



Sorek

SWRO Mega-Sized Desalination Plant

Overview

Capacity: 150M m³/year
(max. 26,000 m³/hour)

Technology:
Seawater Reverse Osmosis (SWRO)

Project Type: Build-Operate-Transfer (BOT)

Water cost: \$0.58 per m³
(as of October 1st 2009)

Boron: 0.3 ppm

Maximum electrical consumption:
≤4 kWh/m³

Location: Sorek, Israel

Footprint: 100,000 m² (10 ha)

Commission Date: 2013

Highlights

PIONEERING MILESTONE PROJECT: the world's largest mega-sized SWRO plant under construction

COMPETITIVE PRICING: sets a new benchmark for low cost of desalinated water

BREAKTHROUGH TECHNOLOGY: innovative design incorporating vertical arrangement of 16" membranes in a large scale facility; also utilizes IDE's proprietary Pressure-Center Design, double line intake, ERS (Energy Recovery System) and a unique Boron removal system

CUSTOMIZED APPROACH: every element of the plant is customized to maximize performance and minimize costs

A Success Story in the Making

The Sorek Seawater Reverse Osmosis (SWRO) desalination plant, currently under construction in Sorek, Israel, is a joint venture of IDE Technologies Ltd (51%) and Hutchison Water International Holdings Pte. Ltd (49%) (SDL). With a total contractual capacity of 150 million m³/year, Sorek will be the largest plant of its kind in the world. When completed, the project will set significant new benchmarks in both desalination capacity and water cost, which, at \$0.58 per m³, will result in substantial savings for the local water market.

This groundbreaking ~100,000 m² (10 ha) facility will follow in the tradition of IDE's other mega-sized RO facilities, including its installations at Hadera and Ashkelon, Israel, by surpassing all previous records in terms of desalination capacity and desalinated water costs.

The Sorek facility, to be completed in 2013, is being constructed by SDL under a BOT (Build-Operate-Transfer) model following SDL's selection, by the Government of Israel, in a competitive tender process. Project financing is through a consortium of financial institutions whose members include the European Investment Bank (EIB), Bank Hapoalim and Bank Leumi. Water produced from the plant will be delivered to Israel's national water distribution system.

Pioneering Technology

IDE will deploy advanced membrane desalination technology at the Sorek plant, including, for the first time in a large-scale facility, 16 inch membranes in an innovative vertical arrangement of the pressure vessels. Other technical features include IDE's proprietary 3-Center Design (pumping center, membrane center and ERS), double line intake and a unique Boron removal system. The fully automated plant will employ state-of-the-art methods for saving energy, and will be powered by an independent combined cycle electric generation plant.



Environmental Awareness

The envisaged design, execution and operation of the plant anticipate minimal impacts to the environment: no marine/shoreline/land impacts are anticipated thanks to pipe-jacking method and the location of the feed water pumping station on site, 1.5 miles inland; minimal entrainment/impingement effects at the intake suction heads are expected; reduced electrical and chemical consumption; natural gas fired IPP, use of environmentally harmless chemicals and treatable cleaning solutions; treatment of media filters and limestone reactor backwashing.

A Trusted Partner

The completion of the Sorek plant promises to herald in a new standard in the international desalination industry, and to further reinforce IDE's position as the clear leader in the industry's mega-SWRO desalination space. The plant will mark yet another milestone in IDE's outstanding track record. Together with numerous other desalination joint ventures completed by IDE, Sorek will further demonstrate IDE's expertise and competence as a trusted source of technology, project management, engineering and construction know-how and financial capabilities. IDE welcomes the opportunity to offer its services to additional groups planning new desalination projects of any size throughout the world.

About Us

IDE Technologies is a world leading desalination company. Since 1965, we have built 400 desalination plants throughout the world with a total desalination capacity of over 2,000,000 m³/day. Our membrane and thermal desalination technologies are recognized as the most advanced in the world. We have designed, built and currently operate most of the world's mega-sized SWRO desalination plants and some of its largest MED & MVC desalination plants. IDE is jointly owned by two of Israel's largest industrial enterprises: ICL Group (50%) - one of the world's leading fertilizer and specialty chemicals international companies, and Delek (50%), the leading energy & infrastructure group based out of Israel.



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