed below, which receive [REDACTED]. The references are to ordering paragraphs in the Decision and the SBPM Workshop (WS).⁸

- Waste byproduct for any GHG-reducing use instead of landfill, e.g., soil amendment (OP 4, 42)
- Perfluoroalkyl or polyfluoroalkyl substances removed from waste byproduct (OP 4)
- Waste haulers delivering to facility use near-zero emission or zero emission vehicles (OP 5)
- CO₂ emissions into atmosphere prevented by Carbon Capture and Use or Storage projects or technology (OP 8, 41, WS)
- Project in a remote location (OP 3, 32, WS)
- Is a new project, or an expansion to an existing project (WS)

The Part B score for a project, $score_B$, decreases as a project possesses more of these benefits. Since all the benefits are [REDACTED] this decrease occurs in [REDACTED]. Thus, lower scores are preferred, indicating more benefits and therefore more cost-effective.

F. SBPM Project Score (P-Score)

Once the scores from both parts of the SBPM have been obtained, their weighted sum is the project score, the *P-Score*:

$$P\text{-Score} = [REDACTED] \times score_A + [REDACTED] \times score_B.$$

⁶ D.22-02-025, p. 53, Findings of Fact 12

⁷ https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf

⁸ See Section G.2 (Appendix: SBPM, Part B) and Attachment B to this Advice Letter.

84 The *P-Score* is the final output of the SBPM. A lower score, closer to zero, indicates more cost-
85 effectiveness. These final scores are be compared between different RNG projects to prioritize
86 procurement. All other things being equal, prioritizing supplies with lower *P-Scores* leads to more cost-
87 effective RNG procurement. Note that the cost-effectiveness scoring provided by the SBPM is meant to
88 serve as a key element of the contract evaluation criteria. Project feasibility, viability, and other
89 considerations not captured by the SBPM will be considered in final contracting decisions. Any such
90 considerations will be detailed in the respective RGPP submitted by each IOU.

G. Appendix

For clarity and ease of understanding, the previous description of the SBPM described the essentials of the methodology. This appendix provides a full description with references to supporting materials.

1. Appendix: SBPM, Part A

Part A of the SBPM scores the degree of cost-effectiveness of a project based on quantifiable, monetary factors. The components used to calculate this score are described first followed by the calculations used to combine them into $score_A$, the Part A score.

a. RNG/Biomethane Costs (RNG Cost)

The cost of RNG over the delivery period of the RNG contract can be expressed as the sum of any associated fixed costs to the IOU, contracted costs of the RNG supply, and variable transport costs to deliver gas to the IOU's system⁹ as follows,

$$R(P^*) = X + \sum_t (P^* + Y_t^{RNG}) Q_t,$$

where R is the cost of RNG over the delivery period of the RNG contract, X (\$) is the IOU infrastructure investment cost over the delivery period of the RNG contract (if applicable), P^* (\$/MMBtu) is the contractual fixed price of the RNG to be solved for, Y_t (\$/MMBtu) is the short-term variable transport cost to deliver RNG to IOU's system over the delivery period of the RNG contract, Q_t (MMBtu/month) is the contractual quantity of RNG supplied per month over the delivery period, and t is the index of time in months.

b. Conventional Natural Gas Costs (Conventional NG Cost)

The cost of conventional natural gas can be expressed as the sum of the costs of the natural gas supply, the variable transport costs to deliver the gas to the IOU's system, and the sum of the costs of emissions compliance under California's Cap and Trade regulation (costs of California Carbon Allowances (CCAs)) as follows,

$$C = \sum_t (V_t + Y_t^{conv} + NG_t) Q_t,$$

where C (\$) is the cost of conventional natural gas over the delivery period of the RNG contract, V_t (\$/MMBtu) is the short-term price of the baseload conventional natural gas over the delivery period of the RNG contract, Y_t (\$/MMBtu) is the short-term variable transport cost to deliver conventional natural gas to IOU's system over the delivery period of the RNG contract, N (0.05307 MT CO₂e/MMBtu) is the GHG emissions from combusting a unit of natural gas per Cap-and-Trade rules, G_t (\$/MT CO₂e) is the short-term price of CCAs over the delivery period of the RNG contract, Q_t (MMBtu/month) is the contractual quantity of the RNG supplied over the delivery period, and t is the index of time in months.

Where appropriate, the SBPM risk-adjusts the conventional natural gas prices and CCA prices. Market prices for conventional natural gas and CCAs have quantifiable risks of deviations from their

⁹ No costs associated with compliance with California's Cap and Trade Regulation are calculated here. RNG supplies from within California are exempt from California's Cap and Trade regulation.

expected values (i.e., forward curves). When performing risk adjustment, we model these prices as random variables and calculate the [REDACTED] percentile of the overall cost of the conventional natural gas supply from their probability distributions.¹⁰ This [REDACTED] percentile cost is then combined with the expected cost in a weighted sum to arrive at the risk-adjusted conventional natural gas cost as,

$$rC = (1 - p) * C + p * \text{[REDACTED] percentile of prob. dist. of } C$$

where $p \in [0,1]$ is the weight of the risk adjustment. For reference, NW Natural uses a similar risk adjustment approach with $p = 0.25$. In the SBPM, each individual IOU selects a weight of the risk adjustment based their own risk assessment process.

c. Social Cost of GHG

There are costs associated with natural gas that are beyond the market-based costs found in contracts for RNG and conventional natural gas transactions. This is recognized in the Decision, which states, “The true cost of gas procurement includes the costs to society at large due to the environmental impacts of its production.”¹¹ The Social Cost of GHG represents the costs to society as a whole resulting from the life-cycle GHG emissions of conventional and renewable natural gas.

The Social Cost of GHG can be used in the SBPM, as presented in the main body of this document, by adding it to both the RNG and conventional natural gas costs to get the all-in costs for both. Since, by definition, RNG will always have a CI that is lower than conventional natural gas,¹² we can take the difference of the social costs of conventional natural gas and RNG to express the benefit of displacing conventional gas with renewable gas as so,

$$\text{Social Cost of GHG} = \frac{\text{Conventional NG}}{\text{Social Cost of GHG}} - \frac{\text{RNG}}{\text{Social Cost of GHG}}$$

In this form the Social Cost of GHG is interpreted as the life-cycle benefit to society from displacing conventional natural gas with RNG.¹³

To calculate this form of the Social Cost of GHG for a given year, the difference in the carbon intensity between conventional natural gas supply and the candidate RNG supply is calculated in terms of metric tons of CO₂ equivalent (MTCO_{2e}) emissions per dekatherm. For a project without a CI score, the current CA-GREET model for the LCFS program can calculate an indicative CI using the various simplified CI calculators. The calculated CI of the project can then be compared to the respective CI of conventional natural gas (Lookup Table Pathways (Table 7-1)¹⁴) for comparison. As stated above, the difference of the two CI’s represents the life-cycle benefit to society of the displacement of conventional natural gas by RNG. This benefit is then multiplied by the quantity of RNG to be supplied to arrive at the

¹⁰ These distributions can be calculated via Monte Carlo methods or other methods such as historical simulation.

¹¹ D.22-02-025, p. 53, Findings of Fact 12

¹² American Gas Foundation, “Renewable Sources of Natural Gas: Supply and Emissions Reduction Assessment”, p.1, <https://gasfoundation.org/wp-content/uploads/2019/12/AGF-2019-RNG-Study-Full-Report-FINAL-12-18-19.pdf>

¹³ <https://ww2.arb.ca.gov/resources/documents/lcfs-life-cycle-analysis-models-and-documentation>

¹⁴ California Air Resources Board Lookup Table Pathways (Table 7-1) available at https://www.arb.ca.gov/fuels/lcfs/ca-greet/lut.pdf?_ga=2.82944479.836877858.1654481394-1461991828.1648240563.

reduction in GHG emissions, measured in MTCO_{2e}. The dollar impact of this reduction is calculated by applying the social cost of CO₂ emissions per MTCO₂ as provided by the U.S. Government's Interagency Working Group on Social Cost of Greenhouse Gases (IWG).¹⁵ The social costs calculated by the IWG assume a ■■■ discount rate is used and risk-adjusted. For candidate contracts beginning later than the IWG base year, the social costs are adjusted for inflation using the annual GDP Implicit Price Deflator.

The calculation of the risk-adjusted Social Cost of GHG (SC-GHG) for year T is,

$$rSC-GHG_T = (CI^{CONV} - CI^{RNG}) \times \left[\frac{\text{conversion}}{\text{factor}} : \frac{gCO_2e}{MJ} \rightarrow \frac{MTCO_2e}{Dth} \right] \times Q_T \times r(SC-CO_2)_T$$

where $CI(gCO_2e/MJ)$ is the carbon intensity, $Q_T(MMBtu/year)$ is the contractual quantity of the RNG over the delivery period, and $r(SC-CO_2)$ (\$/MT CO₂) is the risk-adjusted IWG social cost of CO₂, adjusted for inflation.

Landfills are not able to capture all their methane emissions. Both the EPA and the current CA-GREET model assume that 75% of this methane is captured. More recent data on methane point sources suggests that the capture rate may be lower.¹⁶ Consequently, the social cost of methane will be used to quantify the additional societal benefit of the avoided methane venting from ■■■ of the RNG volume produced from a landfill's diverted organic waste. To capture this benefit, the calculation of the risk-adjusted Social Cost of GHG (SC-GHG) for year T is the following:

$$rSC-GHG_T = (CI^{CONV} - CI^{RNG}) \times \left[\frac{\text{conversion}}{\text{factor}} : \frac{gCO_2e}{MJ} \rightarrow \frac{MTCO_2e}{Dth} \right] \times Q_T \times r(SC-CO_2)_T + \text{■■■} \times Q_T \times r(SC-CH_4)_T.$$

Note that this equation only applies to diverted organic waste feedstock and only until a new GREET model has been developed to capture the benefit.

As with conventional natural gas supply, risk-adjustment may be applied to the social cost calculations. The risk-adjusted IWG social cost of both CO₂ and CH₄ are given by,

$$r(SC-GHG)_T = (1 - p) * (SC-GHG)_T + p * \text{■■■ percentile of freq. dist. of } (SC-GHG)_T$$

where,

$$SC-GHG = \begin{cases} SC-CO_2 & \text{for carbon dioxide emissions} \\ SC-CH_4 & \text{for methane emissions} \end{cases}.$$

¹⁵ Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide, p. 24, Table 1 and Table 2. https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf

¹⁶ Duren, R.M., Thorpe, A.K., Foster, K.T. et al. California's methane super-emitters. *Nature* 575, 180–184 (2019). <https://doi.org/10.1038/s41586-019-1720-3>

The [REDACTED] percentiles of the social costs of GHGs are taken from the IWG's table for social costs of the GHGs and represent the [REDACTED] percentile of the IWG estimates based on a [REDACTED] discount rate.¹⁷ Because the IWG provides yearly social costs of the GHGs that are adjusted to year 2020 values while all other values in the SBPM are in their nominal/future-valued (FV) forms, the IWG social costs of these GHGs are adjusted to their future values. These adjustments are made using inflation forecasts of the annual GDP Implicit Price Deflator.¹⁸ These values are then summed to arrive at the risk-adjusted Social Cost of GHG as,

$$rSC-GHG = \sum_T FV(rSCGHG)_T.$$

d. SBPM, Part A Score Calculation

The final calculation of Part A of the SBPM combines the previously described components to calculate the degree of cost-effectiveness of the candidate RNG supply. The degree of cost-effectiveness is calculated by solving the below equality for the break-even RNG contract price P^* ,

$$R(P^*) = rC + rSC-GHG.$$

Using the proposed RNG contract price P , and the break-even RNG contract price P^* , the cost-effectiveness score for Part A can be calculated by,

$$score_A = \frac{P}{P^*}.$$

RNG supplies with lower proposed contract prices relative to their calculated P^* have lower scores, indicating more cost-effectiveness. As a ratio, the score also allows for the comparison of the cost-effectiveness of projects with a variety of feedstocks, carbon intensities, and sizes. Like prices for consumers, lower scores are better, indicating increased cost-effectiveness compared to higher scores.

2. Appendix: SBPM, Part B

RNG production may yield important benefits which, although not easily quantified, are still relevant for cost-effectiveness and procurement prioritization. Part B of the SBPM accounts for the below set of such benefits and [REDACTED].

SBPM Part B	Method of Verification	Frequency
Waste byproducts are used for any GHG-reducing use instead of landfill, e.g., soil amendment (OP 4, 42)	Officer attestation with regulatory reports on waste byproducts	Annual

¹⁷ Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide, p. 24, Table 1 and Table 2. https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf

¹⁸ The annual GDP Implicit Price Deflator values in the U.S. Bureau of Economic Analysis' (BEA) NIPA Table 1.1.9 are a part of the inflation adjustment.

Perfluoroalkyl or polyfluoroalkyl substances removed from waste byproduct (OP 4)	Officer attestation with regulatory reports on Perfluoroalkyl or polyfluoroalkyl substances	Annual
Waste haulers delivering to facility use near-zero emission or zero emission vehicles (OP 5)	Officer attestation that waste haulers delivering to facility use near-zero emission or zero emission vehicles	Annual
CO ₂ emissions into atmosphere prevented by Carbon Capture and Use or Storage projects or technology (OP 8, 41, WS)	Officer attestation with regulatory reports on Carbon Capture and Use or Storage projects or technology	Annual
Project in a remote location (OP 3, 32, WS)	Officer attestation that the project is not within an HCA (per 49 CFR § 192.903) replacing 1000m for the distance	One Time
Is a new project, or an expansion to an existing project (WS)	Officer attestation that the facility is new or an expansion project	One Time

The weighted values of the benefits provided by an individual project are then summed to arrive at a score for the project, S . The maximum weighted possible score (i.e., maximum possible value of S) is denoted by S_{max} . Part B then calculates as,

$$score_B = 1 - \frac{S}{S_{max}}.$$

$score_B$ can range from 1, for projects with none of the above benefits, to 0, for projects with the maximum number of the above benefits. A lower score indicates more benefits and therefore, a higher degree of cost-effectiveness. [REDACTED] of $score_B$.

3. Appendix: SBPM Project Score (P-Score)

Once the scores from both parts of the SBPM have been obtained, their weighted sum is the project score, the *P-Score*:

$$P\text{-Score} = [REDACTED] \times score_A + [REDACTED] \times score_B.$$

The *P-Score* is the final output of the SBPM. A lower score, closer to zero, indicates more cost-effectiveness. The *P-Scores* can be compared for different RNG supplies to prioritize contracting. Note that the cost-effectiveness scoring provided by the SBPM is meant to serve as key element of the contract evaluation criteria. Project feasibility, viability and other considerations not captured by the SBPM will be considered in final contracting decisions. Any such considerations will be detailed in the respective RGPP submitted by each IOU.

Attachment B

**Standard Biomethane
Procurement Methodology**

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EXECUTIVE SUMMARY

Introduction

The California Public Utility Commission (CPUC) issued Decision (D.) 22-02-025¹ (henceforth the Decision) implementing Senate Bill (SB) 1440 (Hueso, 2018) on February 24, 2022. The Decision ordered Southern California Gas Company, Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southwest Gas Corporation (henceforth, Joint Utilities) to hold a workshop on cost-effectiveness within 45 days of the effective date of the Decision with an agenda based on Sections 3.3.1, 3.3.2.2 and 3.3.2.3 of the Decision.²

The Joint Utilities held the Standard Biomethane Procurement Methodology (SBPM) Workshop on April 5-6, 2022, with multiple panelists addressing the six questions raised in the Decision. The Joint Utilities invited the public to participate in the Workshop and provide any feedback for incorporation into the SBPM. The Joint Utilities noted all feedback from the Workshop from both panelists and audience members – this feedback is summarized in this report. To the extent feedback was in the scope of and in compliance with the Decision, it was incorporated into the SBPM by the Joint Utilities. All panelist materials were provided to the service list of R.13-02-008 after the Workshop.³

Summary by Panel

1. What specific items should be addressed in SBPM cost-effectiveness (CE) test?

- a. **Ray Sasaki**, Joint Utilities: monetary (all-in) costs and other factors that provide incremental benefits to use of renewable natural gas (RNG)
- b. **Michael Colvin**, Environmental Defense Fund (EDF): consider the counterfactual and how much projects reduce greenhouse gas (GHG) emissions
 - i. Consider actual/verifiable leakage rates in RNG projects and how this compares to conventional, feedstocks and their impacts on local communities, optimal contract lengths for cost recovery
 - ii. Work towards developing a standard set of attributes for emissions associated with RNG
- c. **Ryan Bracken**, NW Natural: implemented NW Natural model considers all-in costs of RNG, with risk-adjustment and time accounting
 - i. Implements requirements: model does not currently include non-monetary inputs
- d. **Q&A/Comments:**
 - i. Environmental groups expressed concern about emissions, leakage from particular feedstocks, and how investor-owned utilities (IOUs) will consider secondary impacts/associated costs
 - ii. Environmental groups urge IOUs to think creatively about attaining all attributes of projects, since CA will be a leader with this RNG program

2. Discussion of environmental justice and community benefits related to biomethane procurement.

¹ D.22-02-025, available at <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M454/K335/454335009.PDF>.

² *Id.*, Ordering Paragraph 1.

³ See <http://pgera.azurewebsites.net/Regulation/ValidateDocAccess?docID=698193>.

- a. **Shayne Petkiewicz, Anaergia**: SBPM should prioritize biomethane facilities that divert SB 1383 organics and social benefit of projects should be evaluated based on carbon intensity (CI)
 - i. Prioritizing organic waste diverted from landfills is mandated in the Decision
 - ii. Encourages utilizing the Greenhouse gases, Regulated Emissions, and Energy use in Technologies (GREET) model and updating landfill capture assumptions/price of social cost of methane with latest numbers
 - b. **Jamie Katz, Leadership Council for Justice & Accountability**: IOUs can not ensure dairy facilities are not causing adverse impacts to water/air quality nor that they maintain reasonable herd sizes
 - c. **Lyle Schlyer, Calgren Dairy Fuels**: Calgren projects are monitored by various agencies to verify/check impacts to local communities, including water and air
 - d. **Q&A/Comments**:
 - i. Debate between producers and environmental groups over weighting feedstocks – consensus among panel that organic waste diversion should be prioritized above dairies, despite dairies being more carbon negative
 - 1. Environmental groups express opinion that dairies pollute water and air, so should be completely excluded
 - 2. Dairy producers acknowledge that dairy biomethane can be used for vehicle fuel, but should not be completely excluded from this program
- 3. How should carbon intensity be measured in the SBPM cost-effectiveness test?**
What criteria shall be used in modified GREET and who shall be tasked with developing the model?
What criteria shall be used in a preliminary Cost Effectiveness (CE) test while a modified GREET model is being developed?
- a. **Sam Wade, Coalition for RNG**: CI should be the primary weighting factor
 - i. RNG producers should supply costs as well as a self-adjusted lifecycle CI score
 - ii. Third party consultants should be relied upon to use GREET to produce an appropriate CI for utility end uses
 - b. **David Lindenmuth, Ecoengineers**: to get the highest reduction per dollar, established GHG accounting principles/concepts should be considered
 - i. Preliminary criteria in a CI test should be determined based on the ultimate goal of the program and the behavior it is aiming to incentivize
 - c. **Nina Robertson, Earthjustice**: CI is only one of many required considerations and should not be the most heavily weighted to ensure program is not incenting “bad behavior”
 - i. Intentionally producing methane means any leakage is GHG-positive and model should use GHG-conscious baseline assumptions
 - ii. Preliminary CE test will contain a lot of uncertainty – IOUs should proceed with caution
 - d. **Q&A/Comments**:
 - i. Debate between panelists on whether CI should be the primary weighting factor in SBPM and what the baseline/counterfactuals should be
 - 1. Environmental groups believe CI should not be weighted more than air/water quality and that baselines should be GHG-conscious
 - 2. Industry experts (Coalition for RNG) believe CI should be most heavily weighted and that baselines should be based on current reality, not optimistic futures
- 4. What cost control mechanism such as above market cost caps or rate increase limits should be used for each gas IOUs?**
- a. **Ray Sasaki, Joint Utilities**: Renewable gas procurement plans (RGPP) will provide program-level guidance for expected bill impacts, and CE test will provide guidance for individual contracts

- i. Cost is an important consideration, and cost control mechanisms are needed to keep costs in check
- b. **Julia Levin, Bioenergy Association of California:** Any cost-effectiveness test that the IOUs adopt has to be tied to the level of short-lived climate pollutant (SLCP) and GHG reductions
 - i. RNG project costs should only be compared to other RNG projects
 - ii. Preferred cost cap mechanism is 100% performance/CI-based
- c. **Marcel Hawiger, The Utility Reform Network (TURN):** above market cost cap should be established for individual projects based on the principle of ratepayer neutrality
 - i. Preferred mechanism is capping individual contract prices at a unit price based on incremental cost
- d. **Q&A/Comments:**
 - i. Panelists (TURN and Bioenergy Association) agree that cost caps should be project-specific
 - ii. Debate between panelists on whether LCFS carbon price should be used as a price floor
 - 1. Bioenergy asserts it is necessary for this program to compete with LCFS
 - 2. TURN argues if ratepayers are paying for program, projects should have additionality (additional waste diversion) and not be biomethane that could otherwise be used for LCFS
 - iii. Bioenergy Association emphasizes importance of moving this program into practice quickly as climate cannot wait

KEY RECOMMENDATIONS

No.	Recommendation	Included in SBPM? (Y=Yes, N=No, or N/A)
<i>Carbon Intensity Calculations & GREET</i>		
1	Joint Utilities should evaluate social benefit of biomethane facilities based on Carbon Intensity.	Y, Part A
2	Joint Utilities should measure both societal cost of carbon and societal cost of methane.	Y, Part A
3	Joint Utilities should use GREET 3.0 as a starting point for evaluating CI of biomethane facilities.	Y, Part A
4	Joint Utilities should include distance traveled on pipeline in SBPM in order to acknowledge that there is greater opportunity for climate harm with greater distance traveled on pipeline.	Y, Part A (CI)
5	Joint Utilities should additionally consider carbon negative biomethane projects when evaluating social cost and pricing and update the CI tier 1 calculator to reflect carbon negative ability for biogas.	Y, Part A
6	Joint Utilities should consider how RNG procurement program intersects with other markets and the value required to incentivize development.	Y, Part A
7	Joint Utilities should factor in upstream emissions and leakage when calculating CI.	Y, Part A, GREET
8	Joint Utilities should require RNG producers to supply both cost (on per unit energy basis) and lifecycle CI score in their bids.	Y, Part A
9	Joint Utilities should consider projects “carbon negative” if they include carbon sequestration.	Y, Part A & B
10	Joint Utilities should rely on third party consultants to use/modify GREET to produce an appropriate CI for utility end use and consider the following GREET modifications: <ul style="list-style-type: none"> • Update the landfill capture rate to reflect latest direct measurement studies • Establish a conventional NG baseline for state/region • Change final use to thermal load (residential/industrial) rather than vehicle use • Review SLCP treatment in GREET vs. what LCFS has established • Review more industrial applications (incl. home water heaters) 	Y, Part A
11	Joint Utilities should assess RNG projects based on existing frameworks, particularly when considering counterfactuals/baselines for CI, and compare costs of projects only to other sources of biomethane eligible for the program.	Y, Part A, GREET
12	Joint Utilities should use GHG-conscious baseline assumptions and prioritize alternatives that avoid methane generation.	N/A

13	Joint Utilities should be wary of negative CI scores creating risks or incentivizing bad behavior.	N/A
Accounting, Feedstocks & Model Weights		
14	CI is only one of the required considerations in the Decision, and the Joint Utilities should not weight it more heavily than other factors in SBPM.	Y, Parts A & B
15	Joint Utilities should use CI/emissions reduction as the strongest weight in the SBPM model to achieve the greatest GHG reductions.	Y, Parts A & B
16	Joint Utilities should consider risk adjustment to account for uncertain costs and time, particularly when not contractually obligated.	Y, Part A
17	Joint Utilities should use a performance-based cost assessment similar to low carbon fuel standard (LCFS) that considers the base price of lifecycle CI, the modified GREET model, carbon reduction prices, and cost adders for items listed in Decision.	Y
18	Joint Utilities should weight feedstocks in SBPM to prioritize procuring biomethane produced from organic waste over biomethane produced from dairy, despite dairies being more carbon negative than organics.	N See Decision
19	Joint Utilities should weight feedstocks in SBPM to extend prioritization of SB 1383 organic waste diversion from short-term requirement to the medium-term requirement.	N See Decision
Environmental & Social Justice		
20	Joint Utilities should consider project location and how it impacts priorities (e.g., high poverty and unemployment rates, environmental and social justice, air and water quality issues).	Y, Part B (location)
21	Joint Utilities should include in SBPM consideration of the different ways that biogas can create hotspots of pollution (e.g., fuel cells as considered in Decision).	Y, Part B (location)
22	Joint Utilities should keep an eye on costs to help underserved communities, since high utility bills harm customers.	Y
23	Joint Utilities should ensure that SBPM relies on air and water board compliance at the time of procurement, just as the California Department of Food and Agriculture (CDFA) does for the Dairy Digester Research and Development Program (DDRDP).	Y, prereq.
24	Joint Utilities should take into account in SBPM air and water quality and welfare in local communities.	Y, prereq.
Contract/Project Requirements		
25	Joint Utilities should expressly include any livestock facility generating animal manure that is used to produce biomethane in SBPM analysis.	Y, prereq. and Part B
26	Joint Utilities should ensure that biomethane for the program is in addition to existing production so as not to divert RNG from existing and operational uses.	Y, Part B
27	Joint Utilities should scrutinize contracts with a term of 10-15 years more than contracts with terms of less than 10 years.	N/A

28	Joint Utilities should consider adding an “out clause” or penalty to long-term contracts if producers are not able to meet cost-effectiveness standard (which may not be fully developed at the time contracts are signed) or promised performance level.	N/A
29	Joint Utilities should ask producers for all GHG accounting information (including monitoring, leakage, updates on production resources, etc.).	N/A
30	Joint Utilities should use an “above market” cost cap – contract prices should cover only the incremental cost of producing biomethane for pipeline injection.	N/A
31	Joint Utilities should exclude projects that increase emissions and exclude dairy biomethane projects.	N/A See Decision
32	Joint Utilities should procure from dairy biomethane projects whose activities are monitored by various agencies (e.g., Water Board, CARB, etc.).	N/A
33	Joint Utilities should not procure dairy biomethane as part of the Renewable Gas procurement program, since they cannot ensure that dairy biomethane facilities are not causing adverse impacts to water and air quality or maintaining a reasonable herd size.	N/A See Decision
34	Joint Utilities should strike a balance between populating all methodology components and ability to negotiate contracts.	N/A
35	Joint Utilities should use a portfolio approach when procuring RNG – maintain flexibility around project selection to meet obligations and compare RNG projects.	N/A
36	Joint Utilities should ensure program is reducing emissions by enforcing leak control/tracking GHGs at every link of the chain (including production/source), from start to finish of a project.	N/A

**PG&E Gas and Electric
Advice Submittal List
General Order 96-B, Section IV**

AT&T	East Bay Community Energy Ellison Schneider & Harris LLP	Pioneer Community Energy
Albion Power Company	Engineers and Scientists of California	Public Advocates Office
Alta Power Group, LLC		Redwood Coast Energy Authority
Anderson & Poole	GenOn Energy, Inc.	Regulatory & Cogeneration Service, Inc.
	Goodin, MacBride, Squeri, Schlotz & Ritchie	SCD Energy Solutions
Atlas ReFuel	Green Power Institute	San Diego Gas & Electric Company
BART	Hanna & Morton	
	ICF	SPURR
Barkovich & Yap, Inc.	International Power Technology	San Francisco Water Power and Sewer Semptra Utilities
Braun Blaising Smith Wynne, P.C.		
California Cotton Ginners & Growers Assn	Intertie	Sierra Telephone Company, Inc.
California Energy Commission		Southern California Edison Company
	Intestate Gas Services, Inc.	Southern California Gas Company
California Hub for Energy Efficiency Financing	Kelly Group	Spark Energy
	Ken Bohn Consulting	Sun Light & Power
California Alternative Energy and Advanced Transportation Financing Authority	Keyes & Fox LLP	Sunshine Design
California Public Utilities Commission	Leviton Manufacturing Co., Inc.	Stoel Rives LLP
Calpine		
	Los Angeles County Integrated Waste Management Task Force	Tecogen, Inc.
Cameron-Daniel, P.C.	MRW & Associates	TerraVerde Renewable Partners
Casner, Steve	Manatt Phelps Phillips	Tiger Natural Gas, Inc.
Center for Biological Diversity	Marin Energy Authority	
	McClintock IP	TransCanada
Chevron Pipeline and Power	McKenzie & Associates	Utility Cost Management
City of Palo Alto		Utility Power Solutions
	Modesto Irrigation District	Water and Energy Consulting Wellhead Electric Company
City of San Jose	NLine Energy, Inc.	Western Manufactured Housing Communities Association (WMA)
Clean Power Research	NRG Solar	Yep Energy
Coast Economic Consulting		
Commercial Energy	OnGrid Solar	
Crossborder Energy	Pacific Gas and Electric Company	
Crown Road Energy, LLC	Peninsula Clean Energy	
Davis Wright Tremaine LLP		
Day Carter Murphy		
Dept of General Services		
Don Pickett & Associates, Inc.		
Douglass & Liddell		

Appendix B: Advice Letter Tier Levels

Individual biomethane supply contracts are to be reviewed by CPUC Energy Division through a three-tier advice letter approval process.²⁸ As set forth by the Commission in D.22-02-025, the tier levels are based on contracted price. Upon Commission re-evaluation of the tier levels, other conditions may be included to further define each tier. Currently the tiers are defined as follows:

- Tier 1 AL must be submitted for contract prices up to \$17.70/MMBtu.
- Tier 2 AL must be submitted for contract prices between \$17.70/MMBtu and \$26/MMBtu.
- Tier 3 AL must be submitted for contract prices above \$26/MMBtu.

²⁸ See D.22-02-025, OP 13 at 59.