

SEAFRONT SUB-CATCHMENT SCADA INTEGRATION INTO AL ANSAB CENTRAL CONTROL ROOM

SYNOPSIS OF SCOPE OF WORK

1. PROJECT OBJECTIVE

Haya Water is a Government of the Sultanate of Oman owned entity, and is empowered to build, own and operate the Muscat Wastewater Project covering an area of 3,900 km². Our vision is to Build and Operate a World Class Wastewater System in the Governorate of Muscat.

In line with company's long term operational plans, the company aims to implement centralized remote control operations for its facilities for efficient process control and increased availability of data across the company. As part of it, the company has the plans to integrate remote waste water assets' control systems into Company's Central Control Centre (CCR) which is situated at Al Ansab.

The objective of this project is to complete the integration of one of the Seafront Sub-catchment into Al Ansab CCR.

2. SCOPE OF WORK

2.1. The scope, specifications and requirements of integration for the below listed remote asset shall be as detailed in enclosed document, "Control, automation and Integration Philosophy, NBD -SSG -5001".

2.2. Details of remote assets which shall be integrated, under this contract:

Seafront sub-catchment (SPS1, SPS2 & TE network): The SPS 1 and SPS 2 along with TE network Flow meters are controlled by their respective PLCs (Siemens S7). PLCs equipped with operator interface through their respective panel mounted HMIs. Both the PLCs are connected to a common SCADA (Siemens WinCC) which is installed at SPS2. Refer to below enclosures for more details.

2.3. **Description of Activity:** The following is the list of activities which are needed to be performed under this contract:

- i) Understand the present operation and control philosophy of Seafront sub-catchment and Al Ansab CCR.
- ii) Study the details of hardware/ software installed at Seafront sub-catchment and Al Ansab CCR.
- iii) Supply of required additional hardware and software at Seafront sub-catchment & at Al Ansab locations for the integration.
- iv) Engineering works and modifications of software at Al Ansab towards integration.
- v) Engineering works and modifications of software at Seafront, inclusive of engaging the services of system specialist for Seafront software works for complete integration.
- vi) Integration works shall comply to the specifications, as mentioned in the document "Control, automation and Integration Philosophy, NBD -SSG -5001"

vii) Submit as-built documents and drawings upon commissioning of the integration works.

2.4. **Integration Protocol:** The third party systems will be integrated through OPC client/server/client technology. Contractor shall propose integration solution using OPC as base offer.

If the bidder wants to propose integration solution by using any other protocol, bidder shall submit alternative proposals with merits and justification, in addition to the original offer.

3. **COMMUNICATION NETWORK**

The Fiber Optic network between Seafront pumping stations and Al Ansab are in final stage of installation & commissioning. The same network shall be used for Seafront integration works.

4. **DELIVERABLES:**

- Work Schedule
- Design documents
- Design drawings
- Detailed procedures and Method statements
- Modifications to existing documentation of Seafront & Al Ansab, wherever required
- As-built documentation

All deliverables shall be submitted in three originals, both hard copy and digital format.