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# Project Profile

Riverside Water Quality Control Plant

Product: Carbonate Fuel Cell System

Commercial Operations Date: 2016

## Objectives

- Generate electricity
- Reduce emissions
- Secure incentive funding
- Prevent additional flaring
- Use available biogas

## Challenges

- Biogas contaminants
- Air quality standards
- Power demand variances
- Incorporate EV charging
- Low-cost power district

“I like the system and what it brings to our facility as well as the quick response and updates from the FuelCell Energy service team.”

--- Bryan Padilla  
City of Riverside Operations  
Plant Superintendent



## Solution

FuelCell Energy and the City of Riverside commissioned a combined heat and power (CHP) system at the Riverside Regional Water Quality Control Plant that produces up to 1.4 MW of electricity. The fuel cell power plant converts biogas from the wastewater treatment process into electricity for the facility, anaerobic digesters, and EV charging stations. Heat from the fuel cells can be used for the anaerobic digestion process. The fuel cell system provides predictable energy costs and is virtually free of NO<sub>x</sub>, SO<sub>x</sub>, and particulate matter emissions.



Initial operating efficiency of 47% or an overall efficiency of up to 70% with combined heat and power recovery.



\$3 million in incentives were secured for the project including investment tax credits and various grants.



Approximately 9,360 MWh of carbon-neutral power is produced by the system each year from on-site biogas.



FuelCell Energy's biogas conditioning system.

### Biogas conditioning system

FuelCell Energy has developed a biogas conditioning process which removes contaminants from raw biogas, making it a suitable feed for the fuel cell. By removing these compounds, the treatment system produces up to 340 scfm of clean biogas that can be used by the fuel cell system for electricity generation.

### Energy solutions, not procurement hassles

FuelCell Energy teamed up with the City of Riverside to deliver the energy outcomes they needed—without the burden of figuring out how to fund new power generation or cover additional maintenance costs. Whether you prefer to procure and own your energy infrastructure outright or opt for a monthly fee, like any other utility bill, we tailor a solution that works for you.

### Air quality compliance

FuelCell Energy's CARB certified emissions profile can expedite a project's air permitting process. The City of Riverside's fuel cell was exempt from air permitting and even received a grant from the South Coast Air Quality Management District to promote best-in-class clean energy technology.