Vinon Sur Verdon - France
4.2 MW Photovoltaic Power Plant

PROJECT AT A GLANCE

Project
Vinon Sur Verdon photovoltaic Power Plant

Location
France

Customer
Solaire direct

Application
Production of electrical power

Equipment installed
A turnkey contract for the supply of a complete system involving the conversion and distribution of photovoltaic electricity

CUSTOMER BENEFITS

• A single contact for the turnkey electrical operations
• Minimum downtime in the event of a fault, owing to the monitoring system that allows production to be controlled remotely
• A turn on the investment owing to the competitiveness of the Schneider Electric offer
• Production secured over the next 20 years with the guarantee, and the operating and maintenance contract established with Schneider Electric

Buy-back rates for photovoltaic electricity, established in France since July 10, 2006, have incited exceptional development within the residential, tertiary and array markets.

Investors benefit from high revenues, guaranteed for 20 years, which significantly limits the risks they take provided that their installation is well designed and maintained.

Solaire direct, already present within the residential photovoltaic market, has now decided to invest in solar array projects with production capacities of several megawatts.

Located in Vinon sur Verdon in the Var département, France, this initial 4.2 MW array consists of 19,000 (220 peak-watt) panels installed over 9 ha. The Vinon array will produce enough electricity to supply 2,000 homes, i.e. nearly 4,600 inhabitants. An array of this type can save 2,900 tons of CO2 from being produced per year.

In order to ensure quick turnaround on its investment, Solaire direct aims to install this array as quickly as possible together with reliable, competitive players, while offering them attractive technical solutions and proposing an operating and maintenance contract that is compatible with their business plan.

Make the most of your energy
The Vinon solar array was designed to achieve the highest level of performance from the installation, producing the greatest amount of electricity possible (in terms of KWh). Special care was given to the DC wiring, the inverters selected provide the greatest efficiency of the market, and the transformers are low-loss type.

Finally, the monitoring and control system is capable of detecting even minor incidents.

**Electrical network:**
- 4 transformation stations of 1 MVA each (1 MVA transformer, 2 Xantrex GT500 inverters, medium voltage cubicle)
- 1 EDF grid connection station
- Medium voltage AC and low voltage DC cables (primary and secondary)
- 32 array boxes
- Installation and commissioning of the entire electrical system

**Monitoring system:**
- A current measurement on each input of the array boxes
- A voltage measurement in each array box
- A data logger in each transformer station
- A global data logger in the grid connection station
- Local and remote monitoring station

**The security system for the turnkey site:**
- A peripheral intrusion detection system installed on the site’s fence
- A set of cameras to ensure remote verification via video surveillance
- A monitoring station with video recorder and alarm transmission equipment
- Site remote monitoring and intervention services

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**OTHER REFERENCES**
- Ground-based arrays
  - France / Réunion Island / SAPRIM (1 MW)
  - Spain / Badajoz / Almendralillo (4 MW)
  - Spain / Almería (7.76 MW)
  - Germany / Rote Jahne (6 MW)
  - France / Gabardan (20MW)
- Buildings
  - Spain / Saragossa (10 MW)
  - Spain / Villacafíñas / Toledo (2.5 MW)
  - Spain / Molina De Segura / Murcia (300 KW)