

Augmenting an Existing Seawater Desalination Facility on Curaçao

Challenge

Kompania Di Awa i Elektrisidat Di Korsou, N.V. (K.A.E., N.V.) is the municipal supplier of potable water and electricity for the Caribbean island of Curaçao, the largest of the five islands of the Netherlands

Antilles. Faced with increasing demand for potable water and an aging distillation plant for evaporating seawater, K.A.E. wanted to increase its existing capacity to meet drinking water demand as well as expand its range of technology capabilities for producing potable water via seawater desalination.

Solution

K.A.E. turned to GE Water & Process Technologies, the world leader in water desalination, for the membrane-based solution to augment their existing desalination facility. The solution included the design, build, own and operation of a 10,500 cubic meters per day (2.8 mgd) reverse osmosis desalination facility adjacent to K.A.E.'s existing distillation plant, to produce fresh water from seawater.



Caribbean island of Curaçao

The GE Brand of Solutions means operation, maintenance and training that you can rely upon. GE's staff of "desal" specialists supervise the operation and maintenance of the plant as well as provide the customer training to operate the new RO system, in addition to their pre-existing evaporators.

Results

Capitalizing upon extensive knowledge and experience with seawater desalination, GE has effectively demonstrated that our proprietary, ultra-high-efficiency, energy recovery seawater reverse osmosis system is a cost-effective, reliable model for addressing drinking water supply in the Caribbean. The product water produced by the GE SWRO system matches the quality of the thermal desalination units at less than 20 ppm TDS.

The GE Brand is alive and well on the beautiful island of Curaçao and throughout the Caribbean, addressing the fresh water needs of growing populations with advanced, cost-effective membrane-based solutions.

End-user:	Kompania Di Awa i Elektrisidat Di Korsou, N.V. (K.A.E., N.V.)
Location:	Curaçao, NV
Commissioned:	1996, 1999 expansion
Application:	Potable water and boiler feedwater
Feedwater source:	Seawater—open seawater intake
Feedwater quality:	38,000 ppm TDS
Water quality:	<20 ppm TDS
Water recovery:	60%
Capacity:	2.8 mgd (10,500 m ³ /day)
Technology:	Seawater reverse osmosis (SWRO) desalination

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