

Cordia Models Sustainability with DuPont[™] Closed Circuit Reverse Osmosis (CCRO) Technology

The Challenge

For over a century, the Cordia Plant* in San Francisco has provided steam for the city's downtown area, including 180 buildings nearby. The main intent of this application was to ease pressure on municipal water supplies in order to help alleviate the water crisis in the city and across the wider state. Given the plant's tight site constraints within a high-profile downtown location, it was imperative that the proposed solution utilize the smallest footprint.

The Solution

The plant has implemented DesaliTec[™] Closed Circuit Reverse Osmosis (CCRO) technology to repurpose groundwater that was gathering at the nearby Powell Street BART station, reducing the volume of water demanded from municipal supplies. This solution, which utilizes containerized systems to reduce footprint, resulted in a savings of 30 million gallons of drinking water per year.

The Benefits

Since the CCRO system is versatile enough to handle a variety of feed water sources, flexibility is one of its major benefits. The recovery setting can be automatically adjusted depending upon the incoming water, ensuring peak efficiency is maintained in real time. Thus far, the system consistently demonstrates excellence in operating performance, reliability and durability.

*Cordia, a sustainability-driven energy solutions provider, launched in October 2022 and includes assets from former Clearway Community Energy, including the plant where this project was implemented.

Fast Facts

Location: San Francisco, California, United States

Technology: DuPont[™] DesaliTec[™] Closed Circuit Reverse Osmosis

Application: Process water

End-user: Cordia*

Total # of elements: 160

Plant capacity: 158 m³/h = 1 MGD

Start-up date: September 2018

Feed water quality: Groundwater and Stormwater

Product water quality: <30 uS/cm

Temperature range: 5-30 C

Pretreatment: Microfiltration (MF)

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