As a major player in the field of renewable energies, Eneryo, has begun work on the construction of two solar farms on the Adrechs and Haut-Deffens sites in Callian (Var). The community, with its 3000 habitants, decided on this project to sustainably reinstate this land located just two kilometers from the village, partly degraded by being used previously for a dump, and by nuisances caused by its unauthorized use for mechanical sports.

Eneryo entrusted the engineering of the site to a temporary company group (Groupement Momentané d’Entreprises (GME) comprising EHTP (NGE subsidiary) for the civil engineering and mechanical packages and to Schneider Electric for the turnkey electrical package.

The total power of the solar farms is 7.4 MWc. They include 40,200 photovoltaic modules, covering an area of 17 hectares. Expected electricity generation comes to 10.5 million kWh/year, equivalent to the annual consumption of 4 650 people.

This site, the biggest in the Var “department” was commissioned during the summer of 2011. Ecologically, the solar farm will avoid 1 400 tonnes of CO2 emissions into the atmosphere every year;
Solution:
Electric turnkey contract including:
- Design and installation of electrical system between the solar modules and the power grid, including Xantrex inverters.
- Installation and wiring
- Electrical turnkey package control, and coordination of the partner GME and sub-contractors
- On-site commissioning
- Securing on the site (infrared barrier)
- 20 years operation and maintenance contract. It includes preventive and curative maintenance operations with a commitment to performance and availability for two years and availability for 20 years.

Electrical network:
- 1 X 2.5 MW transformation station on the Adrechs site and 2 W 2 MW transformation station at Haut-Defens, equipped, with:
  > 13 Xantrex GT500E inverters
  > 3 X 1 250 kVA transformers
  > 1 X 630 kVA low loss transformer
  > 3 SM6-24 switchboard
  > 5 RM6 cubicles
- 2 grid connection stations of 20 kV
- 52 array boxes

Monitoring system performing the following functions:
- Supervision and control of equipment
- Support for maintenance and exploitation activities
- Evaluation of availability
- Weather monitoring
- Increased reliability
- Centralisation of information
- Creation of graphics and reports
- Data storage
- Management of remote and multiple access

The security system:
- An infrared intrusion system with cameras, connected to the remote-surveillance post (operated by a remote-surveillance company).

OTHER REFERENCES
- Ground-based arrays
  - Spain - Almeria (7.76 MW)
  - Germany - Rote Jahn (6 MW)
  - France - Vinon Sur Verdon (4.2 MW)
  - France - Les Mées 1 - La Mousse (12 MW)
  - France - Le Gabardan (20 MW)
  - France - St Clar (8.9 MW)
  - France - Les Mées 2 - Haute Montagne (12 MW)
  - Italy - Cellino San Marco - AES (43 MW)

- Buildings
  - Spain - Saragossa (10 MW)
  - Spain - Villacañas - Toledo (2.5 MW)
  - Spain - Molina De Segura - Murcia (300 KW)
  - Reunion & Mayotte Islands - 7 Casino stores (16 MW)