

# Calif.'s Renewable Natural Gas Standard: How It Works

By **Buck Endemann, Molly Barker and Matthew Clark** (April 12, 2022)

On Feb. 24, the California Public Utilities Commission issued a decision, D.22-02-025, requiring California's investor-owned utilities, or IOUs, that supply gas to the public to satisfy short- and medium-term procurement targets for renewable natural gas — also known as biomethane or renewable natural gas.

RNG can be produced from feedstocks including organic food and agriculture waste, dairy and swine manure, and wastewater treatment plant solids.

By focusing initially on diverting organic food and agriculture waste from landfills, however, the CPUC's short-term RNG procurement goals are meant to create demand to amplify other waste diversion strategies supervised by the California Department of Resources and Recycling, or CalRecycle, and the California Air Resources Board, or CARB.

By linking energy procurement mandates with organic waste diversion, the CPUC's renewable gas standard is a unique order that ties together several complementary statewide waste policies. While the CPUC directly regulates a large handful of gas IOUs, waste collection in California is historically performed by a much more diffuse array of local entities.

D.22-02-025 is an important step taken by an energy regulator to promote a unified waste collection and reuse strategy to meet California's emissions reduction goals.

## Regulatory Background

Decision D.22-02-025 relies upon several recent statewide regulatory efforts to reduce statewide greenhouse gas emissions — in particular, emissions from potent GHGs like methane. For at least the last two decades, the CPUC has played a leading emissions reduction role in California's, and arguably the nation's, power and natural gas sectors.

In most contexts, RNG is derived from waste methane that would otherwise be emitted lawfully into the atmosphere as a byproduct of an industrial or agricultural process. Compared to fossil-based sources of natural gas, RNG represents a reduced carbon footprint of methane production, capture and combustion. RNG beneficially uses methane that would be emitted in a business-as-usual scenario, while also displacing higher-carbon sources of energy.

In 2012, then-Gov. Jerry Brown approved A.B. 1900, which required the CPUC to adopt RNG quality standards, and required the IOUs to commit to special monitoring, testing, reporting and record-keeping practices.[1] In 2018, S.B. 1440 required the CPUC and CARB to consider adopting specific RNG procurement targets and goals for gas IOUs.[2]

The CPUC approved a voluntary renewable natural gas tariff in 2020, specifically acknowledging that two California IOUs would offer RNG to foster the development of RNG



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supplies in California and nationally and reduce emissions of short-lived climate pollutants, or SLCPs — specifically, methane.[3]

Mitigating waste methane has also been a focus of other California agencies, including agencies responsible for making waste collection more efficient and less polluting. In California, waste collection and disposal services are carried out mostly by municipalities or private businesses operating under local franchises that are required to meet statewide standards.

In 2014, the California Legislature passed A.B. 1826, which required businesses to recycle their organic waste and local jurisdictions to divert organic waste generated by certain businesses.[4] S.B. 1383, passed in 2016, required local waste collection agencies to implement a suite of measures to mitigate methane and other potent GHGs to meet the state's SLCP reduction strategy, which is overseen by CalRecycle and CARB.

Overall, the state is required to reduce methane emissions by 40%, hydrofluorocarbon gases by 40% and anthropogenic black carbon by 50% by 2030.[5] To meet these goals, CalRecycle has prioritized diverting organic waste to beneficial use, and keeping it out of landfills. The agency set the following targets:

- A 50% reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020;
- A 75% reduction in the level of the statewide disposal of organic waste from the 2014 level by 2025;[6] and
- At least 20% of edible food discarded must be recovered for human consumption by 2025.[7]

Emphasizing environmental justice concerns, the SLCP reduction strategy also requires that, to the extent possible, efforts to reduce SLCPs "should focus on areas of the state that are disproportionately affected by poor air quality." [8]

### **Background on D.22-02-025 and Procurement of Organic Feedstock to Energy**

The CPUC's renewable gas standard relies on a broad set of laws that encourage RNG generation from diverted organic waste streams regulated by CalRecycle and CARB. D.22-02-025 provides demand for these waste streams by establishing procurement targets and cost-benefits tests to meet those targets.[9]

D.22-02-025 also separates IOU procurement targets into short-term and medium-term buckets, echoing some of the structure in the renewable portfolio standards for the power sector's load serving entities.

The CPUC's order established a short-term target to procure sufficient RNG to divert 8 million tons[10] of organic waste from landfills, including wood waste.[11] In the medium term, CPUC set a target to procure 75.5 million British thermal units[12] of RNG annually by

2030 — approximately 12.2% of the IOUs' annual bundled core customer natural gas demand.[13]

To help facilitate these volumes, the CPUC reserved the right to establish a nonbypassable charge for noncore unbundled gas distribution system customers, to ensure core customers are not disproportionately burdened.

D.22-02-025 requires IOUs to rely on an environmental attribute registry to track compliance with the renewable gas standard's procurement targets. This is similar to how load serving entities use the Western Renewable Energy Generation Information System to generate and track renewable energy credits to comply with California's renewable portfolio standard.

For RNG, the CPUC ordered producers to track pipeline injections through the Midwest Renewable Energy Tracking System, or M-RETS.[14] M-RETS is a Minneapolis-based environmental attribute registry that tracks renewable energy credits for the Midwest Independent System Operator, and also offers a renewable thermal certificate to prove volumes of RNG production.[15]

Each renewable thermal certificate includes detailed information to verify, among other things, the carbon intensity of the underlying RNG placed into the pipeline. M-RETS has experience with state RNG tracking systems, being the registry of choice for Oregon's RNG procurement law, S.B. 98.

### **Toward a Unified Theory of Waste-to-Value**

Methane is a potent GHG, and much of California's methane is generated by waste. Recent policies place a social cost on methane, and require diverting organic waste toward beneficial uses such as compost, fertilizers and transportation fuels. D.22-02-025 reflects some of the competing priorities, and makes several value calls among these policies.

### ***The Social Cost of Methane***

California requires the Renewable Gas Standard's procurement targets to provide a "cost-effective means of reducing SLCPs and other GHG emissions." [16] D.22-02-025 adopts the federal government's 2021 Interagency Working Group calculation of the social cost of methane [17] at \$26 per million BTUs, which is used as a threshold for determining the cost-effectiveness of procuring RNG. [18]

According to the CPUC, the average cost of RNG is \$17.70 per million BTUs, such that implementing RNG procurement requirements can be a cost-effective means of achieving the SLCP and GHG reductions. [19] \$17.70 per million BTUs is an optimistic price point, however, and may not always reflect the practicalities of securing large volumes of organic feedstock to produce consistent RNG.

In any event, the CPUC must approve each IOU procurement contract, and the level of scrutiny applied to each review will reflect this social cost of methane assumption. The CPUC's Energy Division will use the three-tier advice letter process to approve individual procurement contracts submitted by the IOUs. [20] The advice tiers reflect an increasing amount of scrutiny for RNG procurement above \$17.70 per million BTUs:

- Tier 1 for contract prices up to \$17.70 per million BTUs. Tier 1 letters are effective pending disposition by the CPUC's Energy Division. [21]

- Tier 2 for contract prices between \$17.70 and \$26 per million BTUs. Tier 2 letters are effective after Energy Division approval.[22] But if no protests have been filed, and the Energy Division has not suspended the advice letter by the end of the initial 30-day review period, the advice letter becomes effective 30 days after submittal.[23]
- Tier 3 for contract prices above \$26 per million BTUs.[24] Tier 3 letters are effective only after full CPUC approval.[25]

Any person may protest an advice letter within 20 days of submittal of the advice letter.[26] The initial review period for an advice letter is 30 days, which can be extended by up to 120 days.[27]

### ***Priority of Organic Wastes***

D.22-02-025 prioritizes RNG sourced from organic waste diverted from landfills, recognizing that other state programs have successfully incentivized the collection and reuse of other organic wastes. The CPUC's short-term procurement targets explicitly complement CalRecycle's 2025 SLCP Reduction Strategy for diverting organic food waste from landfills.

Woody waste — leaves, grass clippings, tree trimmings, etc. — is also targeted as a feedstock for RNG.[28] Eligible projects can procure RNG "from forest, agricultural, and urban food waste pyrolysis and gasification projects using methanation." While the CPUC's identification of pyrolysis is promising, pyrolysis does not currently enjoy any special exceptions under state recycling laws.

Unlike some other states, CalRecycle considers pyrolysis to be "transformation" and excludes it currently from the definition of "recycling" under current California law.[29] Several stakeholders have complained that the pyrolysis exclusion artificially restricts the application of proven reuse technology, and it could place unintended roadblocks for the collection of woody waste for RNG.

Certain RNG feedstocks are also disfavored, at least for the purposes of meeting the renewable gas standard's short-term goals. In particular, the CPUC acknowledges that capturing RNG from dairy manure is already adequately incentivized by CARB's low carbon fuel standard program.

Dairy RNG procurement cannot count toward the 2025 short-term target. Dairy RNG or any other form of livestock-derived RNG can only count toward 4% of the 2030 medium-term target, and only if the dairy RNG is procured from facilities that commence operation after 2021.[30] For now, at least, dairy digesters remain protected for the transportation market's low carbon fuel standard.

### ***Environmental Justice***

Environmental justice continues to be a top priority for California agencies, including the CPUC. Consistent with the SLCP reduction strategy, D.22-02-025 states that the "[b]iomethane procurement strategies should maximize benefits for environmental justice

and disadvantaged communities." [31]

The IOUs each must take social justice impacts into account as part of their RNG procurement practices, and procurement decisions must consider how increases in RNG production "would contribute to or detract from economic, health, and non-energy benefits for local communities." [32]

The second part of this series will review the primary issues that RNG suppliers and producers will need to be aware of when drafting an agreement with an IOU.

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[1] A.B. 1900, 2011-2012 Leg. Reg. Sess. (Cal. 2012).

[2] S.B. 1400, 2017-2018 Leg. Reg. Sess. (Cal. 2018).

[3] Cal. Pub. Util. Code § 651.

[4] See AB 1826 (Sep. 28, 2014) (codified at Cal. Pub. Res. Code, Div. 30, Part 3, Chap. 12.9).

[5] S.B. 1383, 2015-2016 Leg. Reg. Sess. (Cal. 2016).

[6] Cal. Health & Safety Code § 39730.6(a).

[7] Cal. Pub. Res. Code § 42652.5(a).

[8] S.B. 1383, § 1.

[9] See generally Order Instituting Rulemaking to Adopt Biomethane Standards and Requirements, Pipeline Open Access Rules, and Related Enforcement Provisions, Decision 22-02-025, Pub. Util. Comm'n of Cal. Rulemaking 13-02-008 (Feb. 24, 2022) (hereinafter, Order).

[10] Order at 1.

[11] Id., 10, 30.

[12] One million BTUs equals one billion cubic feet. This level of procurement is equivalent

to four million metric tons of CO<sub>2</sub> combustion emissions reductions from displaced fossil natural gas use.

[13] Order at 11, 31.

[14] Id., at 24, 50. M-RETS is a proprietary web-based platform that tracks renewable energy certificates and renewable thermal certificates.

[15] Id., at 24.

[16] Id., at 25; see also Cal. Pub. Util. Code § 651(a)(1).

[17] "Social cost of methane" means the "monetary value of the net harm to society associated with adding a small amount of methane to the atmosphere in a year. In principle, it includes the value of all climate change impacts, including (but not limited to) changes in net agricultural productivity, human health effects, property damage from increased flood risk natural disasters, disruption of energy systems, risk of conflict, environmental migration, and the value of ecosystem services." See Order at 9 n.11.

[18] Id., at 53, 55, 58.

[19] Id., at 53 ("According to the State Water Resources Control Board commissioned study, the average cost of biomethane is \$17.70 per million MMBtu"). See also State Water Resources Control Board, Co-Digestion Capacity Analysis Prepared for the California State Water Resources Control Board under Agreement #17-014-240, at 3-4 (Fig. 3.4) (June 2019), [https://www.waterboards.ca.gov/climate/docs/co\\_digestion/final\\_co\\_digestion\\_capacity\\_in\\_california\\_report\\_only.pdf](https://www.waterboards.ca.gov/climate/docs/co_digestion/final_co_digestion_capacity_in_california_report_only.pdf).

[20] Id., at 29. Rules governing CPUC Advice Letters can be found in CPUC General Order 96-B (General Order 96-B), <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M023/K381/23381302.PDF>.

[21] Id., at Energy Industry Rule 5.1.

[22] Id., at Energy Industry Rule 5.2.

[23] Id., at General Rule 7.3.4.1.

[24] Order at 59.

[25] General Order 96-B, Energy Industry Rule 5.3.

[26] General Order 96-B, General Rule 7.4.1.

[27] Id., at General Rule 7.5.2.

[28] Id., at 67.

[29] See Cal. Pub. Res. Code § 40180 ("Recycle' or 'recycling' means the process of collecting, sorting, cleansing, treating, and reconstituting materials that would otherwise become solid waste, and returning them to the economic mainstream in the form of raw material for new, reused, or reconstituted products which meet the quality standards necessary to be used in the marketplace. 'Recycling' does not include transformation, as

defined in Section 40201 or EMSW conversion"); see also Cal. Pub. Res. Code § 40201 ("Transformation' means incineration, pyrolysis, distillation, or biological conversion other than composting. 'Transformation' does not include composting, gasification, EMSW conversion, or biomass conversion").

[30] Order at 34, 61.

[31] Id., at 56, 57.

[32] Id., at 35–36.