SENATE COMMITTEE ON ENVIRONMENTAL QUALITY
Senator Blakespear, Chair
2025 - 2026 Regular

Bill No:	AB 70		
Author:	Aguiar-Curry		
Version:	5/23/2025	**Hearing Date:**	7/2/2025
Urgency:	No	**Fiscal:**	Yes
Consultant:	Brynn Cook		

SUBJECT: Solid waste: organic waste: diversion: biomethane

DIGEST: This bill defines pyrolysis and requires the Department of Resources Recycling and Recovery (CalRecycle) to make pipeline biomethane converted exclusively from organic eligible for procurement credit under SB 1383 (Lara, Chapter 395, Statutes of 2016) by January 1, 2027.

ANALYSIS:

Existing law:

1) Establishes the Integrated Waste Management Act (IWMA), which generally governs the management of solid waste and recycling in the state, and is implemented by CalRecycle. (Public Resources Code (PRC) 40000 et seq.)

2) Requires the California Air Resources Board (CARB) to develop a comprehensive strategy to reduce the emissions of short-lived climate pollutants (SLCP) to achieve a 40% reduction in methane emissions, a 40% reduction in hydrofluorocarbon gases, and a 50% reduction in anthropogenic black carbon below 2013 levels by 2030. (Health and Safety Code (HSC) 39730-39730.5)

3) Requires the state to reduce the disposal of organic waste by 40% from the 2014 level by 2020 and 75% by 2025 to help achieve the state's methane reduction goal. (HSC 39730.6)

4) Requires CalRecycle, in consultation with CARB, to adopt regulations to achieve the state's organic waste reduction requirements. Specifies that the regulations, in part, require local jurisdictions to procure specified quantities of recovered organic waste products. (PRC 42652.5)

5) Specifies that the organic waste product procurement target may be met by procuring:
   a) Compost from a compost facility or in-vessel digestion facility;

b) Renewable gas used for transportation, electricity, or hearing applications;
c) Electricity from biomass conversion; or,
d) Mulch, as specified. (California Code of Regulations (CCR 18993.1)

6) Defines "biomethane" for purposes of biomethane procurement requirements established by the CPUC, as methane produced from an organic waste feedstock that meets the standards adopted by the CEC for injection into a common carrier pipeline and that:
   a) Is produced from the anaerobic decomposition of organic material, including codigestion; or,
   b) Is produced from the noncombustion thermal conversion of specified organic materials, when separated from other waste. (PUC 650)

7) Defines "Transformation" to mean incineration, pyrolysis, distillation, or biological conversion other than composting. "Transformation" does not include composting, gasification, Engineered Municipal Solid Waste (EMSW) conversion, or biomass conversion. (PRC 40201)

8) Defines "Conversion" as the processes by which residue is converted to a more usable energy form, including, but not limited to, combustion, anaerobic digestion, and pyrolysis, and is used for heating, process heat applications, and electric power generation. (PRC 25135)

9) Requires detailed operations plan for permitting of major waste tire facility that may include pyrolysis of tires. (PRC 42821)

This bill:

1) Defines "pyrolysis" as the thermal decomposition of material at elevated temperatures in the absence or near absence of oxygen.

2) Requires CalRecycle, no later than January 1, 2027, to amend its regulations to include pipeline biomethane converted exclusively from organic waste that is diverted from landfills as a product eligible for procurement credit by local jurisdictions under SB 1383.

Background

1) *Organic Waste and Short-Lived Climate Pollutants.* Organic material accounts for more than a third of California's waste stream: the nearly 6 million tons of food waste that Californians dispose of alone accounts for approximately 18% of landfilled material, and yard waste accounts for another 7% of the total

waste stream. CalRecycle reports that 2.5 billion meals worth of potentially donatable food is landfilled in a year. Organic waste is not only a high volume problem in landfills— it also has an oversized impact on climate. According to CalRecycle, methane emissions from decomposing organic waste in landfills account for approximately 20% of the State's total methane emissions. Methane is a climate "super pollutant" that is 84 times more potent than carbon dioxide over a 20-year timescale.

2) *Organic waste and methane emission reduction goals (SB 1383 Regulations).* In 2016, California passed SB 1383 (Lara, Chapter 395, Statutes of 2016) to reduce emissions of short-lived climate pollutants (SLCPs) and specifically to reduce methane emissions by 40% relative to 2014 levels by 2030. SB 1383 targets SLCP emissions from organic material decomposing in landfills

   When food and other organic material are discarded in a landfill, bacteria break down the material anaerobically (without oxygen), a process that releases methane and other climate pollutants. While modern landfills have systems in place to capture this methane, significant amounts of SLCPs continue to escape from landfills into the atmosphere. According to CalRecycle, landfills are the third largest source of methane in California, and organic waste in landfills emits 20% of the state's methane. Approximately 8.5 million tons of carbon dioxide equivalent were released by landfills in 2020.

   Compost facilities, in contrast to landfills, have significantly fewer emissions from organic waste, as composting primarily breaks material down aerobically (with oxygen), which does not produce methane.

   To reduce emissions from landfills, SB 1383 set a target of reducing the landfill disposal of organic waste 50% by 2020 and 75% by 2025 relative to the 2014 disposal level. Under SB 1383, the organic waste diverted from landfills must go to organics recovery facilities to make products like compost, fertilizer, fuel, or energy. In addition to these goals, at least 20% of the edible food in the organic waste stream must be recovered to feed people by 2025.

   Broadly, SB 1383, as developed in regulations by CalRecycle in consultation with CARB, operates by requiring every jurisdiction to provide organic waste collection services to all residents and businesses and by creating a destination for that stream of organics by setting annual recovered organic waste procurement targets for jurisdictions. The procurement targets are based on the average amount of organic waste generated by Californians annually multiplied by the population of a jurisdiction. Jurisdictions must meet their procurement target by procuring, giving away, or creating direct service contracts with

entities to use the compost, mulch, biomass electricity, or renewable gas that is generated from the collected organic waste.

3) *Progress towards SB 1383 goals.* The ambitious waste diversion goals established in SB 1383 have necessitated significant changes to California's organic waste management infrastructure. Though California has made significant progress towards achieving the goals laid out in SB 1383, there is still some way to go; according to a report by the Little Hoover Commission in 2023, the state failed to reach its 2020 targets and is not on track to reach its 2025 goals. However, since its January 2022 implementation, 75% of California communities (464 out of 616 jurisdictions) report that they have residential organic waste collection in place. According to CalRecycle, California now has 206 organic waste processing facilities and is building 20 more. CalRecycle reports having invested over $220 million in grants and loans for SB 1383 infrastructure.

4) *Pyrolysis*. Pyrolysis is generally defined as the chemical decomposition of organic materials (i.e., containing carbon) by heat in the absence of oxygen. In practice, the complete absence of oxygen is nearly impossible to achieve, and the systems that conduct pyrolysis are operated with some unavoidable oxygen. Pyrolysis is usually conducted at temperatures above 500 degrees Celsius. Due to the lack of oxygen, the material does not combust. Instead, it thermally decomposes into combustible gases and bio-char. The gases can be converted into bio-oil. Pyrolysis is widely used in the chemical industry to produce chemicals, such as ethylene from oil and coke from coal, and in the conversion of natural gas and methane into hydrogen. Pyrolysis is one of the technologies that has gained attention in recent years as a form of "advanced recycling" (previously known as conversion technologies), which is a term widely used by the plastic and oil industries to describe technologies that convert plastic back into chemicals, fuel, or oil. According to a recent study by the National Renewable Energy Lab, pyrolysis and gasification require large amounts of energy and generate GHG emissions and pollutants. These technologies can have significant environmental impacts, particularly in generating hazardous waste,

   In California, these technologies do not count as recycling for purposes of achieving the state's solid waste recycling targets. However, when used to convert organic waste, they may count as organics recycling if they meet certain standards. A technology may qualify as organic waste diversion for purposes of meeting the state's SLCP targets if the permanent life-cycle GHG emissions reductions are equal to or greater than the emissions reductions from composting organic waste.

Federally, the United States Environmental Protection Agency (U.S. EPA) categorizes pyrolysis as small waste combustion units and institutional waste incinerators under the Clean Air Act, as the facilities consist of "two chamber incinerators with a starved air primary chamber followed by an afterburner to complete combustion." The U.S. EPA considered removing the technology from Clean Air Act rules in 2020 in response to pressure from the plastics, oil, and waste industries. According to a Plastics Industry Association comment, regulating pyrolysis and gasification under the Clean Air Act would discourage the use of the technologies, which they argue are necessary to meet the country's recycling needs. The U.S. EPA reversed course in 2023 after receiving public comments (and a change in Administration). In response to the proposal, Earthjustice submitted a public comment noting that Clean Air Act rules should apply to all combustion associated with waste processing, including the various forms of pyrolysis and gasification.

Comments

1) *Purpose of Bill.* According to the author "Climate scientists agree that reducing methane and other Short-Lived Climate Pollutants (SLCPs) is the most urgent step to address climate change. SLCP reductions benefit the climate immediately and reducing methane emissions also provides immediate benefits to public health because methane leads to smog formation and air pollution. SB 1383 required communities to divert organic waste from landfills because organic waste contributes almost 90% of California's methane emissions, but the state has fallen behind on meeting these goals and organic waste diversion projects have faced many obstacles in the permitting process. AB 70 aims to accelerate progress in meeting the state's methane reduction requirements by providing more certainty to projects that divert organic waste from landfills."

1) *Pyrolysis in the code.* Pyrolysis is currently undefined in statute, despite appearing in the definitions of transformation and conversion and being an allowable use for tire management at permitted facilities. The absence of such a definition may create uncertainty on what does and does not constitute pyrolysis. The policy implications for determining if a technology is pyrolysis or not are significant: for example, pyrolysis is regulated differently from a similar technology, gasification, and pyrolysis do not qualify for landfill diversion credit while gasification does.

2) *Procurement pie: more options, same credit pool*. Locals seeking to comply with SB 1383 can reach their required procurement credits through several pathways, including converting organic waste to compost, mulch, biomass

electricity, or renewable gas that is generated from the diverted organic waste. Under current law, biomethane can count towards SB 1383 procurement credits only if the biomethane is used on-site.

AB 70 adds another option for local governments to reach their procurement credit requirements by allowing procurement credits for biomethane injected directly into pipelines, not just biomethane used on site.

Because procurement credit requirements are set based on a per-capita basis (and are thus relatively static), more procurement credits going towards biomethane means less procurement credit going to compost or other allowable uses. While all methods of organic waste diversion have different merits, composting and mulching are important because they return nutrients and carbon to the soil, instead of the inherently more consumptive use of these resources to generate energy. This consumption may be partially mitigated for biomethane produced anaerobically at low temperatures, which also produces digestate that can be used as a nutrient-rich soil amendment.

3) *Exclusively organic?* AB 70 specifies that in order to be eligible for procurement credits, pipeline biomethane must be sourced exclusively from organic waste. This is an important clarification because depending on where the organic waste is sourced or sorted, it can be contaminated with material that is not organic (e.g. food waste contaminated with plastic packaging). It is not clear how or where along the waste to energy process the material will be sorted to create an exclusively organic waste stream.

Related/Prior Legislation

SB 279 (McNearny, 2025) reduces the regulatory requirements for certain composting operations, including for agricultural operations, and specifically lowers the regulatory tier for compost facilities accepting up to 10% food waste for five years. This bill is pending hearing in the Assembly Natural Resources Committee.

AB 2514 (Aguiar-Curry, 2024) was substantively the same as AB 70, and would have defined pyrolysis, and required CalRecycle to include pipeline biomethane converted from organic waste as eligible for procurement credit by local jurisdictions, and would have made biosolids handing projects by the Town of Windsor and the Windsor Water District eligible for an existing CalRecycle grant program to promote organic waste diversion.

SOURCE:

SUPPORT:

Anaergia
Bioenergy Association of California
California Association of Environmental Health Administrators (CAEHA)
California Association of Sanitation Districts
Clean Energy Technologies, INC.
Electrochaea Corporation
Los Angeles County Sanitation Districts
Marin Sanitary Services
Monterey One Water
Northeast-western Energy Systems
Raven SR
Resource Recovery Coalition of California
Seahold
Sempra Energy Utilities/sdg&e/socalgas
Sevana Bioenergy
Stellar J
Tss Consultants
USA Water and Power

OPPOSITION:

None received

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