

Fuel Cells for Wastewater Treatment Facilities



Using **renewable biogas** from wastewater process to generate **clean power**; converting waste disposal problems into **cost savings** for municipal water treatment facilities



Improves Wastewater Treatment Process

- Supports treatment process with **predictable** power and heat generated on-site for the facility
- Enhances site's energy resiliency with **continuous** supply of power
 - *Not dependent on weather or time of day*
- **Turn-key** solution, including the cleaning and processing of renewable biogas from the treatment process before being used by fuel cell system



Generates Savings

- **Affordable** power priced as much as 20% below grid prices
- **Avoid capital investment**; no upfront expenditure, only pay for power as it is produced
- **Highly efficient** combined heat and power (CHP) further supports economics



Avoids Clean Air Permitting Challenges

- Ultra-clean power using **chemistry**, not combustion
 - *Avoids criteria pollutants*
- Supports **sustainability** initiatives
- Achieves **ZERO carbon** footprint



SureSource Solutions

Delivering Customer Satisfaction



City of Riverside, California

- The 1.4 megawatt fuel cell plant cleans and utilizes **biogas** from the wastewater treatment process to generate **carbon-neutral power and heat** for the facility
- The City of Riverside, California pays for the power produced under a **power purchase agreement (PPA)**, generating **immediate savings**, avoiding a capital outlay and eliminating a waste disposal issue
- The **continuous power** profile of the fuel cells enhances the facility's **energy resiliency** with affordable on-site power and supports the treatment process; using approximately two thirds of the biogas generated to generate about one third of the total power needs as well as heat used for the anaerobic digesters
- Avoidance of current and future clean air permitting challenges as fuel cells utilize an electrochemical process that produces power in a manner that is **virtually absent of criteria pollutants** such as nitrogen oxide (NOx) that causes smog, sulfur dioxide (SOx) that contributes to acid rain, or particulate matter that can aggravate asthma
- Complete **turn-key solution** where FuelCell Energy installed, operates and maintains the fuel cell power plant, including the cleaning and processing of the renewable biogas

Financing & Service

- **Power Purchase Agreements** – Avoiding the capital investment of on-site power generation by paying for power as it is produced.
- **Long-term Service Agreements** – FuelCell Energy performs all operation, maintenance and service of the SureSource power solutions on behalf of customer.

ABOUT FUELCELL ENERGY

FuelCell Energy (NASDAQ: FCEL) delivers efficient, affordable and clean solutions for the supply, recovery and storage of energy. We design, manufacture, undertake project development, install, operate and maintain megawatt-scale fuel cell systems, serving utilities, industrial and large municipal power users with solutions that include both utility-scale and on-site power generation, carbon capture, local hydrogen production for transportation and industry, and long duration energy storage. With SureSource installations on three continents and millions of megawatt hours of ultra-clean power produced, FuelCell Energy is a global leader with environmentally responsible power solutions.

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