

Successful delivery of 2MWh of flow battery energy storage solution

Anaergia is a global leader in the production of clean energy, fertilizer, and recycled water from virtually any waste stream.

As part of their drive to deliver sustainable energy creation, Anaergia decided to install a flow battery storage solution in their new waste to energy Rialto Bioenergy Facility in California. The facility provides organic waste recycling and renewable energy generation services to local government authorities and solid waste haulers.

“Anaergia selected Redflow’s zinc-bromine flow batteries because they are uniquely suited to meet the demands of the Rialto site.”

– Yaniv Scherson, Anaergia Chief Operating Officer



PROJECT OVERVIEW

- + **Location:** California, US
- + **Client:** Anaergia Rialto Bioenergy Facility
- + **Storage size:** 12 x Energy Pods containing 192 x ZBM2 flow batteries
- + **Energy storage capacity:** 2 MWh
- + **Inverter:** 4 x Dynapower MPS-125
- + **Renewable source:** Bioenergy facility
- + **Application:** Onsite microgrid



+ OUR SOLUTION

Anaergia constructed an on-site microgrid as part of the project to maximize the use of on-site generated power and to limit their peak load from the grid. The microgrid project was funded in part by a grant from the California Energy Commission and consists of batteries, a biogas conditioning system to support a 2MW biogas-fueled cogeneration unit, and a control system.

Redflow was selected as the supplier for the energy storage system due to their use of sustainable materials and the associated high energy density of the flow battery.

Redflow designed a 2 MWh energy storage system comprising of 192 zinc-bromine flow batteries to store energy and reduce peak energy use. To meet the facility's requirements Redflow designed Energy Pods, each containing 16 Redflow batteries and the power electronics to link to external inverters. The Energy Pod enables Redflow to build scalable, megawatt hour sized storage systems more effectively. This energy storage system is the largest single sale and deployment of flow batteries for Redflow globally.

The 12 Energy Pods are grouped into four banks of three pods with each bank connecting to the microgrid via a Dynapower 125 kW

inverter. The inverters and energy storage system are integrated into a Siemens microgrid controller. This implementation demonstrates that the Redflow Energy Pods can work seamlessly with a range of other clean energy technologies to create sustainable energy systems.

Remote monitoring and control are provided by Redflow's cloud-based battery management system. The battery management system manages the Energy Pods, the individual batteries in each pod. In parallel to the cloud facility, data can be retrieved from each battery using industry standard protocols.

Our technical team successfully completed installation and commissioning of the 2 MWh energy storage system at the Rialto site in December 2021. The four battery banks have now been successfully charged and discharged and have passed critical acceptance testing criteria. The final test of the entire system was executed in early 2022 when Siemens integrated the batteries into the microgrid controller, and the facility can draw on the entire 2 MWh of energy.

To find out more about Redflow or our zinc-bromine flow battery please visit redflow.com



About Redflow

Redflow Limited, a publicly listed Australian company (ASX: RFX), produces zinc-bromine flow batteries for stationary energy storage applications. Redflow batteries are designed for high cycle-rate, long time-base energy storage, and are scalable from small commercial systems through to grid-scale deployments. Redflow's smart, self-protecting batteries offer unique advantages including secure remote management, 100 per cent daily depth of discharge, tolerance of high ambient temperatures, a simple recycling path, no propensity for thermal runaway and sustained energy delivery throughout their operating life.



Sales contact:

P +61 7 3376 0008

E sales@redflow.com