



Fisuel Seminar – 15-16 of October 2025

Dakar - Senegal

STATE OF PLAY OF RENEWABLE ENERGY (SOLAR ENERGY) IN CÔTE D'IVOIRE

SOMMAIRE

Introduction

I- Overview of Renewable Energies, Particularly Solar

I-1- Production

I-2- Types of Production

I-3- Categorization of Self-Production Levels

II- Inspection of Photovoltaic Infrastructure or Systems

II-1- What is an "electrical inspection body"?

II-2- Why choose an approved body?

III- Overview of Photovoltaic Infrastructure or System Inspections

IV- Measures to be taken to ensure the inspection of photovoltaic infrastructure or systems to ensure the safety of property and people.

Conclusion

Introduction

The Energy Transition, a concept that emerged in 1980 in Germany and Austria in the form of a white paper, is a set of transformations in the energy production, distribution, and consumption system with the aim of making it more environmentally friendly.

Introduction

A key element of the ecological transition, it comprises three main components:

1- Transformation of the energy production system;

2- Energy efficiency;

3- Energy conservation.

The energy transition is essential to sustainable development strategies and the fight against global warming.

Introduction

Energy transition programs:

Vary by country and context;

are primarily based on the gradual replacement of fossil fuels (and sometimes nuclear fuels) with an energy mix that prioritizes renewable energies and many other aspects.

Introduction

Côte d'Ivoire is not lagging behind in this strategy for sustainable development and the fight against global warming based on the energy transition.

This presentation will attempt to provide an overview of solar energy in Côte d'Ivoire, based on its business segments (production and control of photovoltaic infrastructure).

I- Status of renewable energies, particularly solar

I-1- Production

Good sunshine in Côte d'Ivoire;

The first solar photovoltaic power plant in Boundiali (north) is in operation to supplement its energy mix, dominated by fossil fuels and hydroelectricity;

Ambitious solar power plant projects, such as the one in Boundiali, are in sight, with the foundation stones being laid.

I- Status of Renewable Energy, Particularly Solar

I-1 - Production

Through all these projects, Côte d'Ivoire's ambition is to achieve 42% renewable energy in its energy mix by 2030;

Beyond these private and public investments, there are authorized self-production initiatives.

I- Overview of renewable energy, particularly solar

I-1- Production



Overview of part of the BOUNDIALI solar
field (North of Ivory Coast)

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I- Overview of renewable energy, particularly solar

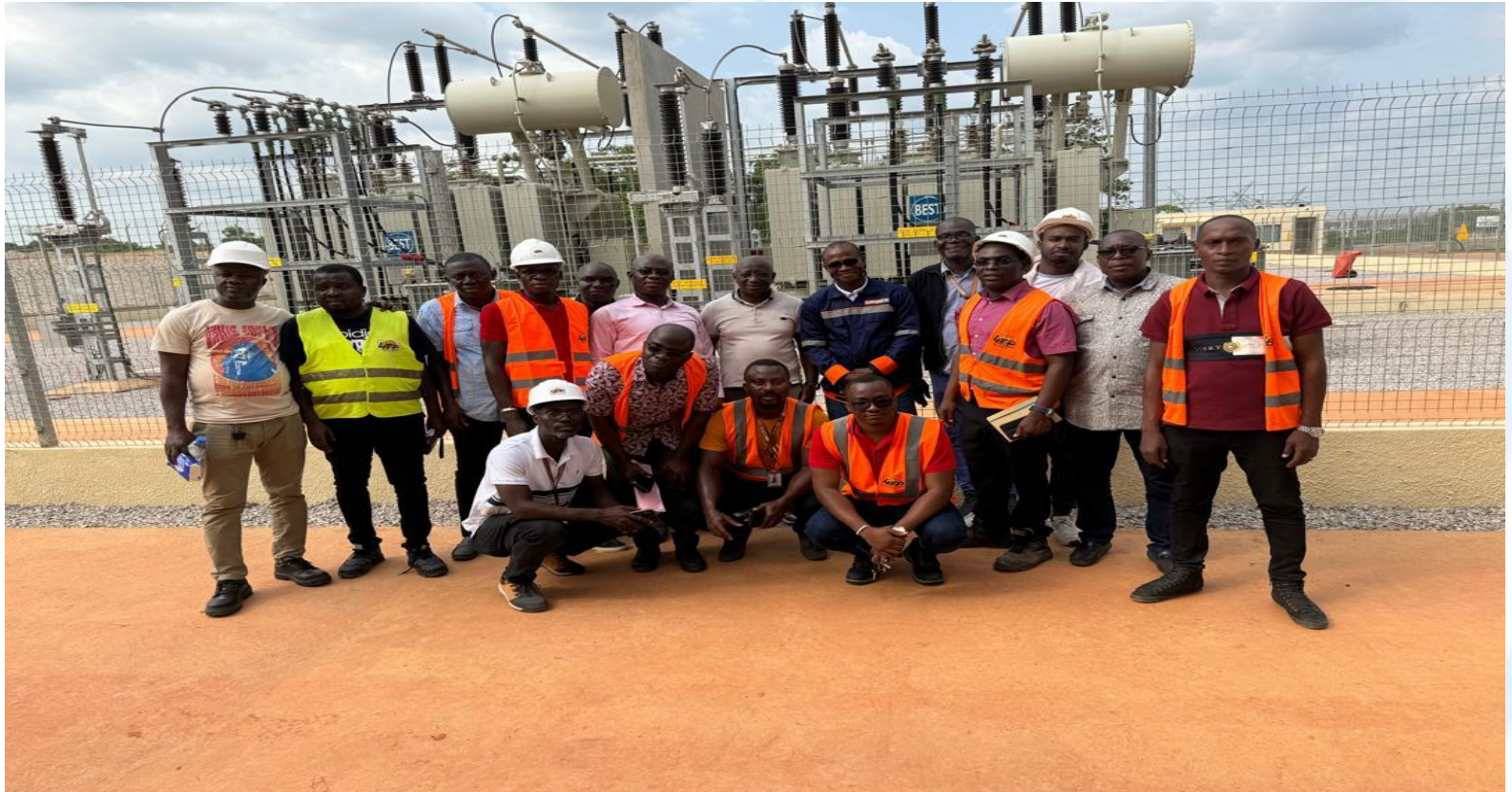
I-1- Production



Overview of part of the HV cells of the AC part of the
BOUNDIALI solar production plant (North of Ivory Coast)

I- Overview of renewable energy, particularly solar

I-1- Production



Overview of part of the HTA/HTB transformer stations of the BOUNDIALI solar production plant (North of Ivory Coast)

Seminar – 15 and 16 October 2025

I- Overview of renewable energy, particularly solar

I-2- Types of production

- Two types:

- 1- Very high-capacity production, carried out through private or public investments, for immediate injection into the national electricity grid;

- 2- Low- to high-capacity self-production, carried out by individuals or legal entities whose excess energy may or may not be injected into the national electricity grid.

I- Overview of renewable energy, particularly solar

I-2- Types of production

According to government regulations, self-generation is the production of electrical energy, including through backup installations, by a natural or legal person primarily for their own consumption and, secondarily, free of charge, for the consumption of individuals or groups dependent on them.

I- Overview of Renewable Energies, Particularly Solar

I-3- Classification of Self-Production Levels

In order to apply the legal regimes, self-generation is classified into three (03) production levels:

1- Case of the legal freedom regime: Not subject to prior declaration or authorization. Applies to self-generation installations with an installed capacity of less than or equal to 0.5 kW from renewable energy sources;

I- Overview of renewable energy sources, particularly solar

I-3- Categorization of self-generation levels

2- Case of the statutory prior declaration regime: Free regime. Applies to self-generation facilities with an installed capacity strictly greater than 0.5 kW and strictly less than 20 kW from renewable energy sources.

Regime granted to any self-generation company requesting authorization, upon presentation of a receipt confirming the submission of a dedicated and duly completed form.

I- Overview of renewable energy sources, particularly solar

I-3- Categorization of self-generation levels

3- Case of the statutory prior authorization regime:
Free of charge. Applies to self-generation facilities with an installed capacity equal to or greater than 20 kW from renewable energy sources, whether connected to the interconnected grid or to an isolated grid.

Regime granted to self-generation facilities that apply for authorization from the Ministry of Energy, according to the procedures provided for this purpose.

II-Control or Inspection of Photovoltaic Infrastructure or Systems

Due to their continuous electrical energy requirements, solar installations must be carefully monitored and controlled by industry professionals.

II- Inspection of Photovoltaic Infrastructure or Systems

II-1- What is an "electrical inspection body" and an "electrical control body"?

There is no formal distinction between "electrical inspection body" and "electrical control body." These terms actually refer to the same entity that verifies the compliance of electrical installations with current safety standards.

II- Control or Inspection of Photovoltaic Infrastructure or Systems

II-1- What is an "electrical inspection body" and an "electrical control body"?

Main function: to ensure the safety of electrical installations, thus preventing the risk of fire, short circuits, or electrocution, and to prepare a report of their findings.

II- Control or Inspection of Photovoltaic Infrastructure or Systems

II-1- What is an "electrical inspection body" and an "electrical control body"?

Consequently, it guarantees:

- 1- Verification of conformity;
- 2- Hazard identification;
- 3- Issuance of a report;
- 4- Official recognition.

II- Inspection of photovoltaic infrastructure or systems

II-2- Why choose an accredited organization?

To ensure:

- The safety of people and property, it is essential that electrical installations be inspected by qualified and recognized professionals;
- Legal compliance: In many countries, a certificate is required for sale or installation, and this can only be issued by an accredited organization.

III- Status of inspections and controls of photovoltaic infrastructure or systems

Regarding inspections, government regulations stipulate that, for the legal authorization regime only, the processing of applications must take into account the standards in force and the safety conditions of the associated electrical systems, installations, and equipment.

III- Status of inspections and controls of photovoltaic infrastructure or systems

As can be clearly seen:

1- Mandatory inspections only apply to installations with a power equal to or greater than 20 kW. However, the frequency of installations in this power category is almost nonexistent, aside from a few installations that are only inspected.

2- Many installations exist in remote and urban areas but are not inspected because they are not subject to the legal framework requiring compliance with current safety standards and requirements.

III- Status of inspections or controls of photovoltaic infrastructures



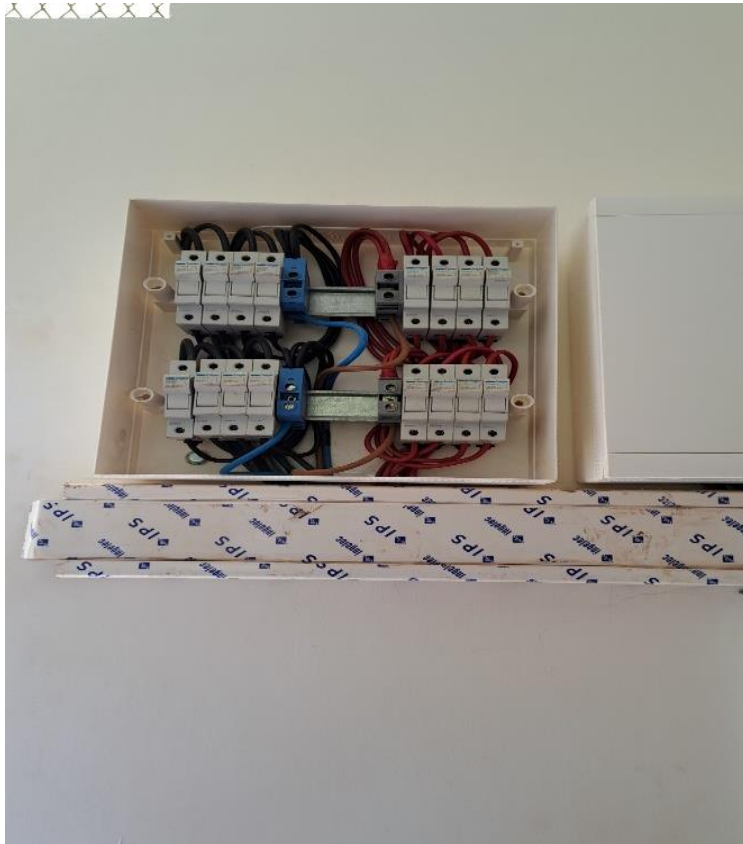
Overview of part of the solar field and the technical building of the DC and AC parts of Somontou S/P in Kaouara, Ouangolodougou Department (North of Ivory Coast)

III- Status of inspections or controls of photovoltaic infrastructures



Overview of one of the DC parts of the Somontou S/P production of Kaouara, Ouangolodougou Department (North of Ivory Coast)

III- Status of inspections or controls of photovoltaic infrastructures



Overview of the AC parts of the Somontou S/P production of Kaouara, Ouangolodougou Department (North of Ivory Coast)

IV- Actions to be taken to ensure the monitoring or inspection of photovoltaic infrastructure or systems to ensure the safety of property and people.

Energy authorities must:

- 1- Reorganize the categorization of photovoltaic systems, with an emphasis on the safety of property and people;
- 2- Build capacity, i.e., develop the skills, knowledge, and resources of individuals, organizations, and other stakeholders to enable them to define and achieve their own energy transition objectives.

Conclusion

Since the safety of property and people must be the top priority, it is crucial for a system renowned for its uninterrupted power supply to ensure the monitoring of solar installations. This requires informed decisions from energy authorities. These informed decisions will also lead to an increase in monitoring rates.

Closing Seminar

MERCI - THANKS

