

INES

Renewable energy management
at the French National Institute of
Solar Energy

Integrator
INEO TINEA

Experimental buildings of the energy platform

The Institut National de l'Energie Solaire, located in Savoie's Technolac technopole, is a leading European center for **solar energy research**. Its role is to support eco-industry players in research and innovation for the development of photovoltaic and thermal solar energy and **building energy efficiency**. Focused on applied research, the different laboratories are tasked with developing tomorrow's technologies with a view to industrialization.



Key figures

- 22,000 m² of floor space
- 400 researchers and technicians
- 200 industrial partners
- 80 patents filed each year
- 15 laboratories
- 1 training platform
- 50M€ annual budget



Aim

INES has chosen the **Panorama SCADA software** to manage the instrumentation and control of its electrical equipment to meet the following objectives :

- Integrate photovoltaic power into electrical grids supporting intelligent systems / Smart Grid;
- Recover and store thermal energy for subsequent use in industry and for distribution via thermal networks;
- Optimize the energy performance of buildings.





The choice of Panorama SCADA

Open design and Interoperability

INES' motivation in revamping its I&C system is to open up even further to the industrial world. Today it is interfacing with third party systems in order to be **compatible with the greatest number of partners** in the electricity sector.

The institute elected to go with the Panorama SCADA system for its ease of implementation and **interoperability**, including its field communication component, which is based on the OPC UA protocol and soon IEC 61850. As a result, when expanding its partnerships with electrical power grid managers, the institute has the ability to combine its data, exchange information between connected network operators and thus to more easily collaborate across the various projects.



Panorama SCADA system at CEA Ines



PRISMES Zone : experimental platform for distributed electrical systems

Better overall visibility across multiple sites

Panorama has made it possible to build a SCADA application that centralizes a large volume of disparate data, processes the information in real time and offers research engineers much better overall visibility through its graphical interfaces (HMIs). This data comes from PLCs and electrical equipment based in the CEA laboratories, as well as from technical demonstration units installed at partner sites. This makes it possible to manage and control the operation of the various different types of equipment, compare and analyze the behavior from one site to another, detect errors and anomalies. The ability to manage industrial electrical equipment effectively helps the **EMS (Energy Management Systems)** developed at INES to operate more **reliably and efficiently**.



Central mirrors and reflectors



Voice of customer inset

« I love technology challenges around renewable energy. I am very pleased with the choice of the Panorama solution and with the software manufacturer Codra.

This SCADA application dedicated to applied research is a source of pride for our teams and a real motivator for this major project»

Hervé Buttin, Research Engineer