



Biomethane supply quick reference guide



Together, Building
a Better California

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What is biomethane?

Biomethane is a 100% renewable energy source which is produced from organic matter like agricultural crops, forestry waste, wooden construction waste, and manure. Major sources of biomethane are non-hazardous landfills, dairies, wastewater treatment plants and other organic sources. Biomethane is chemically similar to conventional natural gas and fully interchangeable. That's why it is often referred to as "renewable natural gas."

The process of converting organic waste to biomethane:



When this process is finished, you have pipeline-quality gas that is ready to enter the gas pipeline system or be burned for electricity generation. Both can be used in PG&E's service territory.

Why biomethane is important



Reduces greenhouse gases

Capturing methane that would otherwise escape reduces the total amount of atmospheric greenhouse gases. This value is increased when the methane is used instead of other greenhouse-gas-emitting fuels.



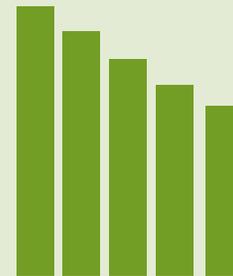
Promotes the development of clean California sourced energy

Developing a renewable energy source that can take over many of the roles of traditional fossil fuels.



24/7 green energy source

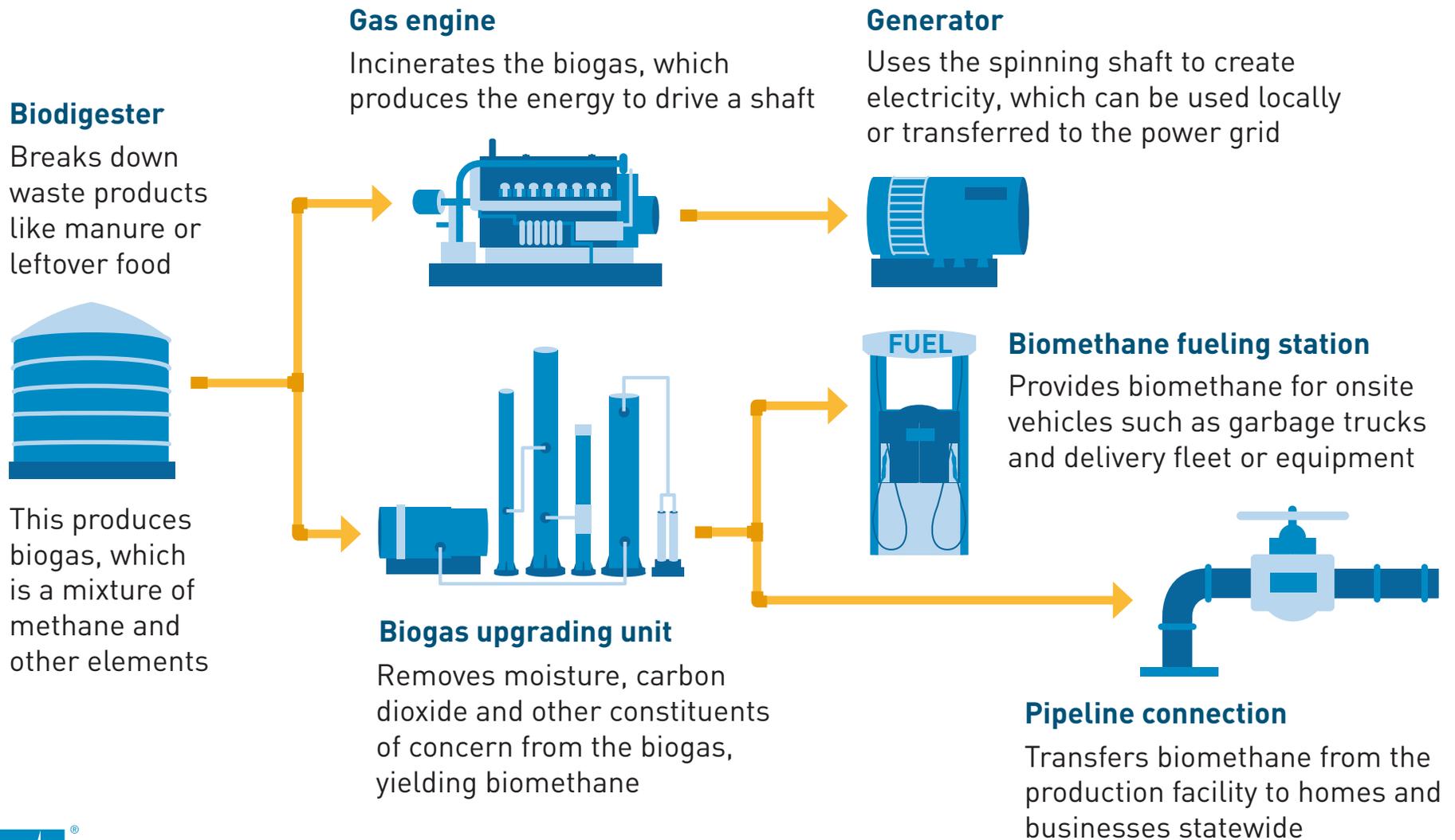
Other sources of renewable energy are dependent on fluctuating external factors like sunshine and wind. Renewable natural gas can be deployed at any time.



Helps meet the California greenhouse gas goals

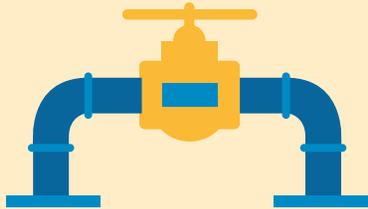
The ambitious goal is to reduce greenhouse gas emissions by 40% below 1990 levels by 2030, and 80% below 1990 levels by 2050.

How a biomethane system works



How biomethane can be used

Biomethane can be used in a variety of different ways. That's one of the reasons it makes sense for Californians to work together to bring this renewable energy source online.



Part of the natural gas supply

Biomethane is interchangeable with natural gas and can enter the natural gas pipeline system where it will be used to create heat in homes, offices and factories across California.



Fueling vehicles

Biomethane can be used in compressed natural gas or liquified natural gas vehicles. Biomethane used in near-zero emission, heavy-duty trucks can deliver some of the best greenhouse gas emission reductions for our state.



Creating electricity

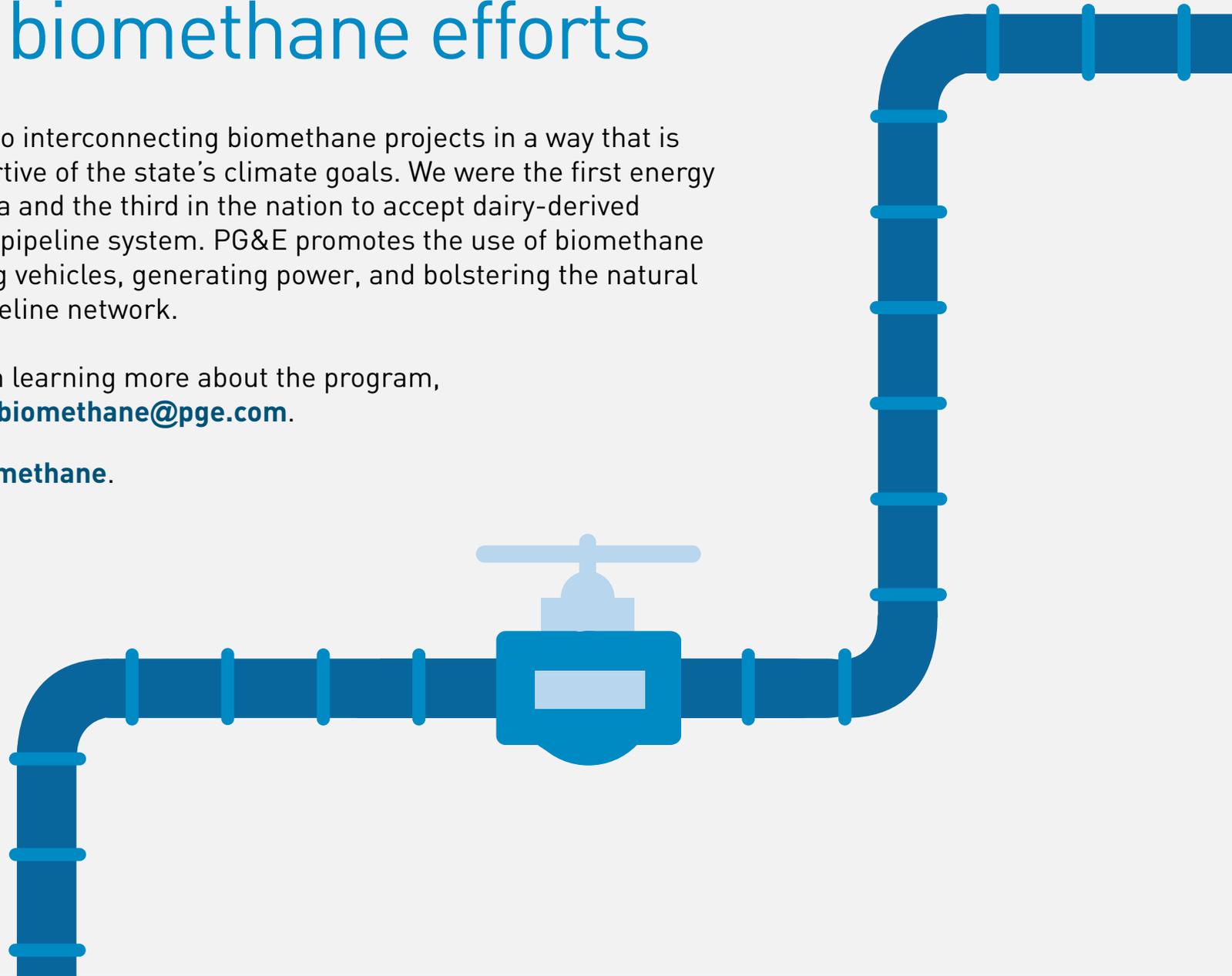
Biomethane can be used to create electricity through reciprocating engines, turbines or fuel cells. This makes it a very clean source of energy for our state.

PG&E's biomethane efforts

PG&E is committed to interconnecting biomethane projects in a way that is both safe and supportive of the state's climate goals. We were the first energy company in California and the third in the nation to accept dairy-derived biomethane into our pipeline system. PG&E promotes the use of biomethane in three ways: fueling vehicles, generating power, and bolstering the natural gas supply in our pipeline network.

If you're interested in learning more about the program, please contact us at biomethane@pge.com.

Or visit pge.com/biomethane.



Interconnecting with PG&E's pipeline



Initial feasibility study

First, you'll provide some information about your project, including your supply source, location and volume. After our analysis, we'll let you know about the nearest pipeline location that can accept your supply.

Up to 3 weeks

Design scope and preliminary estimate

We'll send a project team with engineers and project planners to your site. The team will review the most efficient and safest route to make the pipeline connection, and then develop a preliminary cost estimate for the interconnection.

Up to 20 weeks

Interconnection to the pipeline

This is the engineering and construction phase. We'll finalize the project design and provide more detailed estimates. Then construction will begin.

12 to 24 months

Interconnection factors to consider

Location of your biomethane plant relative to existing gas lines

Long distances can increase costs and permitting requirements.



How much pipeline capacity is available nearby

We need sufficient room in the pipeline to receive the biomethane you may be producing.



Pipeline pressure at the site of the potential injection point

The gas you're supplying will need to be at least equal to the pressure of the pipeline. Injecting biomethane must be done safely and within acceptable pressure ranges.



Customer demand for gas near your connection point

There must be adequate and stable gas demand on the pipeline to accept the biomethane supply from your plant.

Meeting gas quality standards

PG&E gas quality commitment

We are committed to providing Californians with natural gas at the highest level of safety and quality. Biomethane that is accepted into the pipeline must meet high standards.

Renewable natural gas regulation

The California Public Utilities Commission (CPUC) has established standards for natural gas, and has established acceptable levels of 17 elements found in renewable biomethane. Some standards protect human health and safety, while others protect the integrity of the pipeline system.

Monitoring to ensure gas quality

Certain constituents such as methane, hydrogen sulfide, and carbon dioxide are continuously monitored at the connection point. Other constituents are monitored via periodic lab testing of samples.



Our team is available to answer your questions

PG&E is committed to bringing biomethane into the California energy mix, and we want to help your project succeed.

If you have any questions, or would like to talk through a potential project in detail, we'd love to discuss it with you.



Email us at biomethane@pge.com



Visit pge.com/biomethane

Here are some links to additional information:

[Frequently Asked Questions](#)

[Gas Rule 21](#)

[Request for Gas Supply Interconnection Form](#)





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