

SMARTGRID TRAINING

MODULE 1

Situational setting

Electrical distribution is undergoing profound change, due to the energy transition and the advent of SmartGrid. It is also an area where employment is in high tension. With the aim of both attracting more students to meet the needs of companies and preparing them for the evolution of these jobs, we want to evolve our teaching around distribution. smart electric power. We will take the opportunity to adopt the skill writing of these modules.

This writing in competence, will then allow us to offer these different modules in training throughout life. Indeed, the technologies implemented, the importance taken by the data will profoundly change the skills required of professionals in the field.

Training situations



Description in skill blocks

Each training situation will be expressed as follows

Training situation : Maintain a photovoltaic smartgrid and know which element is defective in the event of a malfunction

First, we plan to train on the following three training situations:

- Ensure the maintenance of a photovoltaic smartgrid and know which element is defective in the event of a malfunction.
- Know how to install a photovoltaic smartgrid, size the elements allowing it to connect to the grid and connect the loads. Know how to put it into service and explain its operation and maintenance.
- Know how to design and size a photovoltaic smartgrid and its control/control systems according to a specification.

Photovoltaic Smartgrid:

Smartgrid is a photovoltaic installation with batteries that can provide energy to power charges. This installation can operate in isolation or connected to an existing network. In this case, various strategies can be set up depending on whether one wants to maximize self-consumption or prefer autonomy in case of network losses.

Knowing how to act :

Measure voltages, running powers at different points of the installation.

- By identifying these points on the diagram and drawing parallels with reality
- Using the right measuring devices.
- By taking all measures to ensure its safety and that of microgrid users.

Analyze these measurements to determine the proper functioning or failure of the micro grid.

Check the wiring and configuration of the system's communication equipment

Resources

Knowledge

- Schematic diagram reading.
- Knowledge of the basic rules of continuous and alternative electricity, (current, voltage, power)
- Electrical risk
- Equipment used in Low Tension
- Photovoltaic panels
- Batteries

Technical know-how

• Choose the measuring equipment and perform the measurement safely.

Relationship know-how

• Know how to report on the measurements taken to an expert.