



Thermal, Photovoltaic & Hybrid • Hydraulic • Cold Instrumentation • RVN • Civil Engineering

www.techno-systems.net

Concept by Nomade : +222 48 17 35 85

# Techno Systems: the EPC leader for solar energy in Mauritania

Our reputation is the result of a long and rich experience, due to our ability to finalize projects in the given time and the assurance of a great work.

Over the years, we have strengthened our reputation while developing, to become the reference for EPC Photovoltaic projects in Mauritania in the field of energy and hydraulics.

**Techno Systems** executes EPC projects for commercial, industrial and government customers in Mauritania and the sub-region.

# **OUR AREAS OF EXPERTISE**

# **Engineering & Design Office**

Our design office is working on project designs:

- Survey, sizing and engineering for EPC projects
- Audits and energy analysis
- Project design in civil engineering
- Cold engineering
- Instrumentation



# **Electricity & Photovoltaics**

### **Electricity production:**

- Thermal, solar, wind and hybrid power plants with FSC (Fuel Save Control) system including GC wiring, fire protection system, supervision and **Scada**.
- Auxiliary and backup generators, from small power generator (0.5 KVa) to large power generator (up to 11000 KVa), diesel and fuel oil.

**Electricity transmission and distribution:** Electrical networks (medium and low voltage transmission lines, MT / MT and MT / LT transformer stations up to 90 kV, TGBT distribution installations and switchboards)

Residential and tertiary: High current, low current, low voltage master distribution board and distribution box, switchgear (electrical socket, switch, contactor), wiring.

**Industry :** MT / LT transformer station 90/33 kV and 33/15 kV and MV / LV 33-15 / 0.4 kV, automation and control command, supervision and **Scada**.

### **Hydraulics**

- Systems and water pumping stations (thermal and solar) drinking water, agriculture and drainage, booster station, rainwater treatment plant including civil engineering, connexions, special faucet parts and anti-ram protection.
- Automatic chlorine injection water treatment system with automatic injection flow control.
- Reverse osmosis desalination plant under regular or containerised shelters
- Hoses and water pipes PVC, HDPE, galvanised steel, ductile iron pipe up to a diameter of 1400 and service pressure of 25 Bar for drinking water supply system application, agriculture and wastewater.
- Water tower in concrete and metal on the ground and raised up to 2500 m3 capacity and 25 meters height.
- Control panels with variable speed drives or soft starters, instruments and sensors.











## **RVN and Technical Civil Engineering**

Electricity distribution network (MT and LT), hydraulic (water supply system, wastewater, Drainage, Irrigation ....), conventional and solar street lighting (standard and decorative), remote management system, technical floor, thermal and acoustic insulation, special slab, tanks, fountains, etc.

#### Cold

Positive and negative cold storage rooms (conventional and solar) up to 2,500 m3, Ice factory, clear water and salt water (conventional and solar) up to dozens of tons per day.





#### Instrumentation

- Instrumentation and Remote Management Systems (SCADA) for energy, hydraulic and industrial applications.
- Metrology (weighbridges and weighing systems)
- Level indicator (drilling)
- Various indicators: pressure, temperature, humidity, etc.

### **Special Works**

Electrical resistivity of floors, counting of soil conductivity, topography, special rooms ...

# **Quality Control**

In order to guarantee its installation according to the manufacturer's standards, Techno Systems carries out a certified quality control at the time of delivery of the project.

## ——— SHOW ROOM

Our Showroom sells electrical, photovoltaic and hydraulic equipment.

**Electricity**: Circuit breakers, contactors, variable speed drives, splitters ....

**Photovoltaïc**: solar panels, batteries, inverters ... **Hydraulics**: solar pumps (submersible, surface) ...







Janitza<sup>®</sup>



### OUR AFTER SALES SERVICE

We attach great importance to after-sales service:

- Regular maintenance contract.
- Preventive maintenance contract.
- Emergency response and on-site repair contract

### **SOME OF OUR ACHIEVEMENTS**

### NEMA HYBRID POWER PLANT, HODH EL CHARGUI

**Customer**: Mauritanian Company of Electricity (SOMELEC)

**Delivery**: November 2018

As part of the construction of the Nema hybrid power plant (thermal 4,2MW / 750 KWc solar PV), Techno Systems took up the logistical and space-time challenge and realized the photovoltaic solar part, in turnkey, in a record time of less than 2 months.



### **BOGHE PUMPING STATION, BRAKNA WILAYA**

Customer: National Company of Agricultural Improvements and Works (SNAAT)

**Delivery**: August 2017

- Supply and installation of 3 columns AG DN 1000,12,8 ml
- Supply and installation of 3 Flygt PL 7081 submersible pumps of 160 KW each
- Supply and installation of control cabinet for the 3 pumps.
- Connection of the pump cabinet to the MV substation



#### ELECTRIFICATION PROJECT OF N'DIAGOU BY HYBRID POWER PLANT, TRARZA WILAYA

**Customer**: Universal Access Agency to the Services (APAUS)

**Delivery**: May 2016

Consortium: TECHNO SYSTEMS - JUWI - ELECTROTECH

Leader of consortium: TECHNO-SYSTEMS (Part 80%)

Realisation of a hybrid power station of 206 KW (80 KW Thermal, 126 KWc solar PV), MT network of 5.5 km (33 kV), a 9 km LT network including 50 points of public lighting, 100 residential connections and the construction of an ice factory with a capacity of 10 tons per day.



#### **BIRETTE HYBRID POWER PLANT, TRARZA WILAYA**

**Customer**: Universal Access Agency to the Services (APAUS)

Delivery: June 2015

Consortium: **TECHNO SYSTEMS - COGER - ELECTROTECH** Leader of consortium: TECHNO-SYSTEMS (*Part 85%*)

Realisation of a hybrid power station of 100 KW (40 KW thermal, 60 KW solar PV) and a 4.3 Km LT network including 30 points of public lighting and 80 residential connections.

