Project Report

# Shuweihat Water Transmission Scheme Phase 2, Abu Dhabi United Arab Emirates

The system presently consists of Shuweihat, Mirfa and Mussafah pumping stations, plus a parallel double pipeline 1600mm dia, 250kms in length, with a transfer capacity of 100 million gallons of water per day.

Under the Shuweihat Water Transmission Scheme Phase 2 the capacity of the system will be increased from 100 million gallons a day (MGD) to 180 million gallons a day (MGD) to facilitate water transmission from the Shuweihat Phase 2 independent water and power project, which is currently under construction. The contract covers the extension of the two pumping stations in Shuweihat and Mirfa. The project was awarded to ABB in October 2009. ABB will be responsible for the complete project at various sites, including all electrical, mechanical and civil works, erection and commissioning. Furthermore the extension of the telemetry system at the Load Dispatch Centre (LDC) in Abu Dhabi is also part of the scope of works.

Enduser: Abu Dhabi Transmission and Dispatch Company (TRANSCO), U.A.E.

Completion is scheduled for November 2011.







### **Technical Specification / ABB Scope**

#### **Mirfa Pumping Station**

- 4x 4.7MW 11kV motors
- 4x 4.7MW 12-pulse variable frequency drives
- 4x 5650kVA phase shift transformers
- 2x 3MVA distribution transformers
- Distribution boards for motorized valves
- 4x pump units (flow: 5400m<sup>3</sup>/h, head: 240m)
- 4x 120m<sup>3</sup> plus 2x 20m<sup>3</sup> surge vessels
- Control system and telemetry (extension)
- Instrumentation
- DC/UPS system (extension)
- SCADA (extension)
- Complete pumping station cabling works
- Extension of the pumping station piping including valves, accessories and all related equipment
- Extension of pump house
- Complete erection and commissioning of electrical and mechanical works

#### **Shuweihat Pumping Station**

- 1x 90MVA 132/11kV power transformer
- 1x 11kV 2500A busduct connections
- 9x 11kV 2500A GIS switchgear cubicles
- 4x 4.7MW 11kV motors
- 4x 4.7MW 12-pulse variable frequency drives
- 4x 5650kVA phase shift transformers
- 2x 3MVA distribution transformers
- 13x 5000A 65kA LV switchgear cubicles
- 1x 132kV cable interconnection
- 4x pump units (flow: 5700m<sup>3</sup>/h head: 190m)
- 9x 120m<sup>3</sup> surge vessels
- Distribution boards for motorized valves
- Control system and telemetry (extension)
- Instrumentation
- DC/UPS system (extension)
- SCADA (extension)
- Complete pumping station cabling works
- Extension of the pumping station piping including valves, accessories and all related equipment
- Extension of pump house
- Complete erection and commissioning of electrical and mechanical works

#### Note:

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