



M-Station Becomes UAE's Largest Power & Desalination Plant

Thanks to its recent extension project, undertaken by Dubai Electricity and Water Authority (DEWA) in conjunction with Siemens, M-Station has become the UAE's largest power and desalination plant. The extension was completed at the beginning of the month and unveiled by HH Sheikh Hamdan bin Rashid Al Maktoum, who serves as president of DEWA and deputy ruler of Dubai.

The expansion project added 700MW of production to capacity to M-Station, bringing its overall capabilities up to 2,885MW – just over a quarter of DEWA's total capacity of 11,100MW. Meanwhile, M-Station is also able to produce 140 million gallons of desalinated water every day, or almost a quarter of DEWA's overall capacity of 610 million gallons, making it one of the most important facilities in the country.

A momentous expansion

The expansion of M-Station got underway in April 2013, with Siemens coming on board in 2015 to oversee technical aspects of the project and Mott MacDonald was appointed as a consultant at the same time. In just over five years, the project has reached completion through over 20 million safe man hours and zero time lost to injury or accident.

"The completion of the Jebel Ali M-Station expansion marks another milestone in the long history of Siemens and DEWA as strategic partners," [explained Dietmar Siersdorfer](#), the CEO of Siemens' Middle East and UAE arm. "It's a testament to what we can achieve with innovation and technology to support society and economic growth in the UAE."

The expansion project included the installation of two dual-fuel gas turbine generators, both of which are capable of producing 263.5MW, as well as two waste-heat recovery boilers and a 173MW capacity steam turbine. Additionally, the team also constructed and installed 16 storage tanks for fuel-oil, with a combined capacity of 32,000m³.

Grand ambitions

The overall cost of the expansion project is estimated to stand at \$415.7 billion, bringing M-Station's total price tag to \$3,176.71 billion. It now boasts an impressive



power capacity of 2,885MW and a desalination capability of 140 million gallons of water each day.

M-Station is located within the Jebel Ali Power Plant and Desalination Complex, which includes six other units and produces a cumulative total of 7,800MW of energy. While neighbouring Saudi Arabia might be home to [the largest oil field](#) in the Middle East, Jebel Ali's incredible capabilities surpass anything found in the Kingdom.

Thanks to the 90% fuel efficiency of the new steam turbine, the plant's overall thermal efficiency has also leaped up from 82.4% to 85.8%. Given that some plants in the world only recoup around 30% of the energy created during their processes, that figure is incredibly impressive and represents one of the most thermally efficient power plants to be found anywhere in the world.