

RENEWABLE NATURAL GAS (RNG)



TOOL KIT

FOREWORD

SoCalGas® believes that renewable gas will play a fundamental role in California's clean energy future, alongside wind and solar. Developing renewable gas resources from our state's abundant organic waste streams provides an exciting solution to California's ambitious climate change goals, while also creating additional renewable fuel and jobs for our communities, and potentially billions of dollars in economic benefits.

SoCalGas has more than a decade of experience fostering the growth of renewable gas. Our culture is deeply rooted in customer service and we are committed to finding innovative solutions to meet customers' needs. To date, several projects have demonstrated that biogas can be successfully cleaned to meet pipeline quality specifications.

- In February 2019, Calgren Dairy Fuels, working with SoCalGas, began injecting RNG sourced from cow manure from dairy clusters in Pixley, California.
- At a wastewater treatment plant in Point Loma, California, SoCalGas collaborated with its sister company, San Diego Gas & Electric Company (SDG&E®), to install a renewable gas pipeline interconnection facility to deliver renewable gas into the SDG&E pipeline network.
- In July 2018, CR&R, a waste and recycling management company, began injecting renewable natural gas sourced from landfill-diverted food and green waste into SoCalGas's pipeline to fuel CR&R's waste hauling trucks.

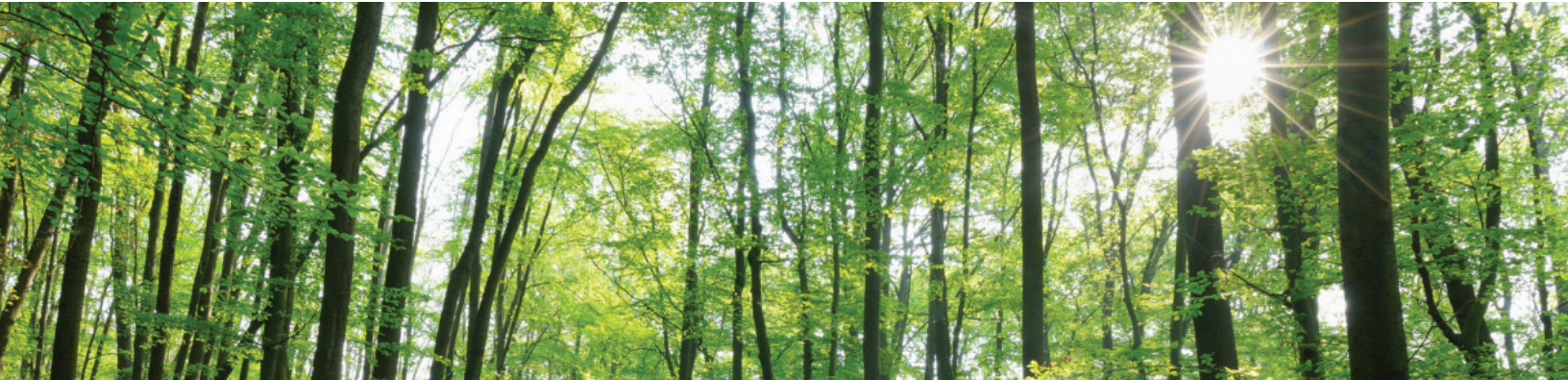
California has a challenging path ahead. Meeting the state's climate goals will require a fundamental shift in the way we power our homes and businesses, transport goods, and manage the lifecycle of our food and waste. By developing renewable gas in California, we can help to meet our climate goals sooner, while diversifying our carbon-free energy sources and improving energy resilience and reliability. SoCalGas stands ready to support biogas producers and to pursue renewable gas projects with pipeline injection. We created this tool kit to assist producers with information and technical guidance to support the interconnection process.

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RENEWABLE NATURAL GAS

PART OF CALIFORNIA'S RENEWABLE ENERGY FUTURE

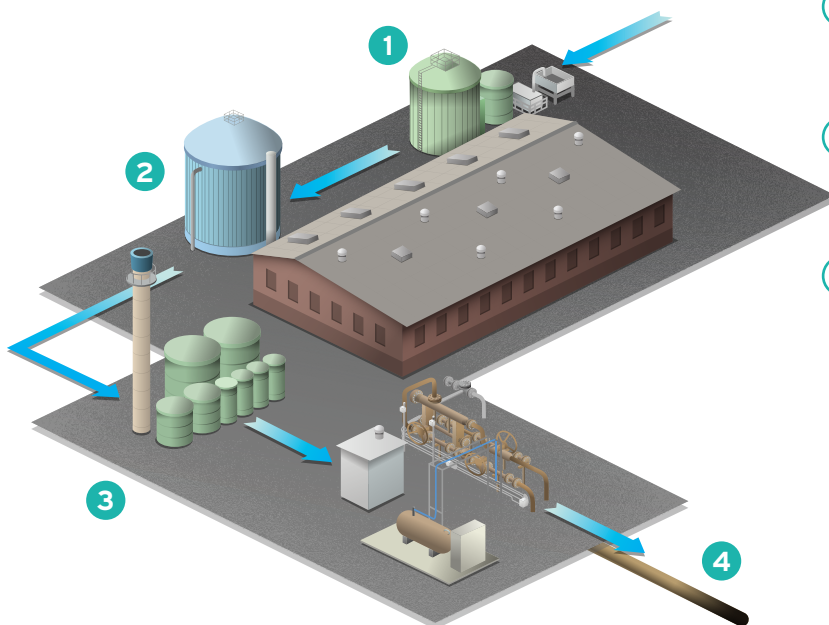


WHAT IS RENEWABLE NATURAL GAS?

Traditionally, pipeline natural gas comes from deep underground wells and is often associated with petroleum production. On the other hand, renewable natural gas (RNG) is natural gas derived from organic waste material found on the surface of the earth. In California, and throughout the United States, there are a variety of sources of this organic waste, which we see in daily life. These include food waste, garden and lawn clippings, animal and plant-based material as well as degradable carbon sources such as paper, cardboard and wood. The abundance of this material can allow for production of biogas in significant quantities.

The most common source of biogas is the naturally occurring biological breakdown of organic waste at facilities such as wastewater treatment plants and landfills. Biogas typically consists of methane and carbon dioxide, with traces of other elements. Biogas is cleaned and conditioned to remove or reduce non-methane elements in order to produce RNG. The converted RNG is then put into the utility pipeline as a replacement for traditional natural gas. This process helps promote the safe and reliable operation of the natural gas pipeline distribution network as well as the natural gas equipment and appliances used by customers.

HOW ORGANIC WASTE IS CONVERTED INTO RNG



- 1 Waste products, such as sludge, food waste or manure are processed in a biodigester.
- 2 The biodigester breaks down the organic material to create biogas – a mixture of methane and other elements.
- 3 The biogas can then be processed and conditioned leaving behind RNG, which can be used interchangeably with traditional natural gas.
- 4 This RNG can be used where it is produced for things like generating electricity or fueling vehicles, or it can be injected into a utility pipeline for transportation to other customers.

GREENHOUSE GAS REDUCTIONS

RNG comes from organic sources that originally removed carbon dioxide from the atmosphere during photosynthesis, so it is considered a carbon-neutral fuel. Often, RNG can be produced from organic waste that would otherwise decay and create methane emissions. Capturing these methane emissions can actually make RNG a carbon-negative fuel by removing emissions from the atmosphere. Reducing carbon dioxide and other greenhouse gas levels is important to help reduce global warming.

GREEN ENERGY AROUND THE CLOCK HELPS CALIFORNIA'S ECONOMY

Unlike certain other sources of renewable energy, such as solar and wind technologies, RNG is available 24 hours per day, seven days a week. It can be deployed when and where it is needed through the existing pipeline network. Converting waste products into RNG could help California meet its energy needs with local resources. Investing in RNG production in California could help create jobs in all regions of the state while improving air quality by better managing our waste streams.

UP TO 400 PERCENT CARBON DIOXIDE REDUCTIONS FOR TRANSPORTATION

Studies conducted by the University of California at Davis have estimated that more than 20 percent of California's current residential natural gas use can be provided by RNG derived from our state's existing organic waste alone¹. This can help reduce the need for other fossil-based fuels, and increase our supplies with a local renewable fuel. According to the California Air Resources Board², RNG sourced from landfill diverted food and green waste can provide a 125 percent carbon dioxide reduction, and RNG from dairy manure can result in a 400 percent carbon dioxide reduction when replacing traditional vehicle fuels.

¹ "The Feasibility of Renewable Natural Gas as a Large-Scale, Low Carbon Substitute", Prepared for the California Air Resources Board and the California Environmental Protection Agency by Amy Jaffe, Principal Investigator. STEPS Program, Institute of Transportation Studies, UC Davis: <https://ww3.arb.ca.gov/research/apr/past/13-307.pdf>

² "Low Carbon Fuel Standard Pathway Certified Carbon Intensities": <https://ww3.arb.ca.gov/fuels/lcfs/fuelpathways/pathwaytable.htm>



More than half of all natural gas dispensed in California for transportation is RNG, powering buses, refuse trucks and heavy-duty trucks.

SOCALGAS® IS A SUPPORTER OF RNG

As part of our commitment to help the environment and support California in meeting its greenhouse gas reduction goals, SoCalGas® offers expertise and assistance to customers and project developers who want to convert organic waste material into biogas or RNG. Through our network of natural gas pipelines, SoCalGas offers the opportunity for RNG to be accepted into our transmission and distribution system and delivered to our customers.

FIND OUT MORE

For more information visit:

socialgas.com/rng

Or contact our Market Development Team at:

MarketDevelopment@socialgas.com

INTERCONNECTION PROCESS



dairies and wastewater treatment plants. This raw biogas is made up of mainly methane and carbon dioxide, with traces of other elements such as water, hydrogen sulfide, siloxanes, nitrogen, and oxygen. Prior to injection into the pipeline, biogas must be conditioned and upgraded to remove or reduce non-methane elements to promote the safe and reliable operation of the pipeline network and end-use natural gas equipment.

BIOGAS PROCESSING TECHNOLOGIES

There are several methods and technologies available to condition biogas. Technology selection can be based on many criteria, including biogas and product gas makeup and site and operating conditions. Some examples of technologies used in biogas conditioning:

- High-selectivity membranes
- Pressure swing adsorption systems
- Water scrubbing systems
- Solid scavenging media
- Regenerative or non-regenerative adsorbent media
- Catalytic O₂ removal

It is common to find a combination of these technologies working in conjunction to meet a set of specifications.

BIOMETHANE INJECTION PROCESS

SoCalGas' Tariff Rule No. 39, "Access to the SoCalGas Pipeline System," provides detailed information on the requirements to interconnect and inject natural gas into utility pipelines. The section below describes the three basic steps of the interconnection process.

OVERVIEW

Renewable Natural Gas (RNG), also known as biomethane, is biogas that has been processed and upgraded to be interchangeable with traditional natural gas. RNG that meets the standards adopted pursuant to California Health and Safety Code Section 25421 can be injected into the existing utility natural gas pipelines. SoCalGas' Tariff Rule No. 30, "Transportation of Customer-owned Gas," describes the specifications, terms and conditions adopted that must be met in order for SoCalGas® to accept RNG into its pipeline network.

The process begins with biogas, which is produced by the anaerobic decomposition of organic material, which occurs naturally. This process happens at facilities such as landfills, landfill diversion facilities,

**Biomethane
Producer's Piping**



**SoCalGas
Pipeline Network**

Utility Interconnection

STEP 1

INTERCONNECTION CAPACITY STUDY

The process starts with an Interconnection Capacity Study, which determines the utility's downstream capacity to take the renewable natural gas away from the interconnection point and the associated utility facility enhancement cost. The Capacity Study step also provides interconnectors with the option to request a deviation from the gas quality specifications defined in SoCalGas' Tariff Rule 30, Paragraph I.3.¹ Interconnectors are responsible for the actual costs needed to perform the Interconnection Capacity Study. These costs typically range from \$2,000 to \$5,000 and require 45 business days to complete.²

STEP 2

PRELIMINARY ENGINEERING STUDY

The Preliminary Engineering Study develops the preliminary cost estimates for land acquisition, site development, right-of-way, metering, renewable natural gas quality, permitting, regulatory, environmental, unusual construction, operating and maintenance costs. Interconnectors are responsible for the actual costs needed to perform the Preliminary Engineering Study. These costs typically range from \$65,000 to \$75,000 and require 100 business days to complete.²

STEP 3

DETAILED ENGINEERING STUDY

There are three elements in the Detailed Engineering Study, including:

1. Description of all costs of construction
2. Development of complete engineering construction drawings
3. Preparation of all construction and environmental permit applications and right-of-way acquisition requirements

Interconnectors are responsible for the actual costs needed to perform the Detailed Engineering Study. These costs typically range from \$325,000 to \$600,000 and require 170 business days to complete.²

Interconnectors may have the option to request and fund the Preliminary and Detailed Engineering Studies (Steps 2 and 3) concurrently.

BIOMETHANE INTERCONNECTION INCENTIVE PROGRAM

In 2015, the California Public Utilities Commission established the Biomethane Interconnector Monetary Incentive Program.³ This program can provide an incentive that can contribute up to 50 percent of interconnection costs, with a cap of \$3 million per project. The cap is \$5 million for dairy cluster projects, defined as three or more dairies in close proximity. The program is described in detail in SoCalGas' Tariff Rule 39 Section A.3.a. Your SoCalGas account executive can help to navigate the qualification and application process for this incentive. The program has a statewide funding cap of \$40 million and is available until December 31, 2026, or until the program has exhausted its \$40 million funding.

FIND OUT MORE

For more information, please visit:

socialgas.com/rng

or contact us at:

GasStudyRequests@socialgas.com

¹ socialgas.com/regulatory/tariffs/tm2/pdf/30.pdf

² The provided estimated costs are based on historical projects and can vary based on site-specific conditions. The estimated costs and timeline do not include requests involving a deviation from the gas quality specifications.

³ D.15-06-02: <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M152/K572/152572023.PDF>

The Biomethane Interconnection Incentive Program is funded by California utility customers and administered by Southern California Gas Company (SoCalGas[®]) under the auspices of the California Public Utilities Commission. Program funds, including any funds utilized for rebates or incentives, will be allocated on a first-come, first-served basis until such funds are no longer available. This program may be modified or terminated without prior notice.

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FOR RENEWABLE NATURAL GAS (RNG) PROJECTS CONNECTING TO THE SOCALGAS® PIPELINE

INTRODUCTION

Renewable natural gas (RNG) is a carbon-neutral gaseous fuel that replaces traditional natural gas. RNG can play an important role in reducing the impact of greenhouse gas (GHG) emissions from the natural gas system. RNG typically comes from biogas sources such as landfills, wastewater treatment facilities, manure, and food and green waste. This raw biogas contains byproducts or compounds that need to be removed so they won't negatively impact end-use equipment or the environment. Removing these compounds, also called conditioning and/or upgrading, ensures the RNG can meet pipeline standards, as defined in SoCalGas' Tariff Rule No. 30.¹ Conditioning and upgrading biogas to meet pipeline standards typically includes removal of water, carbon dioxide (CO₂), hydrogen sulfide (H₂S) and other elements. Numerous commercially-available conditioning and upgrading systems are already in use here in the United States and in Europe.

Once RNG is conditioned and upgraded, it can be injected into SoCalGas® pipelines. The location of the interconnection is critical. A nearby pipeline must have the capacity to accept the volume of RNG produced. Customer demand fluctuates daily and seasonally, and natural gas pipelines typically flow in one direction – from higher pressure feeder

systems to lower pressure distribution systems. For this reason, SoCalGas must conduct an engineering analysis to find a feasible location.

WHAT FACTORS DETERMINE THE VIABILITY OF PRODUCING PIPELINE RNG?

The necessary components and related costs to condition and upgrade raw biogas and inject it into the pipeline can vary, depending on the source and quality of the raw biogas as well as the project location. Below a certain quality level and scale, it may not be economical to produce RNG without incentives. Typically, the larger the project and the cleaner the raw biogas, the more economically feasible that project will be. Project scale isn't the only design factor that may impact project economics. Some other major components that can play a significant, but often manageable, role in project costs are:

- Equipment to remove nitrogen and oxygen (capital and operating cost driver)
- Compression for processing and pipeline injection (capital and operating cost driver)
- Long-distance high pressure pipeline extension (capital cost driver)

1. REMOVING NITROGEN AND/OR OXYGEN

Often landfills and other biogas sources have air infiltration, meaning that nitrogen and oxygen can be inadvertently mixed with raw biogas. Both nitrogen and oxygen removal can increase capital and operating costs while reducing methane recovery efficacy. A recent Black & Veatch study estimated that eliminating the need to remove nitrogen during biogas processing can result in up to 20 to 25 percent cost reduction.² Because of this, it is often more cost-effective to reduce air infiltration upstream of the conditioning system by improving system integrity and adjusting landfill gas collection systems, or by implementing measures that limit or avoid introduction of air in anaerobic digesters.

2. COMPRESSION FOR PROCESSING AND PIPELINE INJECTION

Several biogas processing technologies require gas compression, and depending on the utility pipeline network pressure, final injection of RNG may require higher levels of compression (400 PSIG and greater). Conversely, lower pressure utility pipeline networks may be closer, but they typically have less connected demand available to accept RNG deliveries. Compression energy and maintenance costs can account for one-half to two-thirds of total operating costs, depending on final delivery pressure required. Siting projects to access lower pressure pipelines for injection can result in up to 5 to 15 percent savings in total operating costs.³

3. DISTANCE TO NEAREST VIABLE INJECTION LOCATION

The length of the pipeline extension necessary to interconnect with the utility system is also a critical cost driver. Finding routes for pipelines that require minimal traffic control and re-paving during installation can significantly reduce costs. For example, a 1,000-foot pipeline could equate to around one percent of estimated project lifecycle costs for a typical

economically sized upgrade and injection project but can grow up to 20 percent of project lifecycle costs when a two-mile pipeline is required.³

HOW CAN I FIND OUT MORE ABOUT SITING A PROJECT NEAR AN EXISTING PIPELINE?

To get a general idea about project siting, review the SoCalGas pipeline maps online at: socialgas.com/rng

Keep in mind that the existence of a pipeline on this map is not a guarantee it will have the capacity necessary to support renewable natural gas injection. These maps also don't include many lower-pressure pipelines which could provide injection access. Learn more about the interconnection process at: socialgas.com/rng

The SoCalGas low-carbon fuels Market Development Team can also provide you with more information about renewable natural gas project development. You can email the team at: MarketDevelopment@socialgas.com



¹ socialgas.com/regulatory/tariffs/tm2/pdf/30.pdf

² "Biogas Conditioning and Upgrading Technologies, Technical Characterization and Economic Evaluation" Black & Veatch, Commissioned by SoCalGas, 2015.

³ The provided estimates are based on internal evaluation and assessment work and can vary based on site-specific conditions.

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GAS QUALITY STANDARDS



THE SOCALGAS® GAS QUALITY STANDARDS

SoCalGas® Rule 30 describes the requirements for natural gas to be injected into the utility pipeline. These requirements reflect the first and foremost priority of SoCalGas to protect its customers, employees, contractors and pipeline system, as well as the public. The standards described in Rule 30 cover two major aspects: gas constituent limits (composition-based specifications) and gas interchangeability specifications (performance-based quality specifications). Gas constituent limits restrict the concentration of gas impurities to protect pipeline integrity and ensure safe and proper combustion in end-user equipment. The interchangeability specifications address end-

user combustion performance, ensuring safe and proper combustion for customers.

SoCalGas Rule 30, Section I.5. provides interconnectors with the option to request specific deviations from meeting the defined gas quality specifications in Section I.3. If SoCalGas determines such gas will not negatively impact system operations, SoCalGas is then required to file an Advice Letter for California Public Utilities Commission (CPUC) approval before the gas is permitted to flow into the utility pipeline system.

The table below shows some gas quality standards from across the United States¹. These requirements are specific to each pipeline network.

Pipeline Company	Heating Value (Btu/scf)		Water Content (Lbs/MMscf)	Various Inerts			Hydrogen Sulfide (H ₂ S) (Grain/100scf)
	Min	Max		CO ₂	O ₂	Total Inerts	
SoCalGas	970	1150	7	3%	0.20%	4%	0.25
Dominion Transmission	967	1100	7	3%	0.20%	5%	0.25
Equitrans LP	970	–	7	3%	0.20%	4%	0.3
Florida Gas Transmission Co.	1000	1110	7	1%	0.25%	3%	0.25
Colorado Intrastate Gas Co.	968	1235	7	3%	0.001%	–	0.25
Questar Pipeline Co.	950	1150	5	2%	0.10%	3%	0.25
Gas Transmission Northwest Co.	995	–	4	2%	0.40%	–	0.25

TYPICAL GAS CONSTITUENTS FOUND IN BIOGAS

In 2012, the CPUC issued a decision in the Biomethane Phase I Order Instituting Rulemaking (OIR)² in response to California Assembly Bill 1900 (AB 1900) (Gatto, 2012). In this OIR the CPUC, in collaboration with other state agencies, adopted 17 constituents of concern that can potentially be found in biogas. The CPUC established reasonably acceptable levels of these constituents to protect

human health and system integrity, and ordered them to be included in SoCalGas Rule 30 (See Section J.5). As directed by AB 1900, the protection levels for each constituent along with the monitoring, testing, reporting and recordkeeping requirements are reviewed and updated every five years, or sooner, if new information becomes available. Siloxanes, one of the constituents of concern, can be found in a variety of consumer products. Siloxanes are typically present in biogas created at landfills and wastewater treatment plants, and can sometimes be found in diverted food and green

¹ Source: American Gas Association, Report #4A Natural Gas Contract Measurement and Quality Clauses (2009). Some standards have been updated based on publicly available information

² R.13-02-008

waste biogas. Siloxanes can create problems in end-user equipment because during combustion, they can coat equipment with a fine layer of silica and silicates. This is especially problematic for sensitive end-user equipment found in Southern California. For example, siloxanes can cause expensive catalysts to fail. These catalysts perform an important service reducing emissions to keep our air clean, and are found in all fuel cells, natural gas vehicles, and the majority of electric power generators. The local aerospace industry and other manufacturers have also expressed concerns with siloxanes potentially entering their sensitive facilities through the fuel supply.

CLEANING BIOGAS TO PIPELINE QUALITY STANDARDS

Several methods and technologies are available to condition and upgrade biogas into renewable natural gas (RNG) and remove constituents of concern. Technology selection can be based on many criteria, including the makeup of the biogas as well as site and operating conditions. Some examples of technologies used in biogas conditioning and upgrading are:

- High-selectivity membranes
- Pressure swing adsorption systems
- Water scrubbing systems
- Solid scavenging media
- Regenerative or non-regenerative adsorbent media
- Catalytic O₂ removal

It is common to find a combination of these technologies working together to meet a set of specifications.

GAS CONSTITUENT MONITORING AND MEASUREMENT

Gas quality is maintained by two different types of monitoring, based on the Biomethane OIR requirements. Some attributes such as carbon dioxide, total inerts, and heating value are

continuously monitored at the point of utility interconnection. Other constituents, such as siloxanes, are monitored by taking quarterly or annual samples of the gas and testing it in a laboratory.

SoCalGas Rule 30 requires gas quality testing on biomethane constituents of concern be done by independent certified third-party laboratories³. The NELAC Institute (TNI) maintains a list of laboratories (<http://lams.nelac-institute.org/search>) which are able to test for constituents of concern, including the measurement of siloxanes below the defined trigger level.

FIND OUT MORE

For more information, please visit:

socalgas.com/rng

Or contact our Low Carbon Fuels Market Development Team at:

MarketDevelopment@socalgas.com



³ SoCalGas utilizes an independent third party laboratory and may include a performance sample when measuring siloxane levels.

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BIOGAS CONDITIONING/UPGRADING SERVICES TARIFF



The Biogas Conditioning/Upgrading Services Tariff is a fully elective, optional, nondiscriminatory tariff service for customers that allows SoCalGas® to plan, design, procure, construct, own, operate, and maintain biogas conditioning and upgrading equipment on customer premises. The biogas will be conditioned/upgraded to the gas quality specifications as requested by the customer and agreed to by SoCalGas.

KEY ELEMENTS

- The Biogas Conditioning/Upgrading Services Tariff is a service fully paid for by participating customers. Monthly tariff services pricing will vary based on the size, scope and location of each project.
- The Biogas Conditioning/Upgrading Services Tariff will be provided through a long-term Service Agreement, typically 10-15 years. At the end of the contract term, customer may request to extend the term of the agreement or ask SoCalGas to remove the equipment.
- The tariff service is neither tied to any other tariff or non-tariff services the customer may receive from SoCalGas nor will it change the manner in which these services are delivered.
- Non-utility service providers may offer services that are the same or similar to the Biogas Conditioning/Upgrading Services Tariff and customers are encouraged to explore these service options.
- To assist customers in understanding all of their service options, SoCalGas maintains and provides customers with a list of non-utility service providers at [socalgas.com/rng](https://www.socalgas.com/rng)

FREQUENTLY ASKED QUESTIONS

WHAT ARE SOME EXAMPLES OF END-USE APPLICATIONS THAT WOULD USE THIS TARIFF?

Examples of customer end-use applications that can be served by the Biogas Conditioning/Upgrading Services Tariff include but are not limited to: renewable natural gas for pipeline injection, compressed natural gas for vehicle refueling stations, and conditioned/upgraded biogas for combined heat and power (CHP) facilities.

IS THE BIOGAS CONDITIONING/UPGRADING SERVICES TARIFF MANDATORY IF CUSTOMERS WANT TO PUT RENEWABLE NATURAL GAS (BIOMETHANE) INTO THE PIPELINE?

No. Customers may elect to install and maintain their own biogas conditioning and upgrading equipment or engage a third party to install and maintain their biogas conditioning and upgrading equipment rather than take the Biogas Conditioning/Upgrading Services Tariff from SoCalGas.

DOES ENROLLMENT IN THIS TARIFF RESULT IN ANY PREFERENTIAL TREATMENT WHEN IT COMES TO GETTING GAS SERVICE?

No. The Biogas Conditioning/Upgrading Services Tariff is a fully elective, optional, non-discriminatory tariff service that is neither tied to any other tariff or non-tariff services the customer may receive from SoCalGas nor will it change the manner in which these services are delivered. As an example, requests for an interconnection capacity study are processed on a “first come, first served” basis for all customers, including customers that elect to take the Biogas Conditioning/Upgrading Services Tariff and customers that do not.

WHO CAN RECEIVE SERVICE UNDER THE BIOGAS CONDITIONING/UPGRADING SERVICES TARIFF?

The Biogas Conditioning/Upgrading Services Tariff is generally applicable to producers of biogas. Any agreement to provide service under the Biogas Conditioning/Upgrading Services Tariff is at the discretion of SoCalGas and will depend on non-discriminatory factors such as safety, SoCalGas resource availability, technical feasibility, and acceptability of commercial terms.

UNDER THIS SERVICE, WILL SOCALGAS BE RESPONSIBLE FOR ALL EQUIPMENT CONNECTED TO THE BIOGAS CONDITIONING AND UPGRADING FACILITIES?

No. This service does not cover any activities either upstream from the receipt point of untreated biogas or downstream from the point of service delivery for conditioned/upgraded biogas.

WHO OWNS BIOGAS TREATED UNDER THE BIOGAS CONDITIONING/UPGRADING SERVICES TARIFF?

Any gas processed under the Biogas Conditioning/Upgrading Services Tariff is solely owned by the customer before, during, and after processing. It is solely the customer's responsibility to ensure that treated biomethane intended for pipeline injection meets Rule 30 standards for pipeline injection of customer-owned gas. The customer is solely responsible for any damage to pipeline integrity or human health which results from improperly treated gas entering SoCalGas' natural gas pipeline system.

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Or contact our Low Carbon Fuels Market Development Team at:

MarketDevelopment@socalgas.com



BIOGAS INDUSTRY LIST



Last updated June 2020

NORTH AMERICA

UNITED STATES

Acrion Technologies www.acrion.com	7777 Exchange Street, Suite 5 Cleveland, OH 44124	314-669-2612
AECOM www.aecom.com	1999 Avenue of the Stars, Suite 2600 Los Angeles, CA 90067	213-593-8100
Air Liquide Advanced Separations www.airliquideadvancedseparations.com/our-membranes/biogas	200 GBC Drive Newark, DE 19702	484-666-9088
AMP Americas www.ampamericas.com	811 W. Evergreen Ave, Suite 201, Chicago, IL 60642	949-514-8518
Babcock & Wilcox MEGTEC	830 Prosper Street, De Pere, WI 54115	920-337-1500
BioCNG, LLC www.biocng.us	8413 Excelsior Drive, Suite 160 Madison, WI 5371	630-410-7202
CDM Smith www.cdmsmith.com	600 Wilshire Boulevard, Suite 750 Los Angeles, CA 90017	213-457-2153
CGRS www.cgrs.com	1301 Academy Court, Fort Collins, CO 80524	800-288-2657
CH4 Biogas http://ch4biogas.com	30 Lakewood Circle N. Greenwich, CT 6830	203-869-1446
Clean Energy Fuels www.cleanenergyfuels.com	4675 MacArthur Court, Suite 800 Newport Beach, CA 92660	949-437-1000
Clear Horizons, LLC www.clearhorizonsllc.com	5070 N. 35th Street Milwaukee, WI 53209	414-831-1264
Colony Energy Partners www.colonyenergypartners.com	4940 Campus Drive, Suite C Newport Beach, CA 92660	949-752-7120
EcoCorp www.ecocorp.com	1211 S. Eads Street Arlington, VA 22202	703-979-4999
Eisenmann Corporation www.eisenmann.com	150 East Dartmore Drive Crystal Lake, IL 60014	815-455-4100
Energy Systems Group www.energysystemsgroup.com	4655 Rosebud Lane, Utility Services Business Unit Newburgh, IN 47630	812-492-3703

Enource, LLC www.enource.com	1403 Azalea Bend Sugar Land, TX 77479	832-449-8478
Entegris www.entegris.com	129 Concord Road, Billerica, MA 01821	978-436-6500
EnviTec-Biogas USA www.envitec-biogas.com	7 Fennell Street, Skaneateles, NY 13152	585-802-0174
FirmGreen www.firmgreen.com	2901 West Coast Highway, Suite 200 Newport Beach, CA 92663	949-270-2941
Generon IGS www.generon.com	16250 Tomball Parkway, Houston, TX 77086	713-937-5200
Guild Associates, Inc. www.guildassociates.com	5750 Shier-Rings Road Dublin, OH 43016	614-798-8215
Haldor Topsoe www.topsoe.com	770 The City Drive, Suite 8400 Orange, CA 92868	714-621-3800
Harveset Power www.harvestpower.com	221 Crescent Street, Suite 402 Waltham, MA 2453	781-314-9500
Hitachi Zosen Inova USA, LLC www.hz-inova.com	3930 E. Jones Bridge Road, Suite 200 Norcross, GA 30092	678-987-2500
John Zink Hamworthy Combustion www.johnzink.com	11920 East Apache Street Tulsa, OK 74105	918-234-1800
Northern Biogas www.northernbiogas.com	PO Box 643 Fond du Lac, WI 54936	920-948-3216
PlanET Biogas USA www.planet-biogas-usa.com	5937 State Route 11 Homer, NY 13077	877-266-0994
Prometheus Energy www.prometheusenergy.com	10370 Richmond Avenue, Suite 450 Houston, TX 77042	832-456-6500
Ross Group www.withrossgroup.com	510 E. 2nd Street Tulsa, OK 74120	918-234-7675
SCS Engineers www.scsengineers.com	3900 Kilroy Airport Way, Suite 100 Long Beach, CA 90806	562-426-9544
Tetra Tech www.tetrattech.com	3475 East Foothill Boulevard Pasadena, CA 91107	703-387-2117
TMC Fluid Systems, Inc. https://TMCFluidSystems.com	13217 Jamboree Road, Suite 482 Tustin, CA 92782	949-269-1472
U.S. Gain www.usgain.com/what-we-do/rng-alternative-fuel-source	425 Better Way Appleton, WI 54915	920-243-5856
Veolia http://technomaps.veoliawatertechnologies.com/biothane-anaerobic-technologies/en	6981 North Park Drive, Suite 600 Pennsauken, NJ 08109	856-438-1776

Western Biogas Systems www.firmgreen.com	2522 Chambers Road, Suite 100 Tustin, CA 92780	866-511-1420
Xebec Adsorption USA www.xebecinc.com	14090 Southwest Freeway, Suite 300 Sugarland, TX 77478	604-362-7297
Xergi www.xergi.com	9825 NW Maring Drive Portland, OR 97229	503-830-4086

CANADA

Air Liquide Advanced Separations www.airliquideadvancedseparations.com/our-membranes/biogas	Suite 500, 140-4 Ave SW Calgary, AB T2P 3N3	403-585-2620
Greenlane Biogas www.greenlanebiogas.com	102-4238 Lozelis Avenue Burnaby, British Columbia, V5A 0C4	604-805-8532
PlanET Biogas Solutions www.planet-biogas.ca	56-113 Cushman Road St. Catharines, Ontario, L2M 6S9	905-935-1969
Xebec www.xebecinc.com	730 Boulevard Industriel Blainville, Quebec, Canada, J7C 3V4	450-979-8700

EUROPE

AUSTRIA

Gastechnik Himmel www.gt-himmel.com	Industriestrasse 3 2100 Korneuburg, Austria	+43 2262 / 613 69
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DENMARK

Ammongas www.ammongas.dk	Ejby Mosevej 5 2600 Glostrup, Denmark	+45 69134084
Biogasclean www.biogasclean.com	Egelundsvej 18 DK-5260 Odense S, Denmark	+45 41964569
Gemidan Ecoqi http://gemidan.com/forside.aspx	Øster Dahl Hjallerupvej 36 DK-9320 Hjallerup, Denmark	#+45 98283000
LSM Pumps www.lsmumps.com	Sigenvej 7 DK-9760 Vraa, Denmark	+45 51247543
Nature Energy www.natureenergy.dk	Ørbækvej 260 DK-5220 Odense SØ, Denmark	+45 63156451
Renew Energy www.renewenergy.dk/en	Kullinggade 31E DK-5700 Svendborg, Denmark	+45 62220001

FINLAND

Metener
www.metener.fi

Vaajakoskentie 104
41310 Leppävesi, Finland

+358 50 591 3861

FRANCE

Air Liquide Advanced Separations
www.airliquideadvancedseparations.com/our-membranes/biogas

2 Rue de Clemenciere
38360 Sassenage, France

+33 06 26 80 28 31

Cryostar
www.cryostar.com

2 Rue de l'Industrie
ZI BP 48 68220 Helsingue, France

+33 389 70 27 27

Prodeval
www.prodeval.eu

Rovaltain, Parc du 45ème
Parallèle - 11 rue Olivier de Serres,
26300 Châteauneuf-sur-Isère,
France

+33 0 4 75 40 37 37

GERMANY

BebraBiogas
www.bebra-biogas.com

Kurze Muhren 1
20095 Hamburg, Germany

+49 231 9982 700

Carbotech
www.carbotech.info

Natorpstrabe 27
45139 Essen, Germany

+49 201 50709-300

Eisenmann
www.eisenmann.com

Tubinger Str. 81
71032 Boblingen, Germany

+49 7031 78-0

EnviTec Biogas
www.envitec-biogas.com

BoschstraBe 2
48369 Saerbeck, Germany

+49 (0) 2574 / 8888-0

ETW Energietechnik
www.etw-energy.com

Ferdinand-Zeppelin-Str. 19
47445 Moers, Germany

+49 2841 9990 0

HAASE Energietechnik
www.haase.de

OderstraBe 76
24539 Neumunster, Germany

+49 4321 / 878-0

Mahler
www.mahler-ags.com

Inselstr. 140
70327 Stuttgart, Germany

+49 (7 11) 87030 - 0

Mainsite Technologies
www.mainsite-technologies.de

Industrie Center Obernburg
63784 Obernburg, Germany

+49 (0) 6022 / 81-3366

Schwelm Anlagentechnik
www.schwelm-at.de

Hattinger StraBe 10-12 (oder
Eisenwerkstrasse)
D-58332 Schwelm, Germany

+49 2336 / 809 - 0

Strabag
www.strabag-umweltanlagen.com

Vogelsanger Weg 111
40470 Düsseldorf, Germany

+49 211 6104-50

Weltec Biopower GmbH
www.weltec-biopower.com

Zum Langenberg 2
49377 Vechta, Germany

+49 4441 999780

NETHERLANDS

DMT
www.dmt-et.nl Yndustrywei 3, 8501 SN Joure,
The Netherlands +31 (0) 513 636 789

Gas Treatment Services
www.gastreatmentservices.com Timmerfabriekstraat 12
2861 GV Bergambacht,
The Netherlands +31 182-621890

NORWAY

Memfoact
www.memfoact.no Industriveien 39 E
7080 Heimdal, Norway +47 47 971 69 635

PORTUGAL

Sysadvance
www.sysadvance.com 4470-605 Moreira da Maia
Portugal +351 229 436 790

SPAIN

HERA CleanTech
www.heracleantech.com Parc Tecnològic
de Cerdanyola del Vallès,
Ronda Can Fatjo nº 9, edifici C,
(Primera Planta)
08290 Cerdanyola, Barcelona +33 (0) 6 4858 8458

RosRoca
www.rosroca.com PCITAL Gardeny, Edificio H2,
Planta 2a
25003 Lleida, Spain +34 973 508 100

SWEDEN

Biofrigas
www.biofrigas.se J.A. Wettergrensgata 7
SE-421 30 Västra Frölunda, Sweden +46 708-183807

Biosling
www.biosling.se Marknadsvägen 202
981 91 Jukkasjärvi, Sweden +46 0980-23 000

Econet
www.econetgroup.se Singelgatan 12,
212 28 Malmö, Sweden +46 0 4010 5070

Malmberg Water
www.malmberg.se SE-296 85 AHUS, Sweden
+46 44 780 18 00

Neo-Zeo
www.neo-zeo.com Svante Arrhenius vag 21 B
10691 Stockholm, Sweden +46 7 6219 9731

Purac Puregas
www.lackebywater.se Torsasgatan 5 E
392 39 Kalmar, Sweden +46 480 38 100

SWITZERLAND

Acrona Projects
www.acrona-group.com

Avenue des sports 42
CH-1400 Yverdon-les-Bains,
Switzerland

+41 (0) 78 723 04 02

UNITED KINGDOM

Gasrec
www.gasrec.co.uk

Paddington Station
19 Eastbourne Terrace
London, W2 6LG, United Kingdom

+44 0203 0046888

Hamworthy
www.hamworthy.com

Fleets Corner, Poole,
Dorset, BH17 055, United Kingdom

+46 0980-23 000

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Rule No. 30

Sheet 1

TRANSPORTATION OF CUSTOMER-OWNED GAS

The general terms and conditions applicable whenever the Utility System Operator transports customer-owned gas, including wholesale customers, the Utility Gas Procurement Department, other end-use customers, aggregators, marketers and storage customers (referred to herein as "customers") over its system are described herein.

A. General

1. Subject to the terms, limitations and conditions of this rule and any applicable CPUC authorized tariff schedule, directive, or rule, the customer will deliver or cause to be delivered to the Utility and accept on redelivery quantities of gas which shall not exceed the Utility's capability to receive or redeliver such quantities. The Utility will accept such quantities of gas from the customer or its designee and redeliver to the customer on a reasonably concurrent basis an equivalent quantity, on a term basis, to the quantity accepted.
2. The customer warrants to the Utility that the customer has the right to deliver the gas provided for in the customer's applicable service agreement or contract (hereinafter "service agreement") and that the gas is free from all liens and adverse claims of every kind. The customer will indemnify, defend and hold the Utility harmless against any costs and expenses on account of royalties, payments or other charges applicable before or upon delivery to the Utility of the gas under such service agreement.
3. The point(s) where the Utility will receive the gas into its intrastate system (point(s) of receipt, as defined in Rule No. 1) and the point(s) where the Utility will deliver the gas from its intrastate system to the customer (point(s) of delivery, as defined in Rule No. 1) will be set forth in the customer's applicable service agreement. Other points of receipt and delivery may be added by written amendment thereof by mutual agreement. The appropriate delivery pressure at the point(s) of delivery to the customer shall be that existing at such point(s) within the Utility's system or as specified in the service agreement.

B. Quantities

1. The Utility shall as nearly as practicable each day redeliver to customer and customer shall accept, a like quantity of gas as is delivered by the customer to the Utility on such day. It is the intention of both the Utility and the customer that the daily deliveries of gas by the customer for transportation hereunder shall approximately equal the quantity of gas which the customer shall receive at the point(s) of delivery. However, it is recognized that due to operating conditions either (1) in the fields of production, (2) in the delivery facilities of third parties, or (3) in the Utility's system, deliveries into and redeliveries from the Utility's system may not balance on a day-to-day basis. The Utility and the customer will use all due diligence to assure proper load balancing in a timely manner.

(Continued)

(TO BE INSERTED BY UTILITY)
ADVICE LETTER NO. 4240
DECISION NO. 11-04-032

ISSUED BY
Lee Schavrien
Senior Vice President
Regulatory Affairs

(TO BE INSERTED BY CAL. PUC)
DATE FILED May 6, 2011
EFFECTIVE Jun 5, 2011
RESOLUTION NO. _____

Rule No. 30

Sheet 2

TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

B. Quantities (Continued)

- 2. The gas to be transported hereunder shall be delivered and redelivered as nearly as practicable at uniform hourly and daily rates of flow. The Utility may refuse to accept fluctuations in excess of ten percent (10%) of the previous day's deliveries, from day to day, if in the Utility's opinion receipt of such gas would jeopardize other operations. Customers may make arrangements acceptable to the Utility to waive this requirement.
- 3. The Utility does not undertake to redeliver to the customer any of the identical gas accepted by the Utility for transportation, and all redelivery of gas to the customer will be accomplished by substitution on a therm-for-therm basis.
- 4. Transportation customers, including the Utility Gas Procurement Department, wholesale customers, contracted marketers, and Core Transport Agents (CTAs) will be provided monthly balancing services in accordance with the provisions of Schedule No. G-IMB.

C. Electronic Bulletin Board

- 1. The Utility prefers and encourages customers, including the Utility Gas Procurement Department, to use Electronic Bulletin Board (EBB) as defined in Rule No. 1 to submit their transportation nominations to the Utility. Imbalance trades are to be submitted through EBB or by means of the Imbalance Trading Agreement Form (Form 6544). Use of EBB is not mandatory for transportation only customers.
- 2. Transportation nominations may be submitted manually or through EBB.

D. Operational Requirements

1. Customer Representation

The customer must provide to the Utility the name(s) of any agents ("Agent") used by the customer for delivery of gas to the Utility for transportation service hereunder and their authority to represent customer.

A customer may choose only one of the following gas supply arrangements: 1) one Contracted Marketer, 2) one or multiple Agents (in addition to a Contracted Marketer if desired), or 3) itself for purposes of nominating to its end-use account (OCC).

(Continued)

(TO BE INSERTED BY UTILITY)
ADVICE LETTER NO. 4842
DECISION NO.

ISSUED BY
Dan Skopec
Vice President
Regulatory Affairs

(TO BE INSERTED BY CAL. PUC)
DATE FILED Jul 31, 2015
EFFECTIVE Apr 1, 2016
RESOLUTION NO. _____

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TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

D. Operational Requirements (Continued)

2. Receipt Points

Utility accepts nominations from transportation customers or their representatives at the following Receipt Points into the SoCalGas system, as referenced in Schedule No. G-BTS*:

- El Paso Pipeline at Blythe (Southern Transmission Zone)
- North Baja Pipeline at Blythe (Southern Transmission Zone)
- Transportadora de Gas Natural de Baja California at Otay Mesa (Southern Transmission Zone)
- Kern River Pipeline and Mojave Pipeline (Wheeler Transmission Zone)
- PG&E at Kern River Station (Wheeler Transmission Zone)
- Occidental of Elk Hills at Gosford (Wheeler Transmission Zone)
- Transwestern Pipeline at North Needles (Northern Transmission Zone)
- Transwestern Pipeline at Topock (Northern Transmission Zone)
- El Paso Pipeline at Topock (Northern Transmission Zone)
- Kern River Pipeline and Mojave Pipeline at Kramer Junction (Northern Transmission Zone)
- Line 85 (California Supply)
- North Coastal (California Supply)
- Other (California Supply)
- Storage

* Additional Receipt Points will be added as they are established in the future.

3. Backbone Transmission Capacity

Each day, Receipt Point and Backbone Transmission Zone capacities will be set at their physical operating maximums under the operating conditions for that day. The Utility will schedule nominations for each Receipt Point and Backbone Transmission Zone to the maximum operating capacity of that individual Receipt Point or Backbone Transmission Zone. The maximum operating capacity is defined as the facility design or contractual limitation to deliver gas into the Utility's system adjusted for operational constraints (i.e. maintenance, localized restrictions, and upstream delivery pressures) as determined each day.

The NAESB elapsed pro rata rules require that the portion of the scheduled quantity that would have theoretically flowed up to the effective time of the intraday nomination be confirmed, based upon a cumulative uniform hourly quantity for each nomination period affected. As such, the scheduled quantities for each shipper are subject to change in the Intraday 1 Cycle, the Intraday 2 Cycle, and the Intraday Cycle 3. However, each shipper's resulting scheduled quantity for the Gas Day will be no less than the elapsed prorated scheduled quantity for that shipper.

(Continued)

(TO BE INSERTED BY UTILITY)

ADVICE LETTER NO. 5493
DECISION NO.

3C12

ISSUED BY

Dan Skopec
Vice President
Regulatory Affairs

(TO BE INSERTED BY CAL. PUC)

SUBMITTED Jul 10, 2019
EFFECTIVE Aug 9, 2019

RESOLUTION NO. _____

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TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

D. Operational Requirements (Continued)

3. Backbone Transmission Capacity (Continued)

Each day, the Utility will use the following rules to confirm nominations to the Receipt Point and Backbone Transmission Zone maximum operating capacities. The Utility will also use the following rules to confirm nominations to the system capacity limitation as defined in Section F for OFO events during the Intraday 1 and Intraday 2 cycles; and during the Intraday 2 cycle when an OFO event is not called and nominations exceed system capacity.

Confirmation Order:

- Nominations using Firm Primary backbone transportation rights will be first; pro-rated if over-nominated*.
- Nominations using Firm Alternate backbone transportation rights within the associated transmission zone will be second (“Firm Alternate Within-the-Zone”); pro-rated if over-nominated.
- Nominations using Firm Alternate backbone transportation rights outside the associated transmission zone will be third (“Firm Alternate Outside-the-Zone”); pro-rated if over-nominated.
- Nominations using Interruptible backbone transportation rights will be fourth, pro-rated if over-nominated.
- Southern Transmission Receipt Points will not be reduced in any cycle below 110% of the Southern System minimum flowing supply requirement established by the Gas Control Department.

Bumping Rules:

- Firm Primary rights can “bump” any Firm Alternate scheduled quantities through the Evening Cycle.
- Firm Alternate Within-the-Zone rights can “bump” Firm Alternate Outside-the-Zone scheduled quantities through the Evening Cycle.
- Firm Primary and any Firm Alternate can “bump” interruptible scheduled quantities through the Intraday 2 Cycle subject to the NAESB elapsed pro-rata rules.
- Bumping will not be allowed in the Intraday 3 Cycle.

* If the available firm capacity at a particular receipt point or within a particular transmission zone is less than the firm capacity figures stated in Schedule No. G-BTS, scheduling of firm backbone transportation capacity nominations will be pro rata within each scheduling cycle. Any nominations of firm backbone transportation rights acquired through the addition of Displacement Backbone Transmission Capacity facilities will be reduced pro rata to zero at the applicable receipt point or within the applicable transmission zone prior to other firm backbone transportation rights nominations being reduced.

(Continued)

(TO BE INSERTED BY UTILITY)
 ADVICE LETTER NO. 4842
 DECISION NO.

ISSUED BY
Dan Skopec
 Vice President
 Regulatory Affairs

(TO BE INSERTED BY CAL. PUC)
 DATE FILED Jul 31, 2015
 EFFECTIVE Apr 1, 2016
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TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

D. Operational Requirements (Continued)

3. Backbone Transmission Capacity (Continued)

Priority Rules:

- a. Firm primary scheduled quantities in the Evening Cycle will have priority over a new firm primary nomination made in the Intraday 1 Cycle.
- b. Firm Alternate Inside-the-Zone scheduled quantities in the Evening Cycle will have priority over a new Firm Alternate Inside-the-Zone nomination made in the Intraday 1 Cycle.
- c. Firm Alternate Outside-the-Zone scheduled quantities in the Evening Cycle will have priority over a new Firm Alternate Outside-the-Zone nomination made in the Intraday 1 Cycle.
- d. Interruptible scheduled quantities in the Evening Cycle will have priority over a new Interruptible nomination made in the Intraday 1 Cycle.
- e. This same structure will be applied in going from Intraday 1 Cycle (Cycle 3) to Intraday 2 Cycle (Cycle 4) to Intraday 3 Cycle (Cycle 5). However, this hierarchy will not affect Intraday 4 Cycle (Cycle 6) nominations or the elapsed pro-rata rule.

4. Storage Service Capacity

Each day, storage injection and withdrawal capacities will be set at their physical operating maximums under the operating conditions for that day and posted on the Utility's EBB. These capacities will take into account offsetting injection or withdrawal activity that effectively increase withdrawal or injection capacities. *Injection nominations will be held to the injection capacity specified in the Operational Flow Order (OFO) calculation on the EBB in every flowing cycle regardless of OFO status.** The Utility will use the following rules to limit the nominations to the storage maximums.

As necessary, withdrawal or injection allocated to the daily balancing function will be set aside and given first priority every day.

- Nominations using Firm storage rights will have the next priority, pro-rated, if necessary to the available storage capacity.
- All other nominations using Interruptible storage rights will have the lowest priority, pro-rated if over-nominated based on the daily volumetric price paid.
- On low OFO days the volume of interruptible withdrawal will be cut in half relative to the calculation on a non-OFO day. If interruptible nominations immediately prior to the low OFO were above this level, then they will be held constant through the low OFO.
- Firm storage rights can "bump" interruptible scheduled storage quantities through the Intraday 3 cycle.

Notice to bumped parties will be provided via the Transactions module in EBB. Bumping is subject to the NAESB elapsed prorata rules.

(Continued)

(TO BE INSERTED BY UTILITY)
 ADVICE LETTER NO. 4996
 DECISION NO. 16-06-039

ISSUED BY
Dan Skopec
 Vice President
 Regulatory Affairs

(TO BE INSERTED BY CAL. PUC)
 DATE FILED Jul 25, 2016
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 RESOLUTION NO. _____

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TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

D. Operational Requirements (Continued)

5. Off-System Delivery (OSD) Service

For each flow date, the Utility will determine the quantity of capacity available for off-system deliveries. The quantity will include that available via physical redelivery from the Utility system along with displacement of forward haul flowing supplies. For each nomination cycle, the Utility customers who have contracted with the Utility for off-system delivery service may submit a nomination for such service pursuant to Schedule No. G-OSD and Section D.6. "Nominations" below, for deliveries to the PG&E system and to the Utility Transmission system's interconnection points with all interstate and international pipelines, but excluding California-produced gas supply lines.

The following rules will be used in scheduling of Off-System Delivery Services:

- Nominations using Firm OSD rights will have first priority; pro-rated if over-nominated.
- Nominations using Interruptible OSD rights will have second priority; pro-rated if over-nominated.
- Firm OSD rights can "bump" Interruptible OSD scheduled quantities through the Intraday 2 Cycle, subject to the NAESB elapsed pro-rata rules.
- Bumping of Interruptible OSD rights by Firm OSD rights will not be allowed in the Intraday 3 Cycle.
- Both Firm and Interruptible OSD rights, at any Delivery Point, can be reduced in any cycle, including during curtailment events, (subject to the NAESB elapsed pro rata rules) if, in the sole judgment of the Utility, the discontinuation or reduction of OSD service at that Delivery Point would diminish the need for the Utility to bring additional gas into the Utility's system at an additional cost or reduce the level of curtailment to any Utility customer.
- Reduction of Interruptible OSD nominations at any Delivery Point will be prorated at that particular Delivery Point.
- Reduction of Firm OSD nominations at any Delivery Point will be prorated at that particular Delivery Point.

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(TO BE INSERTED BY UTILITY)
 ADVICE LETTER NO. 5050
 DECISION NO. 16-07-008

ISSUED BY
Dan Skopec
 Vice President
 Regulatory Affairs

(TO BE INSERTED BY CAL. PUC)
 DATE FILED Oct 25, 2016
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TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

D. Operational Requirements (Continued)

6. Nominations

The customer shall be responsible for submitting gas service nominations to the Utility no later than the deadlines specified below.

Each nomination shall include all information required by the Utility's nomination procedures. Nominations received by the Utility will be subject to the conditions specified in the service agreements with the Utility. The Utility may reject any nomination not conforming to the requirements in these rules or in applicable service agreements. The customer shall be responsible for making all corresponding upstream nomination/confirmation arrangements with the interconnecting pipeline(s) and/or operator(s).

Evening and Intraday nominations may be used to request an increase or decrease to scheduled volumes or a change to receipt or delivery points.

Intraday nominations do not roll from day to day.

Nominations submitted in any cycle will automatically roll to subsequent cycles for the specified flow date and from day-to-day through the end date or until the end date is modified by the nominating entity.

Nominations may be made in the following manner:

<u>FROM</u>	<u>TO</u>
Pipeline/CA Producer	Backbone Transportation Service Contract
Backbone Transportation Service Contract	End User, Contracted Marketer, CTA
Backbone Transportation Service Contract	Citygate Pool Account
Backbone Transportation Service Contract	Storage Account
Citygate Pool Account	End User, Contracted Marketer, CTA
Citygate Pool Account	Citygate Pool Account
Storage Account	End User, Contracted Marketer, CTA
Citygate Pool Account	Storage Account
Storage Account	Citygate Pool Account
Storage Account	Storage Account
Storage Account	Off-System Delivery Contract
Citygate Pool Account	Off-System Delivery Contract
End User, Contracted Marketer, CTA	Storage Account

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(TO BE INSERTED BY UTILITY)
 ADVICE LETTER NO. 4842
 DECISION NO.

ISSUED BY
Dan Skopec
 Vice President
 Regulatory Affairs

(TO BE INSERTED BY CAL. PUC)
 DATE FILED Jul 31, 2015
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 RESOLUTION NO. _____

TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

D. Operational Requirements (Continued)

6. Nominations (Continued)

<u>FROM</u>	<u>TO</u> (Continued)
Off-System Delivery Contract	PG&E Pipeline (at Kern River Station)
Off-System Delivery Contract	Mojave Pipeline (at Wheeler Ridge)
Off-System Delivery Contract	Mojave Pipeline (at Kramer Junction)
Off-System Delivery Contract	Kern River Pipeline (at Wheeler Ridge)
Off-System Delivery Contract	Kern River Pipeline (at Kramer Junction)
Off-System Delivery Contract	Transwestern Pipeline (at North Needles)
Off-System Delivery Contract	Transwestern Pipeline (at Topock)
Off-System Delivery Contract	El Paso Pipeline (at Topock)
Off-System Delivery Contract	El Paso Pipeline (at Blythe)
Off-System Delivery Contract	North Baja Pipeline (at Blythe)
Off-System Delivery Contract	Transportadora de Gas Natural de Baja California (at Otay Mesa)
Receipt Point Pool Account	Receipt Point Pool Account
Receipt Point Pool Account	Backbone Transportation Contract

7. Timing

All times referred to below are in Pacific Clock Time. Requests for deadline extensions may be granted for 15 minutes only if request is made prior to the deadlines shown below.

Timely Cycle

Transportation nominations submitted via EBB for the Timely Nomination cycle must be received by the Utility by 11:00 a.m. one day prior to the flow date. Nominations submitted via fax must be received by the Utility by 10:00 a.m. one day prior to the flow date. Timely nominations will be effective at 7:00 a.m. on the flow date.

Evening Cycle

Nominations submitted via EBB for the Evening Nomination cycle must be received by the Utility by 4:00 p.m. one day prior to the flow date. Nominations submitted via fax must be received by the Utility by 3:00 p.m. one day prior to the flow date. Evening nominations will be effective at 7:00 a.m. on the flow date.

(Continued)

(TO BE INSERTED BY UTILITY)
 ADVICE LETTER NO. 5493
 DECISION NO.

ISSUED BY
Dan Skopec
 Vice President
 Regulatory Affairs

(TO BE INSERTED BY CAL. PUC)
 SUBMITTED Jul 10, 2019
 EFFECTIVE Aug 9, 2019
 RESOLUTION NO. _____

TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

D. Operational Requirements (Continued)

7. Timing (Continued)

Intraday 1 Cycle

Nominations submitted via EBB for the Intraday 1 Nomination cycle must be received by the Utility by 8:00 a.m. on the flow date. Nominations submitted via fax must be received by the Utility by 7:00 a.m. on the flow date. Intraday 1 nominations will be effective at 12:00 p.m. the same day.

Intraday 2 Cycle

Nominations submitted via EBB for the Intraday 2 Nomination cycle must be received by the Utility by 12:30 p.m. on the flow date. Nominations submitted via fax must be received by the Utility by 11:30 a.m. on the flow date. Intraday 2 nominations will be effective at 4:00 p.m. the same day.

Intraday 3 Cycle

Nominations submitted via EBB for Intraday 3 Nomination cycle must be received by the Utility by 5:00 p.m. on the flow date. Nominations submitted via fax must be received by the Utility by 4:00 p.m. on the flow date. Intraday 3 nominations will be effective at 8:00 p.m. the same day.

Intraday 4 Cycle

Nominations submitted via EBB for the Intraday 4 Nomination cycle must be received by the Utility by 9:00 p.m. Pacific Clock Time on the flow date. Nominations submitted via fax must be received by the Utility by 8:00 p.m. Pacific Clock Time on the flow date.

*Temporary provisions regarding the trading of scheduled quantities and daily imbalances are provided in Section N.**

Intraday 4 nominations are available only for firm nominations relating to the injection of existing flowing supplies into a storage account or for firm nominations relating to the withdrawal of gas in storage to meet an identified customer's usage. A customer may make Intraday 4 nominations from a third-party storage provider that is directly connected to the Utility's system or from the Utility's storage, subject to the storage provider or the Utility being able to deliver or accept the daily quantity nominated for Intraday 4 within the remaining hours of the flow day and the Utility's having the ability to deliver or accept the required hourly equivalent flow rate during the remaining hours of the flow day. Third-party storage providers will be treated on a comparable basis with the Utility's storage facilities to the extent that it can provide the equivalent service and operations.

(Continued)

(TO BE INSERTED BY UTILITY)
ADVICE LETTER NO. 5064
DECISION NO.

ISSUED BY
Dan Skopec
Vice President
Regulatory Affairs

(TO BE INSERTED BY CAL. PUC)
DATE FILED Dec 1, 2016
EFFECTIVE Dec 1, 2016
RESOLUTION NO. _____

TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

D. Operational Requirements (Continued)

8. Confirmation and Ranking Process

A ranking must be received by the Utility at the time the nomination or the confirmation is submitted. The nominating party will rank its supplies and the confirming party will rank its markets. The Utility will then balance the pipeline system using the “lesser of” rule and the rankings submitted.

The ranking will automatically roll from cycle-to-cycle and day-to-day until the nomination end date, unless modified by the nominating entity.

If no ranking is submitted at the time the nomination is submitted, the Utility will assign the lowest ranking to the nomination.

The Utility will compare the nominations received for each transaction and the corresponding confirmation. If the two quantities do not agree, the “lesser of” the two quantities will be the quantity scheduled by the Utility. Subject to the Utility receiving notification of confirmed transportation from the applicable upstream pipeline(s) and/or operator(s), the Utility will provide scheduled quantities on EBB.

9. As between the customer and the Utility, the customer shall be deemed to be in control and possession of the gas to be delivered hereunder and responsible for any damage or injury caused thereby until the gas has been delivered at the point(s) of receipt. The Utility shall thereafter be deemed to be in control and possession of the gas after delivery to the Utility at the point(s) of receipt and shall be responsible for any damage or injury caused thereby until the same shall have been redelivered at the point(s) of delivery, unless the damage or injury has been caused by the quality of gas originally delivered to the Utility, for which the customer shall remain responsible.
10. Any penalties or charges incurred by the Utility under an interstate or intrastate supplier contract as a result of accommodating transportation service shall be paid by the responsible customer.
11. Customers receiving service from the Utility for the transportation of customer-owned gas shall pay any costs incurred by the Utility because of any failure by third parties to perform their obligations related to providing such service.

(Continued)

(TO BE INSERTED BY UTILITY)
ADVICE LETTER NO. 4258
DECISION NO. 11-03-029

ISSUED BY
Lee Schavrien
Senior Vice President

(TO BE INSERTED BY CAL. PUC)
DATE FILED Jul 15, 2011
EFFECTIVE Oct 1, 2012
RESOLUTION NO. _____

TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

E. Interruption of Service

1. The customer's transportation service priority shall be established in accordance with the definitions of Core and Noncore service, as set forth in Rule No. 1, and the provisions of Rule No. 23, Continuity of Service and Interruption of Delivery. If the customer's gas use is classified in more than one service priority, it is the customer's responsibility to inform the Utility of such priorities applicable to the customer's service. Once established, such priorities cannot be changed during a curtailment period.
2. The Utility shall have the right, without liability, to interrupt the acceptance or redelivery of gas whenever it becomes necessary to test, alter, modify, enlarge or repair any facility or property comprising the Utility's system or otherwise related to its operation. When doing so, the Utility will try to cause a minimum of inconvenience to the customer. Except in cases of unforeseen emergency, the Utility shall give a minimum of ten (10) days advance written notice of such activity.

F. Nominations in Excess of System Capacity

1. In the event customers fail to adequately reduce their transportation nominations, the Utility shall reduce the confirmed receipt point access nominations as defined in Section D.

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(Continued)

(TO BE INSERTED BY UTILITY)
ADVICE LETTER NO. 5297
DECISION NO. 16-06-039, 16-12-015

ISSUED BY
Dan Skopec
Vice President
Regulatory Affairs

(TO BE INSERTED BY CAL. PUC)
SUBMITTED May 22, 2018
EFFECTIVE Jun 1, 2018
RESOLUTION NO. _____

Rule No. 30

Sheet 12

TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

G. Operational Flow Orders and Emergency Flow Orders

1. Operational Flow Order (OFO)

- a. The Utility System Operator’s protocol for declaring an Operational Flow Order (OFO) is described in Rule No. 41. All OFO declarations will be identified by stage that will specify a Daily Imbalance Tolerance and Noncompliance Charge per the table below. The daily balancing standby rate is not applicable to High OFOs. Pursuant to D.19-05-030, this OFO Noncompliance Charge structure shall remain in effect until October 31, 2021, unless modified by a subsequent Commission decision.

Effective June 1 – September 30

Stage	Daily Imbalance Tolerance ¹	Noncompliance Charge (\$/therm)
1	Up to +/-25%	0.025
2	Up to +/-20%	0.10
3	Up to +/-15%	0.50
4	Up to +/-5%	0.50
5	Up to +/-5%	0.50 plus Rate Schedule G-IMB daily balancing standby rate
EFO	Zero	5.00 plus Rate Schedule G-IMB daily balancing standby rate

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(Continued)

(TO BE INSERTED BY UTILITY)
 ADVICE LETTER NO. 5471-A
 DECISION NO. 19-05-030

ISSUED BY
Dan Skopec
 Vice President
 Regulatory Affairs

(TO BE INSERTED BY CAL. PUC)
 SUBMITTED Jun 3, 2019
 EFFECTIVE Jun 3, 2019
 RESOLUTION NO. _____

Rule No. 30

TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

G. Operational Flow Orders and Emergency Flow Orders (Continued)

1. Operational Flow Order (OFO) (Continued)

a. (Continued)

Effective October 1 – May 31

Stage	Daily Imbalance Tolerance ¹	Noncompliance Charge (\$/therm)
1	Up to +/-25%	0.025
2	Up to +/-20%	0.10
3	Up to +/-15%	0.50
3.1	Up to +/-15%	1.00
3.2	Up to +/-15%	1.50
3.3	Up to +/-15%	2.00
4	Up to +/-10%	2.50
5	Up to +/-5%	2.50 plus Rate Schedule G-IMB daily balancing standby rate
EFO	Zero	5.00 plus Rate Schedule G-IMB daily balancing standby rate

¹ Negative daily imbalance tolerances for all stages are capped at up to -5% until Aliso Canyon's withdrawal capacity is available without constraint to the System Operator for load balancing.

- b. The OFO shall apply to all customers financially responsible for managing and clearing transportation imbalances (Balancing Agents), including wholesale customers, Contracted Marketers, core aggregators, California Gas Producers and the Utility Gas Procurement Department.
- c. The OFO period shall begin on the flow date(s) indicated by the Utility Gas Control Department. Generally an initial OFO event will start at Stage 1; however an OFO event may begin at any stage as deemed appropriate by the Utility Gas Control Department with the corresponding noncompliance charge.
- d. An OFO will normally be ordered with at least twelve (12) hours notice prior to the beginning of the gas day, or as necessary as dictated by operating conditions. Charges for the first day of the OFO event will not be imposed if notice is given after 8:00 p.m.* Pacific Time the day prior to the start of the OFO event.

(Continued)

(TO BE INSERTED BY UTILITY)
 ADVICE LETTER NO. 5471
 DECISION NO. 19-05-030

ISSUED BY
Dan Skopec
 Vice President
 Regulatory Affairs

(TO BE INSERTED BY CAL. PUC)
 SUBMITTED May 31, 2019
 EFFECTIVE May 31, 2019
 RESOLUTION NO. _____

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TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

G. Operational Flow Orders and Emergency Flow Orders (Continued)

1. Operational Flow Order (OFO) (Continued)

- e. OFO and EFO compliance and charges will be based on the following for determination of daily usage quantities:
 - i. For a Noncore End-Use Customer equipped with automated meter reading device (AMR) and SDG&E’s Electric & Gas Fuel Procurement Department, compliance during an OFO will be based on actual daily metered usage, and the calculation after the OFO event of any applicable noncompliance charge will be based on actual daily metered usage.
 - ii. For a Noncore End-Use Customer with non-functioning AMR meters, compliance during an OFO or EFO will be based on the Customer’s actual daily metered usage; or the estimated daily usage in accordance with Section C of SoCalGas Rule 14 will be substituted for the actual daily metered usage when actual metered usage is not available.
 - iii. For a Noncore End-Use Customer without AMR capability compliance during an OFO or EFO will be based on the Customer’s MinDQ.
 - iv. For the Utility Gas Procurement Department, the Daily Forecast Quantity will be used as a proxy for daily usage.
 - v. For core aggregators, their Daily Contract Quantity will be used as a proxy for daily usage.
 - vi. For a California Producer with an effective California Producer Operational Balancing Agreement, Form 6452, compliance with an OFO and EFO and calculation of any noncompliance charges will be based on the difference between scheduled receipts and measured receipts for each day of an event. OFO and EFO compliance for a California Producer with an existing non- California Producer Operational Balancing Agreement, Form 6452 access agreement will be treated consistent with the terms of that access agreement.

(Continued)

(TO BE INSERTED BY UTILITY)
ADVICE LETTER NO. 5471
DECISION NO. 19-05-030

ISSUED BY
Dan Skopec
Vice President
Regulatory Affairs

(TO BE INSERTED BY CAL. PUC)
SUBMITTED May 31, 2019
EFFECTIVE May 31, 2019
RESOLUTION NO. _____

TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

G. Operational Flow Orders and Emergency Flow Orders (Continued)

1. Operational Flow Order (OFO) (Continued)

- f. If a Balancing Agent's OFO daily gas imbalance exceeds the applicable daily imbalance tolerance by 10,000 therms or less, the OFO, noncompliance charge will be zero. If the daily gas imbalance amount exceeds the daily imbalance tolerance by more than 10,000 therms, the Balancing Agent will be responsible for the full noncompliance charge; i.e. 10,000 therms will not be deducted from the daily gas imbalance that exceeds the daily imbalance tolerance.
- g. The daily measurement quantity used to calculate the Noncompliance Charge for each OFO event will be the daily quantity recorded as of the month-end close of the applicable month.
- h. *Low OFO noncompliance charges for the gas flow day will be waived when the confirmation process limiting nominations to system capacity cuts previously scheduled BTS nominations during any of the Intraday 1-3 Cycles.**
- i. *SoCalGas will have the discretion to waive OFO noncompliance charges for an electric generation customer who was dispatched after the Intraday 1 (Cycle 3) nomination deadline in response to (1) a SoCalGas System Operator request to an Electric Grid Operator to reallocate dispatched electric generation load to help maintain gas system reliability and integrity, or (2) an Electric Grid Operator request to the SoCalGas System Operator to help maintain electric system reliability and integrity that can be accommodated by the SoCalGas System Operator at its sole discretion. For electric generators served by a contracted marketer, OFO noncompliance charges can be waived under this section only to the extent the contracted marketer nominates their electric generation customer's gas to the electric generation customer's Order Control Code.**

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(Continued)

(TO BE INSERTED BY UTILITY)
 ADVICE LETTER NO. 5471
 DECISION NO. 19-05-030

ISSUED BY
Dan Skopec
 Vice President
 Regulatory Affairs

(TO BE INSERTED BY CAL. PUC)
 SUBMITTED May 31, 2019
 EFFECTIVE May 31, 2019
 RESOLUTION NO. _____

TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

G. Operational Flow Orders and Emergency Flow Orders (Continued)

2. Emergency Flow Order (EFO)

- a. The Utility System Operator's protocol for declaring an Emergency Flow Order (EFO) is described in Rule No. 41.
- b. During an EFO Customer usage must be less than or equal to scheduled supply for a gas day. EFOs will have a zero percent tolerance and a noncompliance charge of \$5.00 plus the Schedule G-IMB Daily Balancing Standby Rate for each therm of usage in excess of scheduled supply.
- c. The EFO shall apply to all customers financially responsible for managing and clearing transportation imbalances (Balancing Agents), including wholesale customers, Contracted Marketers, core aggregators, California Gas Producers and the Utility Gas Procurement Department.
- d. When an EFO is in effect interruptible storage withdrawals are limited to one half of the capacity normally available for interruptible withdrawals. Interruptible storage withdrawal capacity is equal to Withdrawal Capacity minus confirmed firm storage withdrawal nominations minus withdrawal allocated to the balancing function.
- e. Daily measurement quantities used to determine EFO compliance and charges are the same as those used to determine OFO compliance and charges.
- f. The daily measurement quantity used to calculate the noncompliance charges for each EFO event will be the daily quantity recorded as of the month-end close of the applicable month.

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(TO BE INSERTED BY UTILITY)
ADVICE LETTER NO. 5471
DECISION NO. 19-05-030

ISSUED BY
Dan Skopec
Vice President
Regulatory Affairs

(TO BE INSERTED BY CAL. PUC)
SUBMITTED May 31, 2019
EFFECTIVE May 31, 2019
RESOLUTION NO. _____

Rule No. 30

Sheet 17

TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

G. Operational Flow Orders and Emergency Flow Orders (Continued)

3. Information regarding the System Sendout, Withdrawal Capacity and Net Withdrawals will be made available to customers on a daily basis via the EBB.
4. If a wholesale customer so requests, the Utility will nominate firm storage withdrawal volumes on behalf of the customer to match 100% of actual usage assuming the customer has sufficient firm storage withdrawal and inventory rights to match the customer's supply and demand.
5. The Utility will accept intra-day nominations to increase deliveries.
6. In all cases, current rules for monthly balancing and monthly imbalance trading continue to apply. Quantities not in compliance with the Daily Imbalance Tolerance that are purchased at the daily balancing standby rate are credited toward the monthly 92% delivery requirements. Daily balancing charges remain independent of monthly balancing charges. Noncore daily balancing and monthly balancing charges go to the Purchased Gas Account (PGA). Net revenues from core daily balancing and monthly balancing charges go to the Noncore Fixed Cost Account (NFCA). Schedule No. G-IMB provides details on monthly and daily balancing charges.

H. Accounting and Billing

1. The customer and the Utility acknowledge that on any operating day during the customer's applicable term of transportation service, the Utility may be redelivering quantities of gas to the customer pursuant to other present or future service arrangements. In such an event, the Utility and customer agree that the total quantities of gas shall be accounted for in accordance with the provisions of Rule No. 23. If there is no conflict with Rule No. 23, the quantities of gas shall be accounted for in the following order:
 - a. First, to satisfy any minimum quantities under existing agreements.
 - b. Second, after complete satisfaction of (a), then to any supply or exchange service arrangements with the customer.
 - c. Third, after the satisfaction of (a) and (b), then to any subsequently executed service agreement.

(Continued)

(TO BE INSERTED BY UTILITY)
ADVICE LETTER NO. 5471
DECISION NO. 19-05-030

ISSUED BY
Dan Skopec
Vice President
Regulatory Affairs

(TO BE INSERTED BY CAL. PUC)
SUBMITTED May 31, 2019
EFFECTIVE May 31, 2019
RESOLUTION NO. _____

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TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

H. Accounting and Billing (Continued)

2. The customer agrees that it shall accept and the Utility can rely upon, for purposes of accounting and billing, the allocation made by customer's shipper as to the quality and quantity of gas, expressed both in Decatherm and therms, delivered at each point of receipt during the preceding billing period for the customer's account. If the shipper does not make such an allocation, the customer agrees to accept the quality and quantity as determined by the Utility. All quality and measurement calculations are subject to subsequent adjustment as provided in the Utility's tariff schedules or applicable CPUC rules and regulations. Any other billing correction or adjustment made by the customer or third party for any prior period shall be based on the rates or costs in effect when the event occurred and accounted for in the period they are reconciled.
3. The Utility shall render to the customer an invoice for the services hereunder showing the quantities of gas, expressed in therms, delivered to the Utility for the customer's account, at each point of receipt and the quantities of gas, expressed in therms, redelivered by the Utility for the customer's account at each point of delivery during the preceding billing period. The Customer shall pay such amounts due hereunder within nineteen (19) calendar days following the date such bill is mailed.
4. Both the Utility and the customer shall have the right at all reasonable times to examine, at its expense, the books and records of the other to the extent necessary to verify the accuracy of any statement, charge, computation, or demand made under or pursuant to service hereunder. The Utility and the customer agree to keep records and books of account in accordance with generally accepted accounting principles and practices in the industry.

I. Gas Delivery Specifications

1. The natural gas stream delivered into the Utility's system shall conform to the gas quality specifications as provided in any applicable agreements and contracts currently in place between the entity delivering such natural gas and the Utility at the time of the delivery. If no such agreement is in place, the natural gas shall conform to the gas specifications as defined below.

(Continued)

(TO BE INSERTED BY UTILITY)
ADVICE LETTER NO. 5471
DECISION NO. 19-05-030

ISSUED BY
Dan Skopec
Vice President
Regulatory Affairs

(TO BE INSERTED BY CAL. PUC)
SUBMITTED May 31, 2019
EFFECTIVE May 31, 2019
RESOLUTION NO. _____

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TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

I. Gas Delivery Specifications (Continued)

2. Gas delivered into the Utility's system for the account of a customer for which there is no existing contract between the delivering pipeline and the Utility shall be at a pressure such that the gas can be integrated into the Utility's system at the point(s) of receipt.
3. Gas delivered, except as defined in I.1 above, shall conform to the following quality specifications at the time of delivery:
 - a. Heating Value: The minimum heating value is nine hundred and seventy (970) Btu (gross) per standard cubic foot on a dry basis. The maximum heating value is one thousand one hundred fifty (1150) Btu (gross) per standard cubic foot on a dry basis.
 - b. Moisture Content or Water Content: For gas delivered at or below a pressure of eight hundred (800) psig, the gas shall have a water content not in excess of seven (7) pounds per million standard cubic feet. For gas delivered at a pressure exceeding of eight hundred (800) psig, the gas shall have a water dew point not exceeding 20 degrees F at delivery pressure.
 - c. Hydrogen Sulfide: The gas shall not contain more than twenty-five hundredths (0.25) of one (1) grain of hydrogen sulfide, measured as hydrogen sulfide, per one hundred (100) standard cubic feet (4 ppm). The gas shall not contain any entrained hydrogen sulfide treatment chemical (solvent) or its by-products in the gas stream.
 - d. Mercaptan Sulfur: The gas shall not contain more than three tenths (0.3) grains of mercaptan sulfur, measured as sulfur, per hundred standard cubic feet (5 ppm).
 - e. Total Sulfur: The gas shall not contain more than seventy-five hundredths (0.75) of a grain of total sulfur compounds, measured as sulfur, per one hundred (100) standard cubic feet (12.6 ppm). This includes COS and CS₂, hydrogen sulfide, mercaptans and mono, di and poly sulfides.
 - f. Carbon Dioxide: The gas shall not have a total carbon dioxide content in excess of three percent (3%) by volume.
 - g. Oxygen: The gas shall not have an oxygen content in excess of two-tenths of one percent (0.2%) by volume, and customer will make every reasonable effort to keep the gas free of oxygen.
 - h. Inerts: The gas shall not contain in excess of four percent (4%) total inerts (the total combined carbon dioxide, nitrogen, oxygen and any other inert compound) by volume.

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(Continued)

(TO BE INSERTED BY UTILITY)
ADVICE LETTER NO. 5477
DECISION NO. 19-05-018

ISSUED BY
Dan Skopec
Vice President
Regulatory Affairs

(TO BE INSERTED BY CAL. PUC)
SUBMITTED Jun 7, 2019
EFFECTIVE Jul 7, 2019
RESOLUTION NO. _____

TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

I. Gas Delivery Specifications (Continued)

3. (Continued)

- i. Hydrocarbons: For gas delivered at a pressure of 800 psig or less, the gas hydrocarbon dew point is not to exceed 45 degrees F at 400 psig or at the delivery pressure if the delivery pressure is below 400 psig. For gas delivered at a pressure higher than 800 psig, the gas hydrocarbon dew point is not to exceed 20 degrees F measured at a pressure of 400 psig.
- j. Merchantability: The gas shall not contain dust, sand, dirt, gums, oils and other substances at levels that would be injurious to Utility facilities or that would cause gas to be unmarketable.
- k. Hazardous Substances: The gas must not contain hazardous substances (including but not limited to toxic and/or carcinogenic substances and/or reproductive toxins) at concentrations which would prevent or restrict the normal marketing of gas, be injurious to pipeline facilities, or which would present a health and/or safety hazard to Utility employees and/or the general public.
- l. Delivery Temperature: The gas delivery temperature is not to be below 50 degrees F or above 105 degrees F.
- m. Interchangeability: The gas shall have a minimum Wobbe Number of 1279 and shall not have a maximum Wobbe Number greater than 1385. The gas shall meet American Gas Association's Lifting Index, Flashback Index and Yellow Tip Index interchangeability indices for high methane gas relative to a typical composition of gas in the Utility system serving the area.

Acceptable specification ranges are:

- * Lifting Index (IL)
IL <= 1.06
- * Flashback Index (IF)
IF <= 1.2
- * Yellow Tip Index (IY)
IY >= 0.8

- n. Liquids: The gas shall contain no liquids at or immediately downstream of the receipt point.

(Continued)

(TO BE INSERTED BY UTILITY)
 ADVICE LETTER NO. 5471
 DECISION NO. 19-05-030

ISSUED BY
Dan Skopec
 Vice President
 Regulatory Affairs

(TO BE INSERTED BY CAL. PUC)
 SUBMITTED May 31, 2019
 EFFECTIVE May 31, 2019
 RESOLUTION NO. _____

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TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

I. Gas Delivery Specifications (Continued)

4. The Utility, at its option, may refuse to accept any gas tendered for transportation by the customer or on his behalf if such gas does not meet the specifications at the time of delivery as set out in I. 2, I. 3, and J.5, as applicable.
5. The Utility will grant specific deviations to California production from the gas quality specifications defined in Paragraph I.3 above, if such gas will not have a negative impact on system operations. Any such deviation will be required to be filed through Advice Letter for approval prior to gas actually flowing in the Utility system.
6. The Utility will post on its EBB and/or general website information regarding the available real-time Wobbe Number of gas at identified operational locations on its system.
7. Gas monitoring and enforcement hardware and software including, but not limited to, a gas chromatograph and all related equipment, communications facilities and software, identified in Exhibit A to Schedule No. G-CPS, are required, and shall be installed at each interconnection meter site where a California Producer delivers natural gas into the Utility's gas transportation system. The gas chromatograph shall monitor non-hydrogen sulfide constituents in the gas delivered, and deny access to gas that does not comply with the gas specifications set forth in the Gas Delivery Specifications, Section I.1 or I.3 above. Compliance shall be assessed using the 4- to 8-minute monitoring interval adopted in D.07-08-029 and D.10-09-001.
8. The gas chromatograph and all related equipment and software, identified in Exhibit A to Schedule No. G-CPS, shall monitor and enforce the gas quality specifications, using the 4- to 8-minute monitoring interval adopted in D.07-08-029 and D.10-09-001. Access shall be denied by the Utility on a non-latching basis after a second consecutive monitoring interval results in an alarm for gas which exceeds the non-hydrogen sulfide specifications. The gas chromatograph and all related equipment and software shall also enable the Utility to remotely gather and retain gas quality and alarm data. Where additional measures are necessary to promote or enhance safety, SoCalGas may request a deviation from the aforementioned monitoring interval requirements established by the CPUC.
9. For California Producers currently delivering gas into the Utility's transportation system without a gas chromatograph and all related equipment and software in place, as required in Rule No. 39, non-hydrogen sulfide constituents of gas will, on an interim basis, continue to be monitored and access denied under the methods currently in place, until such time as a gas chromatograph and all related equipment and software are installed and operational, subject to Rule No. 39 conditions.

(Continued)

(TO BE INSERTED BY UTILITY)
 ADVICE LETTER NO. 5471
 DECISION NO. 19-05-030

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Dan Skopec
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 Regulatory Affairs

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 SUBMITTED May 31, 2019
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TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

J. Biomethane Delivery Specifications

1. Biogas refers to untreated gas produced through the anaerobic digestion of organic waste material. Biomethane refers to biogas that has been treated to comply with this Rule No. 30.
2. Biomethane delivered, except as defined in Section I.1, must meet the gas quality specifications set out in Section I and the biomethane-specific specifications set out in this Section J. The terms and conditions contained in Section J apply solely to suppliers of biomethane and are incremental to Section I gas quality requirements.
3. Biomethane must not contain constituents at concentrations which would prevent or restrict the normal marketing of biomethane, be at levels that would be injurious to pipeline facilities, or be at levels that would present a health and/or safety hazard to Utility employees and/or the general public.
 - a. Health Protective Constituents are constituents that may impact human health and include carcinogenic constituents (“Carcinogenic Constituents”) and non-carcinogenic constituents (“Non-Carcinogenic Constituents”).
 - b. Pipeline Integrity Protective Constituents are constituents that may impact pipeline system integrity.
4. The party interconnected to the Utility pipeline system for purposes of delivering biomethane (“Biomethane Interconnector”) shall be responsible for costs associated with periodic biomethane testing requirements contained in this Section J, but shall not be responsible for the Utility’s discretionary biomethane testing or monitoring.
5. Biomethane Quality Specifications: Biomethane to be accepted and transported in the Utility pipeline system shall be subject to periodic testing and monitoring based on the biogas source. The Trigger Level is the level where additional periodic testing and analysis of the constituent is required. The Lower Action Level, where applicable, is used to screen biomethane during the initial biomethane quality review and as an ongoing screening level during the periodic testing. The Upper Action Level, where applicable, establishes the point at which the immediate shut-off of the biomethane supply occurs.

(Continued)

(TO BE INSERTED BY UTILITY)
 ADVICE LETTER NO. 5471
 DECISION NO. 19-05-030

ISSUED BY
Dan Skopec
 Vice President
 Regulatory Affairs

(TO BE INSERTED BY CAL. PUC)
 SUBMITTED May 31, 2019
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TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

J. Biomethane Delivery Specifications (Continued)

5. Biomethane Quality Specifications: (Continued)

Constituent	Trigger Level mg/m ³ (ppm _v) ⁱ	Lower Action Level mg/m ³ (ppm _v)	Upper Action Level mg/m ³ (ppm _v)
<i>Health Protective Constituent Levels</i>			
<u>Carcinogenic Constituents</u>			
Arsenic	0.019 (0.006)	0.19 (0.06)	0.48 (0.15)
p-Dichlorobenzenes	5.7 (0.95)	57 (9.5)	140 (24)
Ethylbenzene	26 (6.0)	260 (60)	650 (150)
n-Nitroso-di-n-propylamine	0.033 (0.006)	0.33 (0.06)	0.81 (0.15)
Vinyl Chloride	0.84 (0.33)	8.4 (3.3)	21 (8.3)
<u>Non-Carcinogenic Constituents</u>			
Antimony	0.60 (0.12)	6.0 (1.2)	30 (6.1)
Copper	0.060 (0.02)	0.6 (0.23)	3 (1.2)
Hydrogen Sulfide	30 (22)	300 (216)	1500 (1080)
Lead	0.075 (0.009)	0.75 (0.09)	3.8 (0.44)
Methacrolein	1.1 (0.37)	11 (3.7)	53 (18)
Toluene	904 (240)	9000 (2400)	45000 (12000)
Alkyl Thiols (mercaptans)	(12)	(120)	(610)
<i>Pipeline Integrity Protective Constituent Levelsⁱⁱ</i>			
Siloxanes	0.01 mg Si/m ³	0.1 mg Si/m ³	-
Ammonia	0.001 vol%	-	-
Hydrogen	0.1 vol%	-	-
Mercury	0.08 mg/m ³	-	-
Biologicals	4 x 10 ⁴ /scf (qPCR per APB, SRB, IOB ⁱⁱⁱ group) and commercially free of bacteria of >0.2 microns	-	-

Notes: i) The first number in this table are in milligrams per cubic meter of air (mg/m³), while the second number () is in parts per million by volume (ppm_v). ii) The Pipeline Integrity Protective Constituent Lower and Upper Action Limits not provided above will be established in the Commission's next AB1900 update proceeding. Until that time, Biomethane supplies that contain Pipeline Integrity Protective Constituents exceeding the Trigger Level, but lacking a Lower or Upper Action Level, will be analyzed and addressed on a case-by-case basis based on the biomethane's potential impact on pipeline system integrity. iii) APB – Acid producing Bacteria; SRB – Sulfate-reducing Bacteria; IOB – Iron-oxidizing Bacteria

(Continued)

(TO BE INSERTED BY UTILITY)
 ADVICE LETTER NO. 5471
 DECISION NO. 19-05-030

ISSUED BY
Dan Skopec
 Vice President
 Regulatory Affairs

(TO BE INSERTED BY CAL. PUC)
 SUBMITTED May 31, 2019
 EFFECTIVE May 31, 2019
 RESOLUTION NO. _____

TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

J. Biomethane Delivery Specifications (Continued)

6. Biomethane Constituent Testing shall be based on the biomethane source:

- a. Biomethane from landfills shall be tested for all Health Protective Constituents and the Pipeline Integrity Protective Constituents.
- b. Biomethane from dairies shall be tested for Ethylbenzene, Hydrogen Sulfide, n-Nitroso-di-n-propylamine, Mercaptans, Toluene, and the Pipeline Integrity Protective Constituents.
- c. Other organic waste sources, including biomethane from publicly owned treatment works (i.e., water treatment and sewage treatment plants) shall be tested for p-Dichlorobenzene, Ethylbenzene, Hydrogen Sulfide, Mercaptans, Toluene, Vinyl Chloride, and the Pipeline Integrity Protective Constituents.
- d. Biomethane Interconnectors that certify that their biogas is sourced only from dairy, animal manure, agricultural waste, forest residues, and/or commercial food processing waste, and that products containing siloxanes are not included in the biogas and not used at their facilities in any way that allows siloxane to enter the biomethane, shall have reduced siloxane testing requirements, as described in Section J.8.e. If the certifications identified above are no longer true, then the Biomethane Interconnector must notify the Utility and the full siloxane testing requirement shall apply.

7. Collective Health Risk

- a. Group 1 Compounds are Constituents with a concentration below the test detection level or below the Trigger Level.
- b. Group 2 Compounds are Constituents with a concentration at or above the Trigger Level.
- c. For Health Protective Group 2 Compounds, the collective cancer and non-cancer risk from Carcinogenic and Non-carcinogenic Constituents must be calculated by summing the Group 2 Compounds' risk.
 - i. Cancer Risk: The potential cancer risk for Group 2 compounds can be estimated by summing the individual potential cancer risk for each carcinogenic constituent of concern. Specifically, the cancer risk can be calculated using the ratio of the concentration of the constituent in the biomethane to the health protective ("trigger") concentration value corresponding to one in a million cancer risk for that specific constituent and then summing the risk for all the Group 2 constituents. (For reference, see CARB/OEHHA Report submitted in R.13-02-008, p. 67.)

(Continued)

(TO BE INSERTED BY UTILITY)
ADVICE LETTER NO. 5477
DECISION NO. 19-05-018

ISSUED BY
Dan Skopec
Vice President
Regulatory Affairs

(TO BE INSERTED BY CAL. PUC)
SUBMITTED Jun 7, 2019
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RESOLUTION NO. _____

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Rule No. 30

TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

J. Biomethane Delivery Specifications (Continued)

7. Collective Health Risk (Continued)

c. (Continued)

- ii. Non-Cancer Risk: The non-cancer risk can be calculated using the ratio of the concentration of the constituent in biomethane to the health protective concentration value corresponding to a hazard quotient of 0.1 for that specific non-carcinogenic constituent, then multiplying the ratio by 0.1, and then summing the non-cancer chronic risk for these Group 2 Compounds. (For reference, see CARB/OEHHA Report submitted in R.13-02-008 p. 67.)

Collective from Carcinogenic and non-Carcinogenic Constituents

Risk Management Levels	Potential Risk from Carcinogenic Constituents (chances in a million)	Hazard Index from Non-Carcinogenic Constituents	Action
Trigger Level ¹¹	≥ 1.0	≥ 0.1	Periodic Testing Required
Lower Action Level ²	≥ 10.0	≥ 1.0	Supply shut-in after three exceedances in 12-month period in which deliveries occur
Upper Action Level	≥ 25.0	≥ 5.0	Immediate supply shut-in

1. For any Health Protective Constituent.
2. Sum of the Health Protective Constituents exceeding the trigger level.

8. Biomethane Pre-Interconnection Testing:

- a. Prior to the injection of biomethane, the Biomethane Interconnector shall conduct two tests over a two- to four-week period for the constituents identified for that biomethane source (see Section J.6).
- b. Pre-interconnection testing will be performed by the Biomethane Interconnector using independent certified third party laboratories (Environmental Laboratory Accreditation Program (ELAP) certified, where applicable). The Utility shall be notified of the biomethane sampling and tests and have the option to observe the samples being taken. Test results will be shared with the Utility within five calendar days of the test results being received by the Biomethane Interconnector.

(Continued)

(TO BE INSERTED BY UTILITY)
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TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

J. Biomethane Delivery Specifications (Continued)

8. Biomethane Pre-Interconnection Testing: (Continued)

- c. During pre-injection testing, the Biomethane's collective potential cancer risk and non-cancer risk is calculated by summing the individual risk for each Health Protective Group 2 Compound. If the collective potential cancer risk or non-cancer risk is at or above the Lower Action Level (the cancer risk Lower Action Level is > 10 in a million and the non-cancer risk Lower Action Level is a Hazard Index of > 1), the biomethane cannot be accepted or transported by the Utility's pipeline system. The Biomethane Interconnector shall make necessary modifications to lower the collective potential cancer risk or non-cancer risk below the Lower Action Level and restart pre-injection testing. If the Health Protective Constituents are found to be below the Trigger Level or the collective cancer or non-cancer risk from the Health Protective Group 2 Compounds is below the Lower Action Level in both pre-injection tests, then the biomethane may be injected subject to compliance with the periodic testing requirements specified below.
- d. If during the pre-injection testing, any Pipeline Integrity Protective Constituents are found to be above the Lower Action Level, if applicable, the biomethane cannot be accepted or transported by the Utility's pipeline system. The Biomethane Interconnector shall make necessary modifications to lower the Pipeline Integrity Protective Constituents below the Lower Action Level and restart pre-injection testing. If the Pipeline Integrity Protective Constituents are found to be below the Trigger Level in both pre-injection tests, then the biomethane may be injected subject to compliance with the periodic testing requirements specified below.
- e. Per Section J.6.d, biomethane certified for reduced siloxane testing will be as follows:
 - i. If the pre-injection testing siloxane levels are below or at the Trigger Level of 0.01 mg Si/m^3 , then no periodic siloxane testing is required under Section J.9.d.
 - ii. If the pre-injection testing siloxanes level exceed the Trigger Level of 0.01 mg Si/m^3 , then quarterly testing is required for one year, and if none of those samples are above the Lower Action Level of 0.1 mg Si/m^3 , then no periodic siloxane testing is required under Section J.9.d.
 - iii. If the siloxanes are above the Lower Action Level of 0.1 mg Si/m^3 , then the Section J.6.d biomethane certification for reduced testing is no longer applicable and the Biomethane Interconnector will be required to comply with the periodic testing requirements for siloxane under Section J.9.d.

(Continued)

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TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

J. Biomethane Delivery Specifications (Continued)

10. Biomethane Shut-Off and Restart Procedures: The Biomethane Interconnector may be shut-off when the following occurs:

- a. The CPUC determines that a change in the biogas source at the facility or the upgrading equipment will potentially increase the level of any constituent over the previously measured baseline levels.
- b. Testing indicates constituents are exceeding allowable concentration levels:
 - i. The collective cancer or non-cancer risk from Health Protective Group 2 Compounds is found at or above the Lower Action Level three times in a 12-month period in which deliveries occur.
 - ii. The collective cancer or non-cancer risk from Health Protective Group 2 Compounds is found at or above the Upper Action Level.
 - iii. If applicable, a Pipeline Integrity Protective Constituent is found at or above the Lower Action Level three times in a 12-month period in which deliveries occur.
 - iv. The biomethane contains constituents at concentrations which prevent or restrict the normal marketing of biomethane, are at levels that are injurious to pipeline facilities, or are at levels that present a health and/or safety hazard to Utility employees and/or the general public.
- c. In order to restart injection after a Biomethane Interconnector has been shut-off, the Biomethane Interconnector shall test the biomethane using independent certified third party laboratories (ELAP certified where applicable). Deliveries can then resume, subject to the periodic testing requirements in Section J.9, if the test indicates: (1) the biomethane complies with the gas quality specifications contained in Section I of this Rule; (2) the collective cancer and non-cancer risk of Health Protective Group 2 Compounds is below the Lower Action Level; and, if applicable, (3) the Pipeline Integrity Protective Constituents are below the Lower Action Level. Thereafter, constituents shall be reevaluated by the Utility for eligibility for less frequent testing.

(Continued)

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ADVICE LETTER NO. 5471
DECISION NO. 19-05-030

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TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

J. Biomethane Delivery Specifications (Continued)

11. Testing Procedures: The Utility shall collect samples at the receipt point utility meter. The Biomethane Interconnector shall collect samples upstream of the utility meter. Samples will be analyzed by independent certified third party laboratories (ELAP certified where applicable). Testing for Health Protective Constituents shall be by the methods specified in Table V-4 of CARB/OEHHA Report submitted in R.13-02-008 and adopted in D.14-01-034. Testing for Pipeline Integrity Protective Constituents shall be by the methods approved in D.14-01-034. Retesting shall be allowed to verify and validate the results. The cost of retesting shall be borne by the entity requesting the retest.
12. Continuous Monitoring of Upgrading Process Integrity: Absent an agreement otherwise, the Biomethane Interconnector's compliance with the Utility's continuously monitored Section I gas quality specifications shall be used as an indicator that the upgrading system is effectively conditioning and upgrading the biomethane. If the indicator(s) used to continuously monitor biomethane constituent levels indicates the biomethane has not been sufficiently conditioned and upgraded, the Utility may accelerate the biomethane periodic testing schedule and initiate testing. Accelerated periodic testing shall count toward the recommended periodic testing requirements described in Section J.9.
13. Recordkeeping and Reporting Requirements will be as prescribed in Commission D.14-01-034 and as specified in the CARB/OEHHA Report submitted in R.13-02-008.
14. Prohibition of Biomethane from Hazardous Waste Landfills: Hazardous waste landfills ("Hazardous Waste Landfills") include all contiguous land and structures, and other appurtenances and improvements, on the land used for the treatment, transfer, storage, resource recovery, disposal, or recycling of hazardous waste. The facility may consist of one or more treatment, transfer, storage, resource recovery, disposal, or recycling hazardous waste management units, or combinations of these units. Biomethane from Hazardous Waste Landfills, including landfills permitted by the Department of Toxic Substances Control, will not be purchased, accepted or transported. Before a Biomethane Interconnector can interconnect with the Utility's system, the Biomethane Interconnector must demonstrate and certify to the Utility's satisfaction that the biogas was not collected from a Hazardous Waste Landfill.
15. The biomethane rules in this section are intended to implement D.14-01-034 and D.19-05-018, including rules regarding constituent concentration standards, monitoring and testing requirements, and reporting and recordkeeping requirements.

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(Continued)

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TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

K. Termination or Modification

1. If the customer breaches any terms and conditions of service of the customer's service agreement or the applicable tariff schedules and does not correct the situation within thirty (30) days of notice, the Utility shall have the right to cease service and immediately terminate the customer's applicable service agreement.
2. If the contract is terminated, either party has the right to collect any quantities of gas or money due them for transportation service provided prior to the termination.

L. Regulatory Requirements

1. Any gas transported by the Utility for the customer which was first transported outside the State of California shall have first been authorized under Federal Energy Regulatory Commission (FERC) regulations, as amended. Both parties recognize that such regulations only apply to pipelines subject to FERC jurisdiction, and do not apply to the Utility. The customer shall not take any action which would subject the Utility to the jurisdiction of the FERC, the Economic Regulatory Administration or any succeeding agency. Any such action shall be cause for immediate termination of the service arrangement between the customer and the Utility.
2. Transportation service shall not begin until both parties have received and accepted any and all regulatory authorizations necessary for such service.

M. Warranty and Indemnification

1. The customer warrants to the Utility that the customer has the right to deliver gas hereunder and that such gas is free from all liens and adverse claims of every kind. Customer will indemnify, defend and save the Utility harmless against all loss, damage, injury, liability and expense of any character where such loss, damage, injury, liability or expense arises directly or indirectly out of any demand, claim, action, cause of action or suit brought by any person, association or entity asserting ownership of or any interest in the gas tendered for transportation hereunder, or on account of royalties, payments or other charges applicable before or upon delivery of gas hereunder.
2. The customer shall indemnify, defend and save harmless the Utility, its officers, agents, and employees from and against any and all loss, costs (including reasonable attorneys' fees), damage, injury, liability, and claims for injury or death of persons (including any employee of the customer or the Utility), or for loss or damage to property (including the property of the customer or the Utility), which occurs or is based upon an act or acts which occur while the gas is deemed to be in the customer's control and possession or which results directly or indirectly from the customer's performance of its obligations arising pursuant to the provisions of its service agreement and the Utility's applicable tariff schedules, or occurs based on the customer-owned gas not meeting the specifications of Sections I or J of this rule.

(Continued)

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TRANSPORTATION OF CUSTOMER-OWNED GAS

(Continued)

N. OFO Trading*

1. *Trading Scheduled Quantities**

- a. *Customers may arrange to trade scheduled quantities. The trades are to be arranged outside of the EBB and communicated to the Utility via a trade form.*
- b. *Customers may trade scheduled quantities between End Use contracts only by adjusting scheduled quantities after Cycle 6 has been processed.*
- c. *Trades will only be available for OFO days.*
- d. *Trades must be submitted to the Utility's scheduling department via email or fax by 9 PM Pacific Clock Time one business day following the Gas Day for which the OFO was declared.*
- e. *The Utility may file an expedited Tier 2 Advice Letter to suspend this tariff provision if curtailments are more severe or more frequent due to the offering of this service. Protests and responses to any such Advice Letter would be due within 5 business days, and the Utility's reply would be due within 2 business days from the end of the protest period.*

2. *Trading Daily Imbalances**

- a. *California Producer cash-outs on OFO days will be delayed until 9:00 p.m. Pacific Clock Time one business day following the Gas Day pending submittal of the imbalance trade. If the imbalance is not traded, it will be cashed out.*
- b. *California Producers may arrange to trade daily OFO imbalances with other California Producers. The trades are to be arranged outside of the EBB and communicated to the Utility via a trade form after Cycle 6 has been processed.*
- c. *Trades will only be available for OFO days.*
- d. *Trades must be submitted to the Utility's scheduling department via email or fax by 9 PM Pacific Clock Time one business day following the Gas Day for which the OFO was declared.*
- e. *The Utility may file an expedited Tier 2 Advice Letter to suspend this tariff provision if curtailments are more severe or more frequent due to the offering of this service. Protests and responses to any such Advice Letter would be due within 5 business days, and the Utility's reply would be due within 2 business days from the end of the protest period.*

O. Temporary Settlement Term

- 1. The Sections of this Rule italicized and followed by an asterisk (*) are temporary and will end upon the expiration of the term in the settlement approved by D.16-12-015 and modified by D.18-11-009. Specifically, that settlement term will conclude upon the earlier of: (1) any superseding decision or order by the Commission, (2) return of Aliso Canyon to at least 450 MMcfd of injection capacity and 1,395 MMcfd of withdrawal capacity, or (3) the implementation date of a final decision in A.18-07-024, SoCalGas' 2020 Triennial Cost Allocation Proceeding.

ACCESS TO THE SOCALGAS PIPELINE SYSTEM

The Utility shall provide nondiscriminatory open access to its system to any party (hereinafter "Interconnector") for the purpose of physically interconnecting with the Utility and effectuating the delivery of natural gas, subject to the terms and conditions set forth in this Rule and the applicable provisions of the Utility's other tariff schedules including, but not limited to, the gas quality requirements set forth in Rule No. 30, Section I. None of the provisions in this Rule shall be interpreted so as to unduly discriminate against or in favor of gas supplies coming from any source.

A. Terms of Access

1. The interconnection and physical flows shall not jeopardize the integrity of, or interfere with, normal operation of the Utility's system and provision of service to its customers.
2. The Interconnector and Utility must execute Form No. 6450, Interconnection Agreement (IA) and Form No. 6435, Operational Balancing Agreement (OBA). If the Interconnector is a California Producer without an effective agreement providing for access to the Utility's system, then that Interconnector and the Utility must execute Form No. 6454, California Producer Interconnection Agreement (CPIA) and Form No. 6452, California Producer Operational Balancing Agreement (CPOBA).
3. The Interconnector shall pay for all equipment necessary to effectuate deliveries at point of interconnection, including, but not limited to, valves, separators, meters, quality measurement, odorant and other equipment necessary to regulate and deliver gas at the interconnection point. The Interconnector shall also pay for computer programming changes to the Utility's Electronic Bulletin Board (EBB) scheduling system, if any, required to add the Interconnector's new interconnection point. The Interconnector and the Utility must execute Form No. 6430, Exhibit D, Interconnect Collectible System Upgrade Agreement or Form 6456, Exhibit C, California Producer Interconnect Collectible System Upgrade Agreement (CPICSUA).
 - a. Pursuant to D.15-06-029, as modified by D.16-12-043, the Utility shall provide a monetary incentive to eligible Biomethane Interconnectors built before December 31, 2021. The monetary incentive program shall be in effect until the end of December 31, 2021, or until the program has exhausted its \$40 million funding, including the California Council on Science and Technology study costs. If there are funds remaining at the time of program termination, Biomethane Interconnectors that have started to deliver qualifying biomethane into the Utility's pipeline system as of the termination date of this program are eligible for an incentive payment if they otherwise meet the program criteria. The monetary incentive is for up to 50% of the eligible interconnection costs incurred by a Biomethane Interconnector, up to \$3 million per interconnection for a non-dairy cluster biomethane project. For a dairy cluster biomethane project, as defined in the Public Utilities Code Section 399.19, the monetary incentive is for up to 50% of the eligible interconnection costs and costs incurred for biogas gathering lines.

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(TO BE INSERTED BY UTILITY)
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 DECISION NO. 16-12-043

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Rule No. 39

Sheet 2

ACCESS TO THE SOCALGAS PIPELINE SYSTEM

(Continued)

A. Terms of Access (Continued)

a. (Continued)

“Biogas gathering lines” means multiple pipelines installed to transport biogas from three or more dairies in close proximity to one another to a centralized gas processing facility for pipeline injection. To be eligible, Biomethane Interconnector deliveries must: (1) comply with Utility Tariff Rule Nos. 30 and 39; and (2) produce biomethane flow for 30 out of 40 days within the minimum and maximum measurement range of the meter. Biomethane Interconnectors must declare in a written notice to the Utility at least two business days in advance, the specific start and end date of this 40 day testing period. The 30 out of 40 day requirement is extended 1 day for each day that the Biomethane Interconnector is unable to produce flow because of an interruption of delivery as set forth in Rule No. 23. Biomethane Interconnectors may elect to restart the 40 day testing period by providing a new written notice declaring the new start and end dates at least two business days in advance of when the new 40 day testing period is to begin. The monetary incentive is limited to eligible interconnection costs, which include Consulting Service Agreement (interconnection capacity study and preliminary and detailed engineering studies) costs, and costs associated with facilities downstream of the Biomethane Interconnectors’ processing plants used for delivering biomethane into the Utility’s system. For dairy cluster biomethane projects, the costs incurred for biogas gathering lines to help reduce emissions of short-lived climate pollutants pursuant to Section 39730 of the Health and Safety Code shall be considered an eligible cost. Other costs associated with processing and blending facilities upstream of Utility point of receipt interconnection point, including facilities serving natural gas to the Biomethane Interconnector’s facilities, are ineligible.

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Within 60 days following successful compliance with the 30 out of 40 day biomethane delivery requirement, the Utility will pay the Biomethane Interconnector in the amount up to 50% of the eligible reconciled and undisputed portions of the interconnection costs, not to exceed \$3 million per interconnection for a non-dairy cluster biomethane project, or \$5 million per interconnection for a dairy cluster biomethane project. Payment will be provided to the Biomethane Interconnector if all costs have been paid in full; if there are remaining costs it shall be treated as a credit. In the event that all interconnection costs have not been reconciled by the Utility and the Biomethane Interconnector within 60 days following the successful compliance with the 30 out of 40 day biomethane delivery requirement, the Utility shall resume paying the Biomethane Interconnector upon cost reconciliation. If additional eligible cost information becomes available within 12 months following the initial payment, the Utility shall pay to the Biomethane Interconnector up to 50% of the remaining eligible interconnection costs, not to exceed \$3 million per interconnection for a non-dairy cluster biomethane project, or \$5 million per interconnection for a dairy cluster biomethane project, including all previous payments. The Utility will provide notification to the CPUC Director of the Energy Division and the Biomethane Interconnector of the initial payment as well as any other potentially eligible future payments.

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ACCESS TO THE SOCALGAS PIPELINE SYSTEM

(Continued)

A. Terms of Access (Continued)

4. The point of interconnection shall be established as a transportation scheduling point, pursuant to the provisions of Rule No. 30, if the Interconnector abides by the standards of the North American Energy Standards Board.
5. The maximum physical capacity of the interconnection will be determined by the sizing of the point of receipt, including the metering and odorization capacities, but is not the capacity of the Utility's pipeline system to transport gas away from the interconnection point and is not, nor is it intended to be, any commitment by the Utility of takeaway capacity. The Utility separately provides takeaway services, including the option to expand system capacity to increase takeaway services, through its otherwise applicable tariffs.
6. The available receipt capacity for any particular day may be affected by physical flows from other points of receipt, physical pipeline and storage conditions for that day, and end-use demand on the Utility's system.
7. The Utility will expand specific receipt point capacity and/or takeaway capacity at the request and expense of a supply source, third party storage providers, CPUC-regulated intrastate pipelines, interconnecting interstate pipelines, or other parties. The Interconnector and the Utility must execute a Collectible System Upgrade Agreement (Form 6420) prior to any work being completed.
8. As defined in an IA, the Interconnector shall pay all costs associated with the odorant of the delivered natural gas less the historical costs, on a per unit basis; the Utility has paid for odorant required for existing interstate supplies being delivered as of the date of D.06-09-039. The historical cost is \$0.0003 per Dth. As defined in a CPIA (Form 6454), the Interconnector shall pay all costs associated with the odorization of the delivered natural gas.
9. An Interconnector that is a California Producer that currently has, or will be requesting, access to the Utility's transportation system or is presently interconnected to the Utility without a gas chromatograph and all related equipment, communications facilities and software shall fund Utility installation of a gas chromatograph and all related equipment, communications facilities and software for the purpose of gathering data and monitoring and enforcing gas quality, as specified in Rule No. 30. Refusal on the part of a California Producer to accept these conditions will result in the denial of access to the Utility's transportation system.

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ACCESS TO THE SOCALGAS PIPELINE SYSTEM

(Continued)

B. Interconnection Capacity Studies

1. Any party, including an interconnecting pipeline or a supply source, may request an Interconnection Capacity Study to determine the Utility's downstream capability to take natural gas away from the interconnection point and the associated Utility facility enhancement costs. Upon the request of an entity to establish or increase takeaway capacity from a receipt point, the Utility will make a timely determination of the facilities (and facility modifications) and associated costs that are required to add the requested takeaway capacity on both a Displacement Receipt Point Capacity basis and Expansion Receipt Point Capacity basis. The Utility shall make this determination on a nondiscriminatory and transparent basis, without favoring any region of its territory and without favoring any entity.
2. All analyses shall take into consideration new supplies and facilities that have been or will be installed pursuant to a previously executed Collectible System Upgrade Agreements (CSUA) in effect. Priority for purposes of determining facility costs will be established on the basis of the date a party executes a CSUA. The CSUA shall include the activities from initial study through construction under terms mutually agreeable to the Utility and the party in Appendix "B" to the CSUA. In order to keep its place in the priority established by D.06-12-031 for determining facilities costs, an Appendix "B" must be completed within 90 days of the Commission Resolution approving Advice Letter 3706-A. The Utility shall maintain a queue of executed CSUAs with completed Appendix "B", including project milestones and completion dates. Any CSUA party will be subject to replacement in the queue if any date for performance within its CSUA has expired. The Utility will be provided a 30-day notice of cancellation and allow for a subsequent 60-day period to cure any non-performance. The Utility will file an Advice Letter for Commission approval to re-order the queue due to the non-performance of a CSUA holder.
3. Any party interested in funding an Interconnection Capacity Study must submit a written request for access, which includes where and when the new supply will be delivered to the Utility and the volume required to be received. Within 30 business days, the Utility will provide a written proposal to the party to evaluate the system impact of the new supplies including the estimated time and cost to perform this analysis. For California Producers, the Utility will provide a $\pm 20\%$ cost estimate for the capacity study, but in any event Interconnector is responsible to pay for the entire actual cost of the capacity study.
4. The party and the Utility must execute a Consulting Services Agreement (Form 6440) or Collectible System Upgrade Agreement (Form 6420) and Confidentiality Agreement (Form 6410) prior to any work being completed and provide payment equal to the estimated cost of the Interconnection Capacity Study prior to the Utility proceeding with the Interconnection Capacity Study. The party will be responsible for the actual costs of the analysis; to this end, an invoice or refund will be issued to the supplier at the completion of the analysis for any difference between the actual costs and the estimate.

(Continued)

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Sheet 5

ACCESS TO THE SOCALGAS PIPELINE SYSTEM

(Continued)

B. Interconnection Capacity Studies (Continued)

5. The cost estimate provided in the Interconnection Capacity Study will not include cost estimates for land acquisition, site development, right-of-way, metering, gas quality, permitting, regulatory, environmental, unusual construction costs, and operating and maintenance costs. Upon completion of the Interconnection Capacity Study and for an additional charge, the Utility will perform a more detailed Preliminary Engineering Study that will include such cost estimates associated with these elements, if requested by the party in writing. As with the Interconnection Capacity Study, the party will be responsible for the actual costs to perform the Preliminary Engineering Study.
6. In addition, upon formal written request by any party, the Utility will prepare a Detailed Engineering Study, which will: (1) describe all costs of construction, (2) develop complete engineering construction drawings, and (3) prepare all construction and environmental permit applications and right-of-way acquisition requirements. The party shall pay an estimated charge before the Utility will begin the Detailed Engineering Study. As with the Interconnection Capacity Study, the party will be responsible for the actual costs to perform the Detailed Engineering Study.
7. Customers will have three funding options for increasing receipt point capacity. First, a customer may elect to pay 100% of the costs, including applicable CIAC taxes, to the Utility to complete the installation of the necessary facility without any refund of the advanced funds and not be charged an incremental reservation rate on a going forward basis. Second, a customer may elect to pay 100% of the costs to the Utility to complete the installation of the necessary facility, receive a refund of those advanced funds after gas first flows through the receipt point, and be charged an incremental reservation rate on a going forward basis. Third, a customer may elect to install the necessary facility themselves under the direction of the Utility, transfer ownership of the necessary facilities, along with any payment of applicable CIAC taxes, and not be charged incremental reservation rate on a going forward basis.

(TO BE INSERTED BY UTILITY)

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