Consultancy Intelligence Publishing

The Middle East & Africa Forum for Sustainability Leaders

Views You Can Use - Best of Series

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Saudi world capital of desalinated water

The kingdom has historically influenced the desalination industry since its inception in the country back in the 1960s. Saudi Arabia has become the world capital of desalination by number of plants, assets and volume of desalinated water produced every day. Water scarcity, a historical challenge in the country, has been the main driver in the development of the industry and desalination has become the main source of water for human consumption rather than water-intensive activities like agriculture, as in other geographies. This has meant that Saudi Arabia has been one step ahead in the industry and it has influenced the direction of the market.

Technology paves way for enhanced energy efficiency

The desalination industry has reduced its energy consumption between 50% to 75% in the last 15 years, reducing power consumption from 20kWh to 3kWh per cubic meter. That has been a huge step and was possible thanks to the shift from thermal energy-powered desalination plants to the implementation of reverse osmosis in large, commercial projects, mainly driven by the private sector. The next step to meet Vision 2030 will be about shifting to a new technology. This is where decision makers will influence the market to go next.

Innovation essential for future of water

Technology innovation has been one of the main pillars that has led ACWA Power to become a major private sector player in the industry. We do not limit ourselves to using the same technology from previous projects. After completing the Raghbi plant, one of the world´s most energy efficient, we moved into a new project in Jubail, which will be partly powered by renewable energies. In the future, we aim to build plants fully running on renewables. For existing facilities, we leverage digitalization to optimize processes. This can play a key role in reducing the industry’s power consumption and carbon emissions and also make brine less chemically hazardous.