

SoCalGas' Rush to Greenwash Gas

Southern California Gas (SoCalGas) is promoting so-called renewable natural gas (RNG) from biogas and attempting to make it appear climate-friendly and to convince people that the natural gas is "clean." But biogas from landfills, livestock manure and sewage is mostly the potent greenhouse gas methane. Burning RNG spews carbon dioxide (CO₂) and other pollutants, making it indistinguishable from fracked gas. SoCalGas' promotion of RNG will help prolong fossil fuel dependence and delay the shift to clean, renewable energy needed to reduce greenhouse gas emissions.

SoCalGas and its parent company, Sempra Energy, benefit from entrenching natural gas infrastructure.¹ SoCalGas has launched new strategies to lock gas in to California's energy future. Natural gas infrastructure including pipelines, storage facilities (like Aliso Canyon) and power plants last for decades. SoCalGas promotes biogas, RNG and other gas-friendly projects to prolong the investment and reliance on gas.

SoCalGas Greenwashing Gas With Biogas and RNG

SoCalGas has aggressively promoted RNG to greenwash dirty energy and protect its gas profits from truly clean energy rivals like wind and solar. The gas industry wants to process biogas from waste methane (from manure, landfills and sewage) into pipeline-grade RNG.² Biogas and renewable natural gas are just cleaner-sounding names for the same old climate-destroying methane.

SoCalGas plans to sell RNG for natural gas vehicles, RNG buses, and residential and commercial buildings and to pump it through existing pipelines, further entrenching natural gas.³ SoCalGas asserts that RNG is "carbon neutral" or "carbon negative," purportedly because it comes from organic sources that already absorbed CO₂.⁴

Burning any methane releases CO₂ and air pollutants, and gas pipelines and other infrastructure leak tremendous volumes of methane that contribute to climate change, negating any alleged RNG savings.⁵ SoCalGas' RNG charm offensive capitalizes on clean energy's popularity and deceptively suggests that the gas company is taking climate action.



PHOTO CC-BY-SA © GENEVIEVE PRENTICE / FLICKR.COM

False power-to-gas solution

SoCalGas has partnered to develop power-to-gas technology that uses clean, renewable energy to create natural gas.⁶ Power-to-gas would allegedly store surplus intermittent wind and solar energy to convert water into hydrogen that can be combined with CO₂ to create storable methane for power plants.⁷ This technology has only been implemented in a limited number of pilot projects and demonstration plants and faces technical hurdles to become economically viable.⁸ Pursuing this unproven technology to convert zero-emission renewables into climate-destroying gas is nonsensical when renewable power and battery storage are becoming cheaper and more effective.⁹

RNG buses are fossil-fueled polluters

SoCalGas also supports RNG-fueled vehicles.¹⁰ RNG-powered buses seem like cleaner transportation but only reinforce the demand for gas infrastructure. Although gas-powered buses may not belch as much particulate pollution as diesel buses, they still emit dangerous air pollutants and greenhouse gases.¹¹ Gas buses have high lifecycle emissions for many toxic air pollutants and emit large volumes of carbon monoxide and smog-creating nitrous oxides (NO_x).¹² California landfill gas buses release 72 percent more NO_x than electric buses.¹³

Subsidizing dirty energy

Proponents claim RNG is energy that deserves the same level of government support as wind and solar power.¹⁴ California already encourages expanding RNG through state renewable fuel standards, low-carbon fuel standards and other financial incentives.¹⁵ In 2018, California enacted two bills backed by the industry group The Coalition for Renewable Natural Gas (SoCalGas is a leadership member) that would entrench gas infrastructure by allowing the California Public Utilities Commission to let gas utilities charge ratepayers to connect biogas to pipelines and require utilities to purchase RNG.¹⁶

The federal Renewable Fuel Standard and the California Low Carbon Fuel Standard programs extend additional biogas incentives. The federal and state programs let biogas operations sell renewable energy credits to dirtier utilities for the biogas they produce.¹⁷ These programs have incentivized RNG production because selling renewable credits increases RNG's value.¹⁸

SoCalGas Pushing Dirty Biogas — A False Energy Solution

California policies that encourage developing RNG have promoted pollution. Burning biogas releases greenhouse gases like CO₂ and other pollutants including NO_x, ammonia and hydrogen sulfide.¹⁹ These projects cost millions of dollars; some have received taxpayer subsidies, and other costs can be billed to utility ratepayers.²⁰

Taxpayer-subsidized factory farm manure digesters produce neither clean nor safe energy because of methane combustion emissions, methane leaks, accidental manure spills and explosions.²¹ Most California factory-farmed dairy

cows are in the Central Valley, a high-poverty region with the state's highest rates of childhood asthma emergency room visits.²² The same is true of landfill and sewage facilities. In 2011, a San Jose landfill digester faced an \$882,200 fine for a chemical spill that contaminated a nearby creek.²³ Landfill gases can leak into soil and buildings, posing a potential explosion hazard and threatening public health.²⁴

Every dollar invested in natural gas or RNG infrastructure discourages investments in clean, renewable energy and perpetuates the demand for natural gas, pipelines and associated methane leaks.²⁵ Once methane leaks are considered, the greenhouse gas footprint of natural gas is worse than for coal and oil because methane is such a powerful greenhouse gas.²⁶



Aliso Canyon Methane Leak, 2015
PHOTO CC-BY © EARTHWORKS / FLICKR.COM

SoCalGas Discouraging Electric Buildings and Appliances

SoCalGas actions and statements make it seem like RNG gas-powered buildings and appliances are superior to electric power, even as many are trying to reduce the carbon footprints of buildings by shedding fossil fuel-fired appliances and equipment. A SoCalGas-commissioned report found that RNG was cheaper, cleaner and more efficient than switching to electric.²⁷ But the study assumed that RNG has zero emissions (an unsupported claim) and alleged that a mix of RNG and conventional gas can reduce climate emissions as much as all-electrified buildings.²⁸

SoCalGas also promotes gas cooking as cheaper than electric and induction stoves. It claims that chefs prefer gas over electric cooking.²⁹ However, electric induction cooktops are the most efficient — they heat pans faster with less energy than electric or gas cooktops.³⁰ And nearly two-thirds of U.S. households use electric stoves.³¹

SoCalGas could pass costs on to utility customers to finance this proposed shift to RNG as well as to finance the utility's equipment, biogas processing facilities and biogas pipeline network connections.³²

SoCalGas' Poor Environmental Record

SoCalGas has a shoddy public health and environmental track record. In 2016, the company was fined \$2.25 million for pipeline safety violations,³³ and between 2015 and 2018 it incurred nearly \$120,000 in workplace safety or health violation penalties.³⁴

The recent shift from coal to natural gas electricity generation has driven underground gas storage to record-high levels.³⁵ However, outdated storage facilities like Aliso Canyon

and SoCalGas' Playa del Rey gas storage facility were not originally designed for high-pressure gas storage.³⁶

In late 2015, SoCalGas reported a major gas leak at its Aliso Canyon gas storage facility that lasted nearly 120 days — the worst methane leak in U.S. history, which ultimately displaced 8,000 families.³⁷ The leak released nearly 100,000 tons of methane and spread to homes in the nearby Porter Ranch neighborhood and greater San Fernando Valley.³⁸ Residents reported headaches, nosebleeds, nausea and rashes.³⁹ In 2018, SoCalGas paid a \$119.5 million settlement for the gas leak.⁴⁰

Playa del Rey also has had numerous environmental lapses, including releasing a "fine oil mist" that covered homes; odor emissions; allegations of contaminating drinking water; and a 2013 vent stack explosion that was visible for miles.⁴¹ The facility already regularly emits dangerous air pollutants that contribute to respiratory illnesses, as well as chemicals that are known carcinogens.⁴² A gas blowout at the Playa del Rey facility would threaten the nearby residential neighborhood and the Los Angeles International Airport, which is less than a mile away.

Delays in Getting Off Fossil Fuels Impede Transition to Clean Renewables

More investment in natural gas infrastructure prolongs our fossil fuel dependence, delays the shift to clean, renewable energy and forestalls any meaningful reductions in greenhouse gas emissions.⁴³

Tell Governor Newsom to stop expanding gas infrastructure and funding bogus RNG programs, and to support a swift transition to 100 percent clean, renewable energy today:

fwwat.ch/SoCalGas

Endnotes

- 1 Sempra Energy. U.S. Securities and Exchange Commission. Form 10-K. Fiscal year ending December 31, 2017 at 11 and 16 to 17; Sempra Energy. "Investing for the Future: 2017 Annual Report." 2018 at 1 and 4 to 5.
- 2 Anderson, Larry G. "Effects of using renewable fuels on vehicle emissions." *Renewable and Sustainable Energy Reviews*. March 2015 at 163 and 164.
- 3 Natural Gas Vehicles for America. [Press release]. "LA Metro awards contract for 295 new natural gas buses." June 22, 2017; Clean Energy Fuels. [Press release]. "LA Metro awards multi-year contract for Clean Energy's Redeem™ renewable natural gas to fuel nation's largest CNG bus fleet." May 26, 2017.
- 4 Southern California Gas Company (SoCalGas). Sempra Energy. "What is renewable natural gas?" Available at <https://www.socalgas.com/smart-energy/renewable-gas/what-is-renewable-natural-gas>. Accessed August 14, 2018.
- 5 Howarth, Robert W. et al. "Methane and the greenhouse-gas footprint of natural gas from shale formations." *Climatic Change*. April 2011 at 679, 687 and 688; Howarth, Robert W. "A bridge to nowhere: Methane emissions and the greenhouse gas footprint of natural gas." *Energy Science & Engineering*. 2014 at 1 and 2; Jackson, Robert B. et al. "Natural gas pipeline leaks across Washington, DC." *Environmental Science & Technology*. Vol. 48, Iss. 3. January 2014 at 2051; Lavoie, Tegan N. et al. "Assessing the methane emissions from natural gas-fired power plants and oil refineries." *Environmental Science & Technology*. Vol. 52. February 21, 2017 at 3373.
- 6 SoCalGas. Sempra Energy. "Power-to-gas technology." Available at <https://www.socalgas.com/smart-energy/renewable-gas/power-to-gas>. Accessed August 14, 2018.
- 7 Sempra Energy. [Press release]. "SoCalGas power-to-gas project selected by U.S. Department of Energy's National Renewable Energy Laboratory to receive funding." April 24, 2017.
- 8 Eveloy, Valerie and Tesfaldet Gebreegziabher. "A review of projected power-to-gas deployment scenarios." *Energies*. Vol. 11, No. 1824. 2018 at 45; Oxford Institute for Energy Studies. "Power-to-Gas: Linking Electricity and Gas in a Decarbonising World." October 2018 at 2 and 10.
- 9 Abraham, John. "Study: wind and solar can power most of the United States." *The Guardian* (U.K.). March 26, 2018; Berke, Jeremy. "One simple chart shows

- why an energy revolution is coming — and who is likely to come out on top.” *Business Insider*. May 8, 2018.
- 10 SoCalGas. Sempra Energy. [Press release]. “SoCalGas statement on LA Metro approval of renewable natural gas purchase.” May 25, 2017; SoCalGas. Sempra Energy. “Find out why LA Metro is the largest transit property in the U.S. to fully switch to CNG.” Available at <https://www.socalgas.com/for-your-business/natural-gas-vehicles/Metro>. Accessed August 14, 2018; SoCalGas. Sempra Energy. “Learn why Culver City is planning to replace all diesel-fueled city vehicles with CNG.” Available at <https://www.socalgas.com/for-your-business/natural-gas-vehicles/Culver-City-Bus>. Accessed August 14, 2018; SoCalGas. Sempra Energy. [Press release]. “SoCalGas to offer renewable natural gas at its fueling stations for the first time.” September 17, 2018.
 - 11 Xu, Yanzi et al. “Assessment of alternative fuel and powertrain transit bus options using real-world operations data: Life-cycle fuel and emissions modeling.” *Applied Energy*. 2015 at 153 and 154.
 - 12 Scott Institute for Energy Innovation. Carnegie Mellon University. “Policymaker Guide: Which Alternative Fuel Technology Is Best for Transit Buses?” January 2017 at Table 4 at 27; U.S. Environmental Protection Agency (EPA). “Technical Bulletin: Nitrogen Oxides (NO_x), Why and How They Are Controlled.” (EPA 456/F-99-006R.) November 1999 at 1; Xu et al. (2015) at 146, 153 and 154.
 - 13 Union of Concerned Scientists. “Methodology for Heavy-Duty Vehicle Emissions Analysis.” 2017 at Table C-9.
 - 14 American Biogas Council. [Press release]. “American Biogas Council statement on the Bipartisan Budget Act of 2018.” February 9, 2018.
 - 15 Ca. Pub. Res. Code §25741(a)(1) and Ca. Pub. Util. Code §399.12(e); U.S. EPA, U.S. Department of Energy and U.S. Department of Agriculture. “Biogas Opportunities Roadmap.” August 2014 at 8; SoCalGas. Sempra Energy. “Biomethane monetary incentive program.” Available at <https://www.socalgas.com/smart-energy/renewable-gas/biomethane-monetary-incentive-program>. Accessed August 14, 2018; Lucas, Jim. Southern California Gas. Sempra Energy. “Renewable natural gas and interconnecting to the SoCalGas pipeline.” PR1118.1 Working Group Meeting. October 24, 2017 at 5 to 9; The Coalition for Renewable Natural Gas. [Press release]. “California Governor Brown signs RNG coalition bill to authorize state procurement program for renewable natural gas.” September 24, 2018; Bioenergy Association of California. [Press release]. “California passes major bioenergy, climate legislation.” September 7, 2016.
 - 16 Ca. Pub. Util. Code §650-651; Ca. Pub. Util. Code §784.2; The Coalition for Renewable Natural Gas (September 24, 2018); SoCalGas (August 14, 2018); Sempra Energy. [Press release]. “Study advises renewable natural gas use for low-carbon building strategy.” August 2, 2018; The Coalition for Renewable Natural Gas. “Coalition members.” Available at <http://www.rngcoalition.com/coalitionmembers>. Accessed November 20, 2018; Karidis, Arlene. “Two bills pushing for California pipeline biomethane projects move forward.” *Waste 360*. June 19, 2018.
 - 17 U.S. EPA. “Overview for renewable fuel standard.” June 7, 2017; California Energy Commission. “Low Carbon Fuel Standard.” Available at https://www.energy.ca.gov/low_carbon_fuel_standard/. Accessed December 18, 2018.
 - 18 Lucas (2017) at 5 to 9.
 - 19 Kuo, Jeff. California State University, Fullerton. “Air Quality Issues Related to Using Biogas From Anaerobic Digestion of Food Waste.” February 2015 at 2; Sharvelle, S. and L. Loetscher. Colorado State University. “Anaerobic Digestion of Animal Wastes in Colorado.” May 2011 at 1 and 3; Whiting, Andrew and Adisa Azapagic. “Life cycle environmental impacts of generating electricity and heat from biogas produced by anaerobic digestion.” *Energy*. Vol. 70. 2014 at 181, 184, 187 and 191 to 192.
 - 20 Lucas (2017) at 6, 9, 11 and 14.
 - 21 Flesch, Thomas K. et al. “Fugitive methane emission from an agricultural biogas digester.” *Biomass and Bioenergy*. 2011 at 3927; Verburg, Steve. “Blast destroys roof of troubled biogas digester near Waunakee.” *Wisconsin State Journal*. August 6, 2014.
 - 22 Kaiser Health News. “ER visits for asthma rising among kids in California.” *U.S. News and World Report*. May 30, 2015; U.S. EPA [Press release]. “EPA resolves air violations with thermal energy development partnership in Tracy, California for \$145,000.” January 28, 2013.
 - 23 Rogers, Paul. “Waste Management faces \$882,200 fine in connection with San Jose landfill pollution.” *Mercury News* (CA). August 13, 2016.
 - 24 California Department of Resources Recycling and Recovery. “Landfill Gas Investigations at Former Landfills and Disposal Sites.” February 2015 at 3 and 6.
 - 25 Murphy, T. “U.S. shale gas trends — economic and global implications.” *Journal of Physics: Conference Series*. Vol. 745. 2016 at 1 and 6; Southern Environmental Law Center. [Press release]. “Study: proposed interstate natural gas pipelines not needed.” September 22, 2016; Peng, Wei. Princeton University. “How would shale gas influence the investment in renewables? A perspective from price and price risks in gas and electricity market.” January 2012 at 1 and 6; Jackson, Robert B. et al. Duke University, Center on Global Change. “Research and policy recommendations for hydraulic fracturing and shale-gas extraction.” 2011 at 2; Jackson (2014) at 2051.
 - 26 Howarth (2014) at 1; Howarth (2011) at 679, 687 and 688.
 - 27 Navigant Consulting. Prepared for SoCalGas. “Analysis of the Role of Gas for a Low-Carbon California Future.” Reference No. 195582. July 24, 2018 at v, xvii and xviii.
 - 28 *Ibid.* at 5, 7 and 9.
 - 29 SoCalGas. Sempra Energy. “Energy-saving tips for your home.” Available at <https://www.socalgas.com/save-money-and-energy/energy-saving-tips-tools/tips-for-your-home>. Accessed December 19, 2018; Sempra Energy (August 2, 2018); Sempra Energy. [Press release]. “Newest energy-efficient commercial kitchen equipment to be demonstrated at SoCalGas’ foodservice equipment expo.” October 1, 2018.
 - 30 Severson, Kim. “Is induction cooking ready to go mainstream?” *New York Times*. April 6, 2010; Sorrel, Charlie. “Induction cooking is way more efficient, and even faster, than gas.” *Fast Company*. August 22, 2016.
 - 31 U.S. Energy Information Administration. “Residential Energy Consumption Survey (RECS).” Table HC1.9 Fuels used and end uses in U.S. homes by home size, 2015. May 2018.
 - 32 Sempra Energy (August 2, 2018); Black & Veatch Corporation. Prepared for SoCalGas. “Gas cleaning public letter.” April 29, 2016 at 1 to 4; Jaffe, Amy Myers. University of California, Davis. Prepared for the California Air Resources Board and the California Environmental Protection Agency. “Final Draft Report on the Feasibility of Renewable Natural Gas as a Large-scale, Low Carbon Substitute.” Contract No. 13-307. February 29, 2016 at 58, 62 and 76.
 - 33 Barboza, Tony. “Southern California Gas Co. fined \$2.25 million for pipeline safety violations.” *Los Angeles Times*. May 17, 2016.
 - 34 Good Jobs First. “Violation tracker parent company summary: Sempra Energy.” Available at <https://violationtracker.goodjobsfirst.org/prog.php?parent=sempra-energy>. Accessed January 24, 2019.
 - 35 Michanowicz, Drew. “The Aliso Canyon gas leak was a disaster. There are 10,000 more storage wells out there just like it.” *Los Angeles Times*. May 14, 2018.
 - 36 *Ibid.*; McNary, Sharon. “Like Porter Ranch, neighborhoods in Playa del Rey, Montebello sit near aging gas wells.” *Southern California Public Radio*. 89.3 KPCC-Southern California. February 24, 2016.
 - 37 Los Angeles Times Editorial Board. “The largest methane leak in U.S. history began one year ago at Aliso Canyon. What have we learned since then?” *Los Angeles Times*. October 22, 2016; Khan, Amina. “Porter Ranch leak declared largest methane leak in U.S. history.” *Los Angeles Times*. February 25, 2016; Michanowicz (2018).
 - 38 Khan (2016); Los Angeles Times Editorial Board (2016).
 - 39 *Ibid.*
 - 40 “SoCalGas announces \$119.5 million gas leak settlement.” *Environmental Protection Online*. August 8, 2018.
 - 41 McNary (2016).
 - 42 South Coast Air Quality Management District. “Facility information detail: SoCalGas Co Playa del Rey storage facility, 2013-2017.” Available at <http://www3.aqmd.gov/webappl/fim/prog/search.aspx>. Accessed April 4, 2018; U.S. EPA. Enforcement and Compliance History Online. “Southern California Gas Company, 8141 Gulana Avenue, Playa del Rey, CA 90293.” Available at <https://echo.epa.gov>.
 - 43 McJeon, Haewon et al. “Limited impact on decadal-scale climate change from increased use of natural gas.” *Nature*. 2014 at 482; Zhang, Xiaochun et al. “Climate benefits of natural gas as a bridge fuel and potential delay of near-zero energy systems.” *Applied Energy*. 2015 at Abstract and 5.