DOCKETED	
Docket Number:	21-IEPR-05
Project Title:	Natural Gas Outlook and Assessments
TN #:	239541
Document Title:	Presentation - CPUC Renewable Gas Programs
Description:	S2.5A Karin Sung, CPUC
Filer:	Raquel Kravitz
Organization:	CPUC
Submitter Role:	Public Agency
Submission Date:	8/30/2021 11:49:12 AM
Docketed Date:	8/30/2021

CPUC Renewable Gas Programs

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August 31, 2021

California Public
Utilities Commission

Presentation Overview

- Standardized Pipeline Interconnection Policies
- Voluntary Renewable Natural Gas Tariff
- SB 1440 Implementation (Renewable Gas Procurement Staff Proposal)

Standardized Pipeline Interconnection Policies

Standardized Pipeline Interconnection Policies

- D.20-08-035: Standard Renewable Gas Interconnection Tariff
  - Gas quality standards to protect human health and ensure pipeline integrity

- D.20-12-031: Standard Renewable Gas Interconnection Agreement
  - Standardized contract between interconnector and gas utilities: PG&E, SoCalGas, SDG&E, and Southwest Gas
  - Increases biomethane interconnection monetary incentive an additional $40 million ($80 million total)

Voluntary Renewable Natural Gas Tariff

Voluntary Renewable Natural Gas Tariff

- D.20-12-022 – CPUC approved SoCalGas and SDG&E Voluntary Renewable Natural Gas Tariff

- Program Overview
  - Cost recovery and wind down costs treatment
  - Procurement requirements: 50 % of RNG must comply with PU Code 651(b)(3)(B)
  - Carbon intensity verification through modified LCFS GREET model

- Current status
  - Implementation pending outcome of Decision regarding SB 1440 Staff Proposal

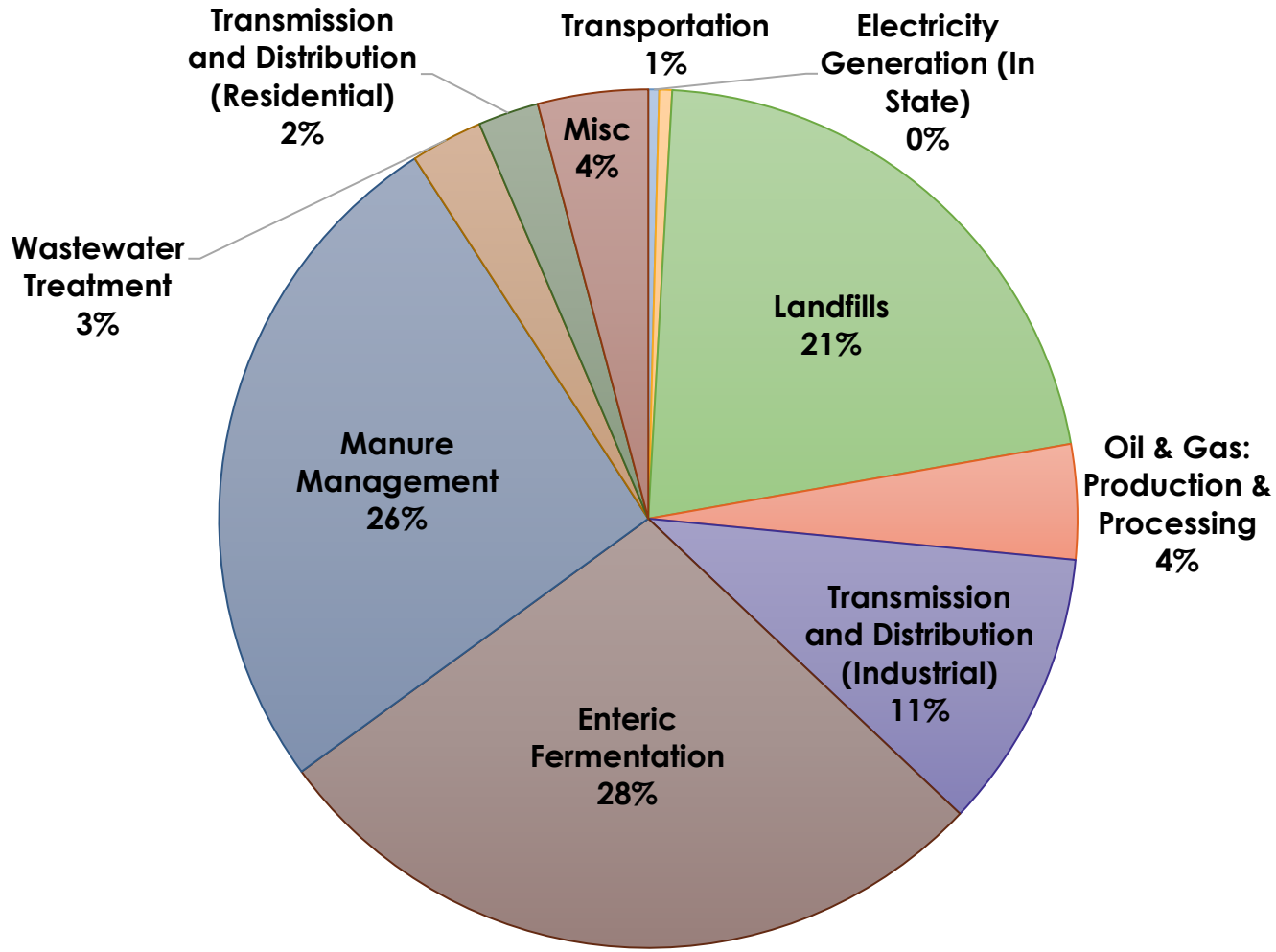
SB 1440 Implementation (Renewable Gas Procurement Staff Proposal)

SB 1440 (Hueso, 2018)

(a) "The commission, in consultation with the State Air Resources Board, shall **consider** adopting specific biomethane procurement targets or goals for each gas corporation so that each gas corporation procures a proportionate share, as determined by the commission, of biomethane annually." (emphasis added)

(b) "If the commission adopts specific biomethane procurement targets or goals . . ."

SLCP Reduction (SB 1383): California's Methane (2019 CARB Data)



Source: CARB GHG Inventory raw data https://ww2.arb.ca.gov/ghg-inventory-data.

SB 1440 Staff Proposal: Short-Term Targets

- **Short-term (by 2025):** procure biomethane to support diversion of the **8 million tons of organic waste** that exceeds CalRecycle's SB 1383 projected organic waste diversion capacity from wastewater treatment plants that can co-digest organic waste diverted from landfills and standalone organic waste digesters.
  - This excludes dairy biomethane unless the dairy biomethane is procured for the LCFS program.

Technology	Estimated Anticipated Capacity, 2025	Estimated Needed Capacity, 2025	Difference
Compost	5.3	9.6	(4.3)
Anaerobic Digestion	1.0	2.7	(1.7)
Co-Digestion	0.21	2.4	(2.2)
Chipping and Grinding	3.5	3.3	0.2
Total	10.0	18.0	(8.0)

Source: CalRecycle "Analysis of the Progress Toward the SB 1383 Organic Waste Reduction Goals" (2020) Table 1 at 7 https://www2.calrecycle.ca.gov/Publications/Download/1589

SB 1440 Staff Proposal: Short-Term Targets

- **Wastewater Treatment Plants (Co-digestion):**
  - 153 existing wastewater treatment plants in California with anaerobic digesters

- **Standalone Digesters:**
  - 9 operating standalone anaerobic digestion facilities operating in California
    - 8 of those facilities are anticipated to begin operations with new or expanded capacity within the next few years

Source: CASA research shows there are 153 existing in-state wastewater treatment plants with digesters that can be converted to accept organic waste diversion. See "2015 Estimate of Excess Capacity at Existing Anaerobic Digesters for Co-Digestion at Wastewater Treatment Facilities in California": https://casaweb.org/wp-content/uploads/2015/12/Summary-of-Estimate-of-Excess-Capacity-for-Co-digestin-in-CA_081718-With...1.pdf.

SB 1440 Staff Proposal: Medium-Term Targets

- **Medium-term (by 2030):** procure 75.5 million MMBtu (72.8 Bcf) of biomethane annually to support CARB's landfill methane reduction goals from their 2017 Scoping Plan. This may change when Staff revisit targets in 2025
  - This is equivalent to 12% of 2020 core gas demand in California

75.5 million MMBtu = 4 MMTCO2e

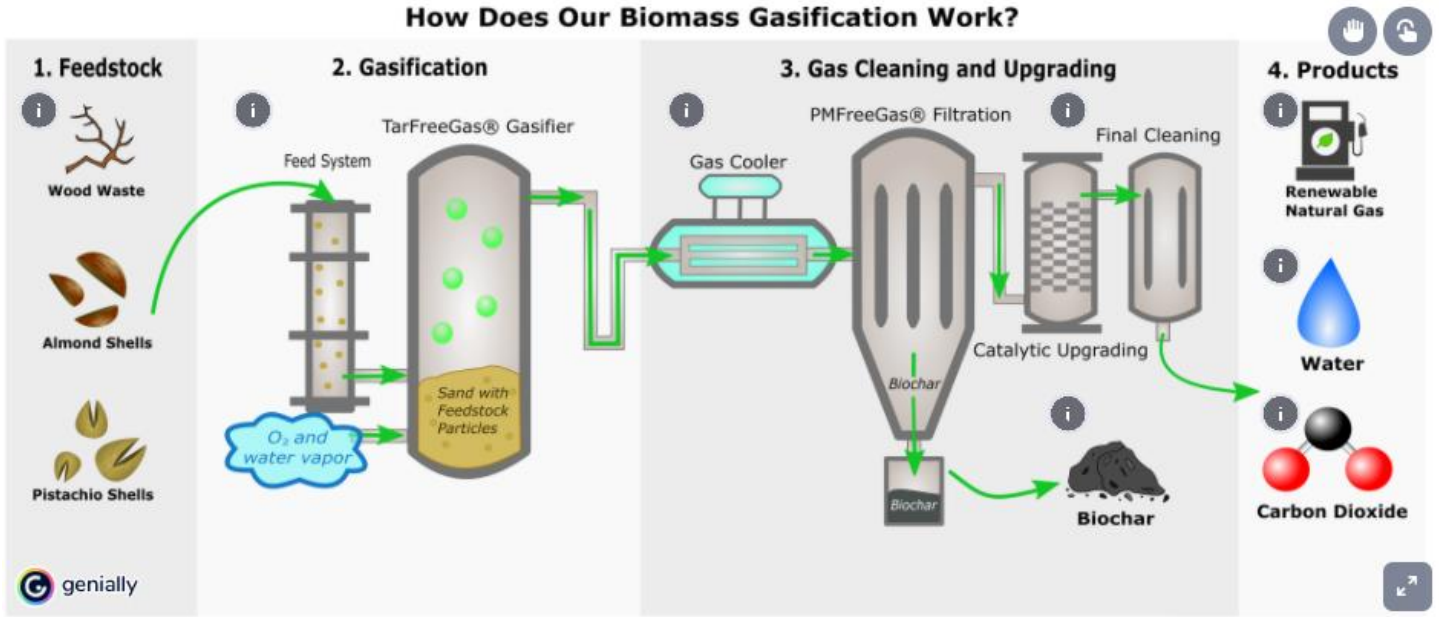
According to CARB, organic waste diversion goals "will reduce 4 MMTCO2e of methane in 2030 (using a 20-year GWP), but one year of waste diversion in 2030 is expected to result in a reduction of 14 MMTCO2e of emissions over the lifetime of waste decomposition"

SB 1440 Staff Proposal: Medium-Term Targets

- **Medium-term (by 2030):** various feedstocks

Forest Woody Biomass Waste

Agricultural Waste



The gasification process will produce RNG and several coproducts including biochar, argon and liquid nitrogen, and heat.

Source: San Joaquin Renewables https://sjrgas.com/the-project/.

SB 1440 Staff Proposal: Cost-Effectiveness

California's four largest gas IOUs are tasked with establishing a cost-effectiveness test to guide procurement decisions through a jointly filed Standard Biomethane Procurement Methodology (SBPM) to be approved via Tier 3 Advice Letter

The gas IOUs will each individually submit a separate Biomethane Procurement Plan (BPP) that proposes:

- new biomethane producer procurements
- how many biomethane producers each gas IOU will procure
- procurement price per MMBtu
- feedstock types
- annual fossil fuel displacement estimates
- how much customers' bills are anticipated to increase as a result of that procurement
- fossil fuel displacement between now and 2030

Procurement contracts will be approved via Advice Letter, the tier of which will depend on the procurement price:

- Tier 1 for prices below $17.70/MMBtu (based on market estimate)
- Tier 2 for prices between $17.70 and $26/MMBtu
- Tier 3 for prices $26/MMBtu and above (based on the 2021 social cost of methane)

Environmental and Social Justice

- CPUC's Environmental and Social Justice (ESJ) Action Plan:
  - "Increase investment in clean energy resources to benefit ESJ communities, especially to improve local air quality and public health."

- SB 1440 Staff Proposal's additional recommendations implement CPUC ESJ goals

See: https://www.cpuc.ca.gov/esjactionplan/.

SB 1440 Staff Proposal: Other Recommendations

- Requires all biomethane production facilities to limit hydrogen sulfide before entering gathering lines.
- Requires new vehicles purchased by biomethane production facilities to use low-carbon or zero-carbon fuel alternatives to diesel.
- Prioritizes procurement from facilities that commit to not increasing onsite gas combustion.
- Prioritizes procurement from facilities that commit to carbon capture and storage.
- Requires CTAs to meet or exceed biomethane procurement levels of the gas IOUs.
- Prioritizes procurement from facilities that convert their waste product into soil amendment.
- Requires SoCalGas and PG&E to submit applications for pilot pyrolysis projects in order to help process anticipated increases in woody biomass from forest thinning initiatives.

SB 1440 Staff Proposal: Modification Pending

- The SB 1440 Staff Proposal is a preliminary step in establishing a procurement program at CPUC
- Public comments and reply comments will be integrated into a proposed decision (PD) to develop a program that satisfies parties to the fullest extent possible

California Public Utilities Commission

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