

# REGGANE NORD DEVELOPMENT PROJECT SURFACE FACILITIES



**Sector:** Oil&Gas

**Year:** 2015-2016

**Place:** Reggane Nord, Algeria

**Direct client:** Renco Spa

**Final client:** Petrofac/GRN

## OBJECTIVES

Groupement Reggane (GRN), comprising Sonatrach, Repsol Exploración Argelia S.A., RWE Dea AG and Edison International are developing the Reggane Nord Project located in the Reggane Basin, approximately 1,500 km southwest of Algiers. The Surface Facilities include a gas gathering system connecting widely dispersed wells to a Central Processing Facility where the gas will be processed to sales specification. The gas will then be compressed, metered and exported via a pipeline to a tie-in on the main gas transport system in the region.

Two Modular Package Substations (SS01-SS02) provide electricity and services to the facility.

### Main characteristics of the Packaged Substations:

- Overall dimensions of the Substations: 70m x 9m x 4,5m
- Modular Architecture for sea and road transportation issues
- Gas Tight performances of the Envelope
- Passive Fire Protection: external walls EI60 fire rated
- Blast resistant (only SS02)
- External Hazardous Area (only SS02)
- Chemical Gas Extinguishing System: 2x100% redundancy for each protected room
- F&G Detection System, included HSSD system
- Free Issue Equipment received from the Client:
  - MV Switchgear;
  - LV Switchgears;
  - PMS cabinets;
  - Telecom Cabinets;
  - AC/DC UPS Systems;
  - Power and Control Panels for Packages (Turbines, Diesel Generators);
  - Thyristor Control Panels;
  - VSD Panels.
- Design of HVAC system for Switchgear rooms, UPS rooms, VSD room, Battery room;
- Centralized architecture by 2x100% AHUs (DX type) installed in HVAC room;
- Pressurization of the Substation @30Pa by the HVAC system;
- Battery Room ventilation.



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## MAIN ACTIVITIES AND SOLUTIONS

The Scope Of Work for Trillini Engineering consists of:

1. Engineering Activities of HVAC System
  - Calculations (Thermal, Air Flows);
  - Main Units sizing and design;
  - D&ID, Logic Diagrams;
  - Ducting Layouts;
  - Datasheets;
  - Wiring Diagrams;
2. Assistance to Procurement Activities of HVAC System
  - Material Requisition;
  - Technical Bidder Evaluation;
  - Vendor Follow-up.
3. Assistance to FAT activities of main HVAC units (AHUs, Power and Control Panels, F&G Dampers);
4. Assistance on Supervision Activities during prefabrication in Italy;
5. Assistance on Test Activities before shipment;
6. Project Engineering Management for all discipline involved in the project: Structural, Architectural, HVAC, E&I, F&G, Telecom.

### Features:

- EPC project with Tight schedule (11 months);
- Overall Big Dimensions of the Substations;
- Modular Architecture;
- Extreme Design Temperatures  $-4^{\circ}$  /  $+50^{\circ}$ C;
- High Internal Thermal Loads;
- Positive Pressurization;
- Atex Installations;
- Blast rated.

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