SOUTHERN CALIFORNIA GAS COMPANY (SOCALGAS)
SIERRA CLUB-SCG-01
WOODY BIOMASS PILOT PROJECT APPLICATION (A.25-10-008)
DATE REQUESTED: November 4, 2025
RESPONSE DUE: December 5, 2025

QUESTION 1-1:

The Testimony of James Lucas prepared on October 15, 2025 ("Lucas Testimony") at page JL-7 proposes that Utility-Owned Pipeline Infrastructure (Lanes 7-10 in Figure 2) be eligible for the Cap-and-Trade funds that SoCalGas has set aside for the Project.

a. What are the estimated costs for each of the listed utility-owned infrastructure in Lanes 7-10?
b. If SoCalGas cannot provide the cost estimate requested above for each lane at this time, when will it be able to provide such a cost estimate?

RESPONSE 1-1:

a) SoCalGas has not completed the estimated costs for lanes 7-9. There are no costs for lane 10 because this lane is part of existing infrastructure.
b) The estimated costs for lanes 7 to 9 are estimated to be provided no later than December 19, 2025. SoCalGas will supplement this response as soon as it has such an estimate.

QUESTION 1-2:

Please provide a complete version of April 22, 2025 Solicitation.

RESPONSE 1-2:

SoCalGas objects to this request because it seeks documents that are not relevant and not reasonably calculated to lead to the discovery of admissible evidence. SoCalGas also objects to this request to the extent that it seeks documents that contain confidential information, including proprietary, market sensitive information.

QUESTION 1-3:

Lucas Testimony at pages J-19 to JL-20 states that "[t]he date for the WBF facility to be operational and trucking biomethane to the interconnection facility is not more than five years after WBF has received notification by SoCalGas that the Commission granted to application."

a. Please indicate where this five-year deadline is established in the SB 1440 Pilot Project Agreements.
b. When or at what point in time will SoCalGas commence construction of Lanes 7-10?
c. What is the deadline, if any, by which SoCalGas must commence construction of Lanes 7-10 in Figure 2 on JL-7.
d. What is the deadline, if any, by which SoCalGas must complete construction of Lanes 7-10.

RESPONSE 1-3:

a) The SB 1440 Gasification/Pyrolysis Pilot Project Funding Agreement, Attachment B of the Application, states at page 7, "[S]uch Target Date shall be [X] years after the Project Owner has received notification by SoCalGas of a successful Application."

   The SB 1440 Gasification/Pyrolysis Pilot Project Funding Agreement reflects a target date of [X] years, which may be less than five years depending on when the CPUC issues a final decision on the Application. As ordered in D.22-02-02, "Any unspent Cap-and-Trade allowance proceeds shall be returned to ratepayers in the Climate Credit by December 31, 2032." Such statutory requirement will serve as a driver for timely completion of construction of the project within the specified timeframe.

b) SoCalGas's commencement of the facilities in lanes 7-10 will be dependent on CPUC approval of the Application and when West Biofuels is able to demonstrate project readiness as discussed on JLMS-19.

c) The estimated deadline for SoCalGas to commence construction for Lanes 7 to 10 is Q2/Q3 of 2030.

d) The estimated deadline for SoCalGas to complete construction for Lanes 7 to 10 is Q4 of 2030/Q1 of 2031.

QUESTION 1-4:

Lucas Testimony at JL-1 states that "SoCalGas is proposing a Project that appears financially sustainable in the long-term." The Application states at page 3 that "SoCalGas is nonetheless optimistic that this proposed project will be successful because of WBF's experience with similar projects and the Project's characteristics."

a. On what basis does Mr. Lucas conclude that the Project "appears financially stable"?
b. What are the "similar projects" with which WBF has experience?

RESPONSE 1-4:

a) West Biofuels provided SoCalGas a high-level project pro-forma that was used to gain insight into the financial viability of the project.

b) See the link provided below, which shows three projects which were developed and/or constructed by West Biofuels (2009, 2022, and 2025):

https://www.westbiofuels.com/history

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QUESTION 1-5:

Lucas Testimony at page JL-15 to JL-17 and Attachment 1 to the Lucas Testimony estimate carbon intensities and emissions intensities from the Project.

a. Please provide the emissions factors used to estimate carbon intensity and the emissions presented in Tables 1, 2, and 3 the Lucas Testimony and please list the sources of those emissions factors.
b. Please provide the basis for the percentages assumed I the "Base case disposal method" and "Qty" columns provided in Table 1 of the Lucas Testimony.
c. What level of methane leakage was assumed in each of the Lanes of the Project (as presented in Figure 2 on JL-7)?
d. Please provide the daily and annual emissions estimates for each emissions category in Tables 1 and 2 of the Lucas Testimony.
e. Please provide the facility specifications used to estimate "Bio-SNG plant direct emissions" in Table 2 of the Lucas Testimony.
f. Please provide the carbon capture and storage facility specifications used to estimate "CCS" in Table 2 of the Lucas Testimony
g. Has SoCalGas estimated the annual greenhouse gas emissions effects from Lanes 7-10 (in Figure 2 on JL-7), separate and apart from the other Lanes of the Project?
h. If the answer to question (e) above is yes, please provide that estimate.
i. Has SoCalGas estimated the annual greenhouse gas emissions effects from Lanes 1-6 (in Figure 2 on JL-7), separate and apart from the other Lanes of the Project?
j. If the answer to question (e) above is yes, please provide that estimate.
k. What is the estimated number of daily truck tips in Lane 6 (in Figure 2 on JL-7)?

RESPONSE 1-5:

a. Emission factors used for typical activities in the modelling are sourced from the 2024 R&D GREET model.[1] GREET emissions factors for activities in NREL's baseline and Bio-SNG use cases included the following:

[1] Available at https://doi.org/10.11578/GREET-Excel-2024/dc.20241203.1.

	GHG	VOC	CO	NOx	PM10	SOx	Unit
Biomass transportation	92.06	0.013	0.17	0.11	0.0064	0.0041	g/ton.mile of biomass
Biomass preprocessing	7.02	0.0035	0.016	0.034	0.0024	0.00031	g/kg of biomass
Bio-SNG compression (3,000 psi)	68.78	0.011	0.037	0.067	0.0079	0.024	g/kg of Bio-SNG
Electricity[2]	290.53	0.046	0.15	0.28	0.034	0.10	g/kWh
Bio-SNG transportation	92.06	0.013	0.17	0.11	0.0064	0.0041	g/ton.mile of Bio-SNG
Carbon capture & storage	57.65	0.0090	0.031	0.056	0.0067	0.020	g/kg of CO2
CIDI Vehicle:Conv. & LS Diesel	90.54	0.047	0.95	0.045	0.010	0.0040	g/MJ
Dedicated CNGV, NA NG	70.12	0.032	0.63	0.076	0.0079	0.0014	g/MJ

	GHG	VOC	CO	NOx	PM10	SOx	Unit	Sources
Dairy Bedding Direct	866.0	--	--	--	--	--	g/kg	NREL (preliminary study)
Incorporation Direct	1700	--	--	--	--	--	g/kg	Culumber et al (2025)[3]
Air Curtain Incinerator Direct	1445	0.21	3.45	0.80	3.85	0.25	g/kg	EPA Curtain Incinerator[4]
Biomass Plant Direct	1742	0.010	0.16	1.04	0.023	2.00	g/kg	R&D GREET 2024
Bio-SNG Plant Direct	1249	0.0076	0.025	0.11	0.0089	0.0033	g/kg	This study (w/o CCS)

Note: all units are g/kg of biomass feedstock

b. Base case disposal methods and quantities were developed based on conversations with the Central California Almond Growers Association (CCAGA) and what they are currently doing with their almond biomass. The project plans to get all of its almond biomass from CCAGA, so these percentages are representative of where the biomass is currently going and projected to go in the future.

c. The calculations assume no fugitive methane emissions as the level of leakage is expected to be negligible.

d. Daily and annual CO2e emissions are provided below for Tables 1 and 2.

[2] Uses WECC region emissions for statewide average electric grid emissions.
[3] https://www.sciencedirect.com/science/article/pii/S0167880925001963?via%3Dihub.
[4] SJVAPCD, Air Curtain Incinerator Emission Factor Determination, March 10, 2017, available at: https://ww2.valleyair.org/media/dpipwseq/criteria-air-incinerator-ef-determination-analysis.pdf.

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Table 1

Biomass feed, dry			Base case handling	Baseline CI		Daily CO2e	Annual CO2e
		kg /hr		kg CO2e/kg biomass	g CO2e/MJ Bio-SNG	Metric tons CO2e	Metric tons CO2e
Almond shells	20%	607.5	100% go to the dairy	0.17	16.15	12.7	4,636
Stick	10%	303.8	50% air curtain burner	0.07	6.74	5.2	1,909
			50% cogeneration plant	0.09	8.12	6.7	2,455
Orchard removal	70%	2,126.3	90% incorporation	1.07	99.87	79.1	29,182
			10% cogeneration plant	0.12	11.37	8.9	3,272
Residue processing			Chipping & loading	0.02	1.60	1.4	545
Total	**100%**	**3,037.5**		**1.54**	**143.85**	**113.9**	**42,000**

Table 2

	Bio-SNG Use Case CI	**Daily Emissions**	**Annual Emissions**

	Without CCS (g CO2e/MJ Bio-SNG)	With CCS (g CO2e/MJ Bio-SNG)	Without CCS (Metric tons CO2e)	With CCS (Metric tons CO2e)	Without CCS (Metric tons CO2e)	With CCS (Metric tons CO2e)
Biomass preprocessing	0.52	0.52	0.4	0.4	153	153
Biomass transportation (~114 miles)	1.03	1.03	0.8	0.8	303	303
Bio-SNG plant electricity	4.01	4.01	3.2	3.2	1,180	1,180
Bio-SNG plant direct emission	116.55	23.31	93.9	18.8	34,282	6,856
CCS	-	7.71	0	6.2	0	2,268
Bio-SNG compression (3,000 psi)	1.47	1.47	1.2	1.2	432	432
Bio-SNG transportation (~114 miles)	0.22	0.22	0.2	0.2	64	64
Total	123.81	38.27	99.8	30.8	36,415	11,257

e. The proposed Bio-SNG facility will utilize agricultural waste from the CCAGA facility in Kerman, where the plant will be co-located. The proposed system has a thermal input of 15MW, which equates to about 30,000 dry tons of biomass feed to the system and is about a third of CCAGA's total annual production. Expressed on a daily basis, the Bio-SNG facility will generate approximately 750 MMBTU per day (9 MW thermal) of RNG from processing about 80 dry tons of biomass per day.

f. In total, there are about 32,000 tons of CO2 emissions annually from the Bio-SNG plant which can be captured. The CO2 concentrates in two main streams during the Bio-SNG process, one at the gasifier flue gas and the other after the methanation reactor. Both streams have relatively high CO2 concentrations and available commercial technologies can capture CO2 from both locations.

g. SoCalGas has not selected the decanter equipment and is unable to provide a figure at this time.

h. Based on some initial estimates, SoCalGas does not expect the greenhouse gas emissions for Lanes 7-10 to be more than 1% of the estimated CO2e emissions for Lanes 1-6 (under both cases – with CCS and without CCS).

i. Table 2 of Jim Lucas/Matthew D. Summers Testimony contains the greenhouse gas emissions for lanes 1-6.

j. See Table 2 of Jim Lucas/Matthew D. Summers Testimony.

k. There will be approximately two to three truck trips to the point of injection per day.

QUESTION 1-6:

Lucas's Testimony provides a "well-to-wheel" estimate of the carbon intensity of the Project. The Application at page 2 states that the biomethane will be used for a "variety of end-uses including transportation, utility biomethane procurement and commercial industrial customers, etc."

a. What percentage of the Project's biomethane will go to the transportation sector?
b. What percentage of the Project's biomethane will go to utility biomethane procurement.

Response 1-6:

a) Page 2 of the Application does not state that the biomethane **will be used** for a variety of end-uses including transportation, utility biomethane procurement and commercial industrial customers, etc. Rather, the referenced language provides that the biomethane **can be used** for such end-uses: "Once it reaches the interconnection point, the biomethane can be used or sold for a variety of end-uses, such as transportation, utility biomethane procurement, commercial/industrial customers, etc." At this time, West Biofuels has not made a decision on the end-use for the biomethane.

b) See response to question a).