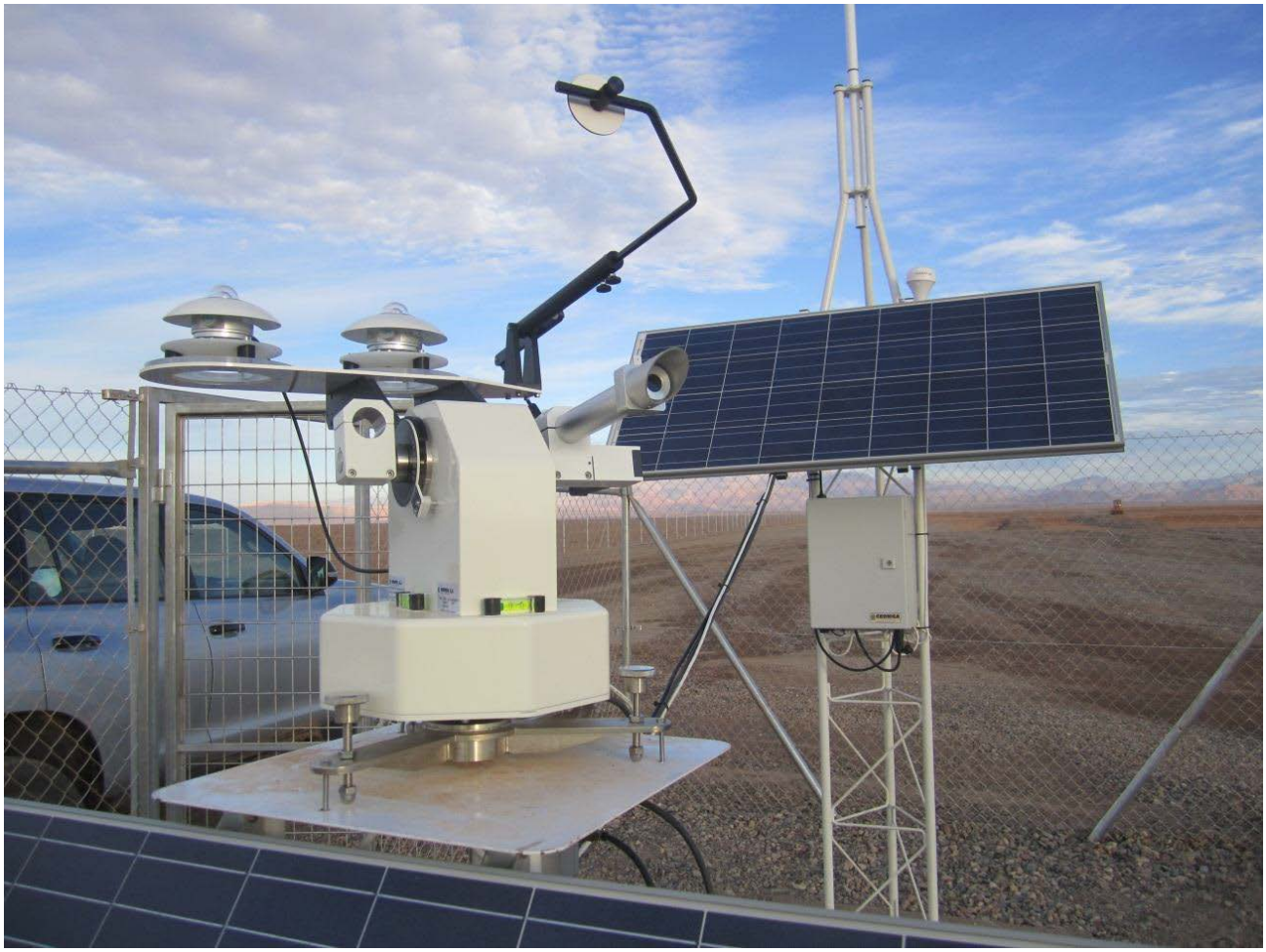
THE EPC CONTRACTOR OF 160 MWE SOLAR CSP PLANT IN OUARZAZATE (MOROCCO)

SELECTS GEONICA SEMS SOLAR ENERGY MEASUREMENT SYSTEM



The Spanish consortium consisting of **Acciona, Sener and TSK** has chosen **GEONICA SEMS Solar Energy Measurement System** for the continuous monitoring of solar energy resource assessment and other environmental meteorological parameters at the Ouarzazate Plant.

In December 2013 GEONICA supplied and installed on site a network of automatic and totally autonomous **Solar Meteorological Stations** with data transmission via GPRS to the customer's Data Receiving Center for remote monitoring in real-time. When the plant construction was completed, the meteorological stations were relocated at the Power Block and distributed in the Solar Field, covering the area conveniently and directly connected also to the plant SCADA.

The **Solar Meteo-Stations** designed and manufactured by **GEONICA** are configured by our advanced **METEODATA Datalogger / Controller** and our very low power consumption **Sun Tracker 3000**, alongside the necessary Pyrheliometers and Pyranometers for the measurement of Direct Normal Irradiance (DNI), Global Horizontal Irradiance (GHI) and the Diffuse Horizontal Irradiance (DHI), as well as other meteorological parameters, in particular: wind speed and direction, temperature and relative humidity of air, barometric pressure, precipitation and visibility.



Pictures of SEMS Stations at Ouazarzate site

OUARZAZATE (Phase-I) Project Overview

Ouarzazate 160 MWe CSP plant with 3 hours of thermal storage is today the world's largest parabolic trough CSP power plant and the first utility size thermal solar generation project in Morocco. The project is located in Souss-Massa-Draa, province of Ouarzazate in Morocco, approximately 200 km south of Marrakesh.
The first 160 MW phase of the 500 MW Ouarzazate solar project has secured €345 million in funding from Europe. It was operational since 2015. Meanwhile, sources report that a US$1 billion PPA has been secured for the project.

Technology	Parabolic trough
Status	In Operation
Country	Morocco
Solar Resource	2,635 kWh/m2/yr
Solar Resource Monitoring	METEODATA 3000 datalogger
Turbine Capacity (Net)	160.0 MW
Storage Capacity	3 hours
Thermal Storage	By Molten Salt