South Africa’s largest seawater desalination plant

Mossel Bay, Western Cape, South Africa

Water for home and industry
The Mossel Bay Municipality oversees the service delivery of over 120,000 residents in an area that occupies roughly 2,000 square kilometres of the Cape. Located 400 kilometres to the east of Cape Town, Mossel Bay features a commercial harbour, a tourism industry, commercial farms, and a gas-to-liquids refinery – owned and operated by PetroSA.

PetroSA is one of Mossel Bay’s largest water users, as well as a key figure in the city’s economy as its largest employer.

Emergency drought relief
In 2010, the worst drought in over 130 years caused the southern Cape to be declared a disaster area. The solution was to find a way of utilising the region’s only constant water source - the ocean.

Removing the salt
Veolia Water Solutions & Technologies South Africa was awarded the contract to design, manufacture, supply, maintain and operate a turnkey seawater desalination plant ten times bigger than anything previously built in South Africa. But the severity of the drought required the plant to be up and running in record time.

Cost of project: ZAR 210 million
Total capacity: 15 mega litres per day
Process water: 5 mega litres per day – destined for PetroSA
Potable water production: 10 mega litres per day – for domestic and other uses

Unique challenges
- Limited space at the construction site called for exceptionally compact plant designs.
- The short construction timeline required that Veolia Water sister companies and suppliers manufacture components abroad.
- Imported components needed to be air-freighted, rather than shipped, requiring large reverse osmosis skids to be disassembled and reassembled.

Sustainable water supply
The plant has helped to secure Mossel Bay’s future. PetroSA is able to maximise fuel production and continue contributing to the region’s economy, while residents are ensured of high-quality water in their taps, suitable for irrigation, bathing and drinking.

The plant provides additional water security to the region, along with the Wolwedans Dam, the Mossel Bay Municipality’s main water supply.