



Cogenra Solar is a distributed solar cogeneration company that combines photovoltaic and hot water production to deliver low-cost electricity and heat generation for commercial, industrial and government clients.

CORPORATE OVERVIEW



SOLUTIONS

COGENRA SOLAR PROVIDES HOT WATER AND ELECTRICITY IN ONE SOLUTION – PROVIDING 5 TIMES THE ENERGY, 3 TIMES THE GREENHOUSE GAS REDUCTION AND 2 TIMES THE SAVINGS THAN TRADITIONAL PHOTOVOLTAIC-ONLY SYSTEMS.



TECHNOLOGY

Cogenra's proprietary design combines the proven 35+ year lifetime of silicon PV, combined with concentrating optics and an innovative thermal transfer system to cogenerate electricity AND solar hot water in an integrated hybrid receiver.

Standard PV panels capture approximately 15% of the sun's energy, while the remaining 85% of the sun's energy is converted to waste heat. Solar Hot Water alone does not yield any electricity, which typically has greater financial value per unit of energy (e.g. kWh) than hot water.

Solar cogeneration utilizes 15% of the sun's energy to produce electricity AND also captures up to 60% of the waste heat (used to heat water), which results in 75% overall efficiency of the system.

HIGHEST EFFICIENCY & HIGHEST RETURNS

Solar cogeneration combines the best of both technologies. One collector captures up to 75% of the sun's energy and delivers the highest possible financial energy value.

Lower Your Bills

With solar cogeneration customers save on their gas and electric bills, and hedge against increasing electric and gas rates, which have risen 650% and 1360% respectively since 1970.* As emissions standards tighten and energy demand outpaces supply, rate increases will likely accelerate in the future.

Cogenra makes solar cogeneration simple and affordable by offering the industry's first Heat & Power Purchase Agreement (HPPA). By removing barriers to entry, Cogenra helps companies start saving money and energy immediately, and allows them to benefit from predictable long-term energy costs without upfront expense.

**California commercial rates*

Help the Environment

Solar cogeneration reduces greenhouse gas emissions (e.g. CO₂) and local emissions (e.g. VOC, NOx) by reducing both electric power demand from the grid and the burning of fuels in local boilers. The reduction in greenhouse gas emissions is 3 times that of PV.

Site Integration and Utilization

Integration is easy. Solar cogen modules are quickly assembled on site—either roof or ground-mounted—and are designed to seamlessly integrate with existing hot water equipment.

Solar electricity generated on-site is used up or is fed back to the utility grid. Depending on the facility's needs, the water is heated through a closed-loop heat exchanger to temperatures around 70° C (158° F) for immediate use, fed into boilers to be elevated to higher temperatures, or temporarily stored and used during non-sunny hours.

INDUSTRIES

By using solar cogeneration, many different industries can reduce a significant portion of their natural gas consumption and gain access to clean electricity to sustainably supply energy for daily operations.

FOOD & BEVERAGE

Hot water is used for cleaning (Clean-In-Place), cooking, washing & sanitation, drying, pasteurization, fermentation and boiler pre-heating. Industries include:

- **Food Processing** (e.g. meat and poultry, dairy, nuts and vegetables, greenhouses, fish)
- **Beverage** (e.g. beer, wine, soft drinks, spirits)
- **Food Service**

PROCESS

Hot water is used for washing & sanitation, and other process heat. Examples of this segment include:

- **Commercial Laundry**
- **Municipalities** (water treatment & utility)
- **Pulp & Paper**
- **Textile**
- **Chemicals & Pharmaceuticals**

PEOPLE

Segments that have numerous people residing together in one location can benefit from solar cogeneration for their cooking, cleaning, showers, laundry, dishwashing, space heating, and water heater pre-heat. This includes:

- **Multi-Family**
- **College Campus**
- **Retirement**
- **Military**
- **Hotel & Resort**
- **Correctional Facilities**
- **Healthcare**

COMPANY BACKGROUND

Cogenra, led by a group of seasoned industry experts and headquartered in Mountain View, California, USA, combines solar photovoltaic and hot water collection to deliver low cost electricity and heat. Cogenra offers clean, renewable energy below utility rates while reducing natural gas and grid-fed electricity consumption.

Please contact us if you would like to learn more.



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