



CHP in California:

Self-Generation Incentive Program

Program Description



San Francisco, California

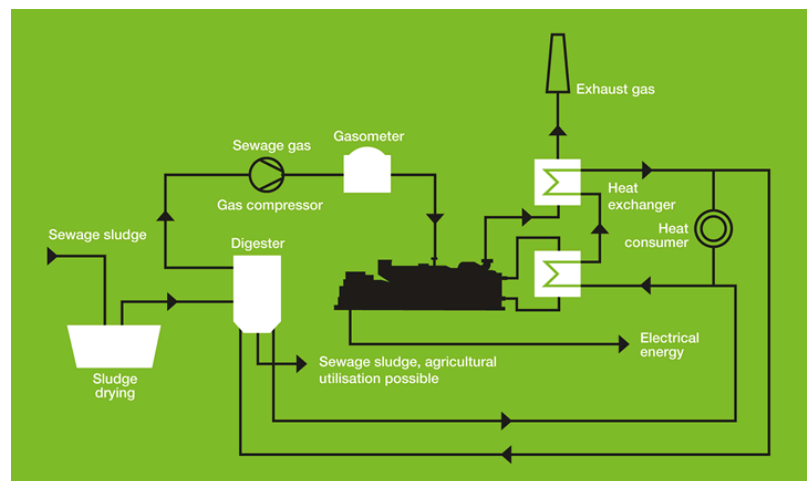
SOURCE: <https://www.goodfreephotos.com>

California's Self-Generation Incentive Program (SGIP) was created in 2001 to increase adoption of on-site distributed electric generation systems and energy storage devices. SGIP's primary goals are to reduce emissions, improve grid reliability, and transform markets for both residential and commercial customers. In 2018, California passed Senate Bill (SB) 700, which authorized additional funding for SGIP through 2024 and specified that, starting in 2020, only renewable fuels would be eligible for generation incentives. Combined heat and power (CHP) qualifies for these incentives. CHP is a promising generation technology that can help California meet its energy goals.

Benefits of Biogas CHP

CHP systems can use renewable biofuels or waste gas to produce thermal heat (steam and/or hot water) and electric power. Although many CHP facilities are fueled by natural gas, biogas-fueled systems are becoming more viable, especially for applications such as wastewater treatment plants. Biogas-fueled systems provide several benefits over natural gas systems:

- Since the biofuel is generated on site, there is no need to purchase and import natural gas.
- Captured biogas is a renewable resource that results in reduced greenhouse gas emissions.
- These installations can run independent of any utility.



Combined Heat and Power for Sewage Applications

SOURCE: <https://www.clarke-energy.com/sewage-gas/>

SGIP Incentives for CHP

SGIP offers incentives for CHP installations at a rate of \$0.60/W. For 2019, CHP systems that use a mixture of fuel that is more than 75% renewable* can benefit from additional incentives. Starting in 2020, all CHP systems applying for SGIP incentives must use fuels that are 100% renewable.



**Hale Avenue Resource Recovery Facility (HARRF),
City of Escondido**

SOURCE: <https://www.escondido.org/harrf.aspx>

- For installations over 30 kW, incentive payments are split and paid based on system performance over several years.
- Available incentive funds vary across California according to utility territory (Pacific Gas and Electric Company, Southern California Edison, San Diego Gas & Electric, and Southern California Gas Company).
- System incentives are capped at 3 MW, but systems can be larger.
- Many other requirements may apply. Interested parties should contact the Western CHP Technical Assistance Partnership (TAP) for assistance and more information.

SGIP recently incentivized installation of a 1.2 MW CHP system at a wastewater treatment plant in the City of Escondido. This combined CHP system generates 75% of the wastewater plant's electric needs and 100% of its heating requirements. This facility will save the City of Escondido \$10 million over the life of the system and reduce emissions by 3,300 metric tons a year. Fuel for this CHP system comes from biogas produced as a byproduct of the wastewater treatment plant.

*Biogas, biofuels, or biodiesel that meets California's renewable portfolio standards

Future SGIP Funding and Project Challenges

In April 2019, the California Public Utilities Commission (CPUC) filed a Ruling in response to the California Legislature's authorization of additional SGIP funding (SB 700). The Ruling requested input from stakeholders before the CPUC determines how to distribute SGIP funding moving forward. The Commission asked the following questions regarding generation technologies:

- What are the main drivers for low participation in applications for CHP, wind, and other generation technologies?
- What program changes should the Commission consider, if any, to increase subscription in the generation budget?

The responses could affect future incentives for CHP systems.

Next Steps

Since 2017, SGIP has experienced declining participation for generation projects for reasons that have yet to be determined. In addition, the 2020 funding requirement that applicable generation assets use 100% renewable fuels to generate electricity may be difficult to comply with under current program requirements. In the past, the CPUC has responded to similar challenges by raising incentive levels to increase program participation. Stakeholders should pay close attention to future program changes in CPUC Ruling R.12-11-005 to monitor how SGIP incentives may change for 2020 and beyond.

For More Information

**U.S. DOE WESTERN CHP TECHNICAL
ASSISTANCE PARTNERSHIP (CHP TAP)**
www.wchptap.org

SGIP INFORMATION
<https://www.selfgenca.com/>

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