

PROJECT NARRATIVE



System Description

Company (Owner) : Sharjah Electricity and Water Authority (SEWA)

Plant Name: Layyah Power & Desalination Station Units 5 & 6

Emerson Product: Ovation , PlantWeb

Location: United Arab Emirates (U.A.E.)

Plant Size: total plant is 8 units, 1400 MW baseload

Boiler/Plant Type: Desalination

Application: BLR, BMS, STC, boiler protection, and desalination process

Contract Initiation: June 2006

Project Completion: June 2007

Total I/O Points: ~13,000

Layyah Generation & Desalination Station



Photo courtesy of www.sewa.gov.ae

SHARJAH ELECTRICITY AND WATER AUTHORITY (SEWA) ***Layyah Power & Desalination Station*** **Located in the United Arab Emirates (U.A.E)**

Emerson Process Management won a contract to apply the company's PlantWeb® digital plant architecture to modernize Units 5 and 6 of the Layyah Power & Desalination Station located in the United Arab Emirates (U.A.E). The 8-unit, 1,400-MW baseload plant, which is vital to the region's growing water and energy needs, is owned by Sharjah Electricity and Water Authority (SEWA). SEWA is the only power producer in the Sharjah Emirate, and is the third-largest utility company in the United Arab Emirates.

The project is a cooperative effort between Emerson and Danway L.L.C, a subsidiary of Emirates Holdings, and an Emerson sales representative for U.A.E. Danway will be responsible for overall project coordination as well as procurement of critical field devices, while Emerson's Power & Water Solutions industry center will manage project implementation including engineering, field installation, startup, commissioning and training. The project is scheduled to be completed in June 2007.

Emerson will install its PlantWeb digital plant architecture with the company's Ovation® expert control system and intelligent field instruments and valves. All existing instrumentation will be replaced with Emerson's intelligent field devices, including Rosemount® pressure and temperature transmitters, Fisher® valves and Fisher FIELDVUE® digital valve controllers, and Rosemount Analytical liquid and gas analyzers.

Emerson's comprehensive PlantWeb digital automation solution for Layyah also includes the AMS™ Suite: Intelligent Device Manager which streamlines device configuration, enabling savings and increased efficiency of plant startup. The AMS Device Manager supports proactive maintenance by providing online access to instrument and valve process information, and diagnostic status information. It also delivers predictive health information and corrective guidelines as needed to plant



“Emerson’s experience in the Middle East and the recognized capability of PlantWeb technology allows us to offer a complete instrumentation, automation and control solution,” said Bob Yeager, President, Power & Water Solutions for Emerson Process Management. “SEWA’s adoption of this digital automation architecture demonstrates the growing recognition of the economic and operational advantages offered by these technologies.”

personnel, and automatically documents all field device maintenance information. The predictive intelligence of Emerson’s AMS Suite helps customers not only optimize plant operations and maintenance activities, but avoid costly unplanned outages.

The two power units being modernized in this project, Units 5 and 6, are each coupled to a 5 MGD desalination train. In addition to providing power for the high-energy desalination process, the units also provide electricity to the grid. For this project, the Ovation system will control and monitor the boilers, turbines, burner management systems, boiler protection systems, and desalination units. The Ovation system will also interface to the existing SCADA system. In all, the Ovation system will manage approximately 13,000 I/O points across the two units.