

## ENERGY RENOVATION PROJECT

### Sogefiha Building

#### CONTEXT

The Ivorian government, in implementing its energy policy, has established the ECLER IVOIRE project. This project, part of the program for supporting the Ivorian energy sector (ENERGOS II), was initiated by the Directorate General of Energy and funded by the European Union. It includes an "energy efficiency in public buildings" component with the aim of sustainably reducing energy consumption in public buildings in Ivory Coast, a sector with significant energy savings potential.

A study of 72 energy-consuming public buildings in Ivory Coast led to the selection of the SOGEFIHA building, constructed in 1977. With an annual consumption of 1335 MWh (equivalent to 254 kWh/m<sup>2</sup> per year), the SOGEFIHA building emits approximately 750 tons of CO<sub>2</sub> annually.

The consortium SMART ENERGY/KDM/SELF-CI was selected for the execution of these works following an international tender.

#### THE PROJECT

The SOGEFIHA building accommodates the offices of the Directorate General of the Treasury and Public Accounts (DGTCP), as well as other state structures. It comprises nine (09) floors with a conditioned area of over 5000 m<sup>2</sup>. Smart Energy is undertaking energy rehabilitation works to make this building a model of energy efficiency and energy management.

With an initial budget of around 2.3 million euros, the works began in December 2021.

The project's final objectives include:

- Strengthening user safety
- Improving user comfort
- Reducing energy expenses (from 254 kWh/m<sup>2</sup>/year to 156 kWh/m<sup>2</sup>/year)
- Contributing to the fight against climate change and reducing greenhouse gas emissions





## WORKS EXECUTED BY THE CONSORTIUM SMART ENERGY/KDM/SELF-CI

In accordance with the specifications, the following works have been executed:

- Renovation of energy systems (air conditioning, ventilation, lighting)
- Installation of an automated energy supervision and management system
- Installation of solar panels
- Reinforcement of thermal insulation on roofs and facades

These works were carried out in on an occupied site, requiring rigorous organization with day and night work scheduling, strict adherence to safety rules, and strong commitment from all stakeholders.

Smart Energy's energy renovation process for the SOGEFIHA building incorporated analysis of different uses and improvement suggestions for energy performance.

The analysis was able to identify solutions generating 30 to 40% energy savings, henceforth achieving excellent performance at 156 kWh/m<sup>2</sup> per year, and enhancing user well-being and comfort.

In addition to this work, Smart Energy implemented solutions for the sustainability of installations and the longevity of their energy performance.

The ECLER IVOIRE project, by achieving the first energy-efficient renovation on an occupied site, elevates the SOGEFIHA building to the status of the first public building compliant with the new energy regulations in force in Ivory Coast.

## ENERGY RENOVATION PROJECT IN NUMBERS

Building creation date: 1977 Dimensions: 09 levels; conditioned area: 5000 m<sup>2</sup> Annual electricity consumption: 1335 MWh, resulting in an annual emission of approximately 750 tons of CO<sub>2</sub> Energy Balance: 254 kWh/m<sup>2</sup> per year

Energy renovation works:

- **Budget: Approximately 2.3 million euros**
- **Starting: December 2021**
- **Duration: 18 months**
- **Targeted energy performance: 156 kWh/m<sup>2</sup> per year**

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