Observatoire Europe-Afrique 2030

Case study n°21

Manufacturing Sector "Solar Energy" in Africa: Trends and Prospects for Cooperation

April 2nd, 2026

Summary

The « Observatoire Europe-Afrique 2030 » has identified thirteen manufacturers of photovoltaic cells and panels, and six manufacturers of solar-powered equipment on the African continent.

Investment in this sector took off during the 2010's, with production capacities ranging from a few dozen to a few hundred MW/year. Among the identified manufacturers of solar cells and panels, half of them perform cutting, molding, and welding operations, as well as final assembly. Four of them limit themselves to end-of-line assembly operations.

The attractiveness of this sector for foreign investors seems quite low: To date, no European or American manufacturer has entered this niche, with the only two subsidiaries of foreign groups identified being Chinese. Furthermore, uncertainty surrounds the figures regarding the actual level of demand for solar panels on the African continent. Recent years have seen little growth in new manufacturing capacity.

In light of recent developments, however, the situation could take a more positive turn in Morocco and Egypt. For European companies, investment opportunities may arise in the form of participation in joint-ventures. These two countries have set ambitious targets and are encouraging private-sector participation, particularly through tenders and public-private partnerships.

1. Context

« Champions in Green Industrialization in Africa" lists nineteen companies engaged in manufacturing within the "Solar Energy" sector on the African continent.

Of these nineteen companies, thirteen manufacture photovoltaic cells and panels, and six manufacture solar-powered equipment (streetlights, portable chargers, inverters individual lighting kits).

These two groups of companies have contrasting characteristics in terms of the products they manufacture: the first, homogeneous group focuses on the manufacture of photovoltaic panels. In contrast, the second group is characterized by diverse product lines that incorporate solar panels into the products they manufacture. Consequently, the two groups are analyzed separately, with the exception of section 2, "Geographic Overview".

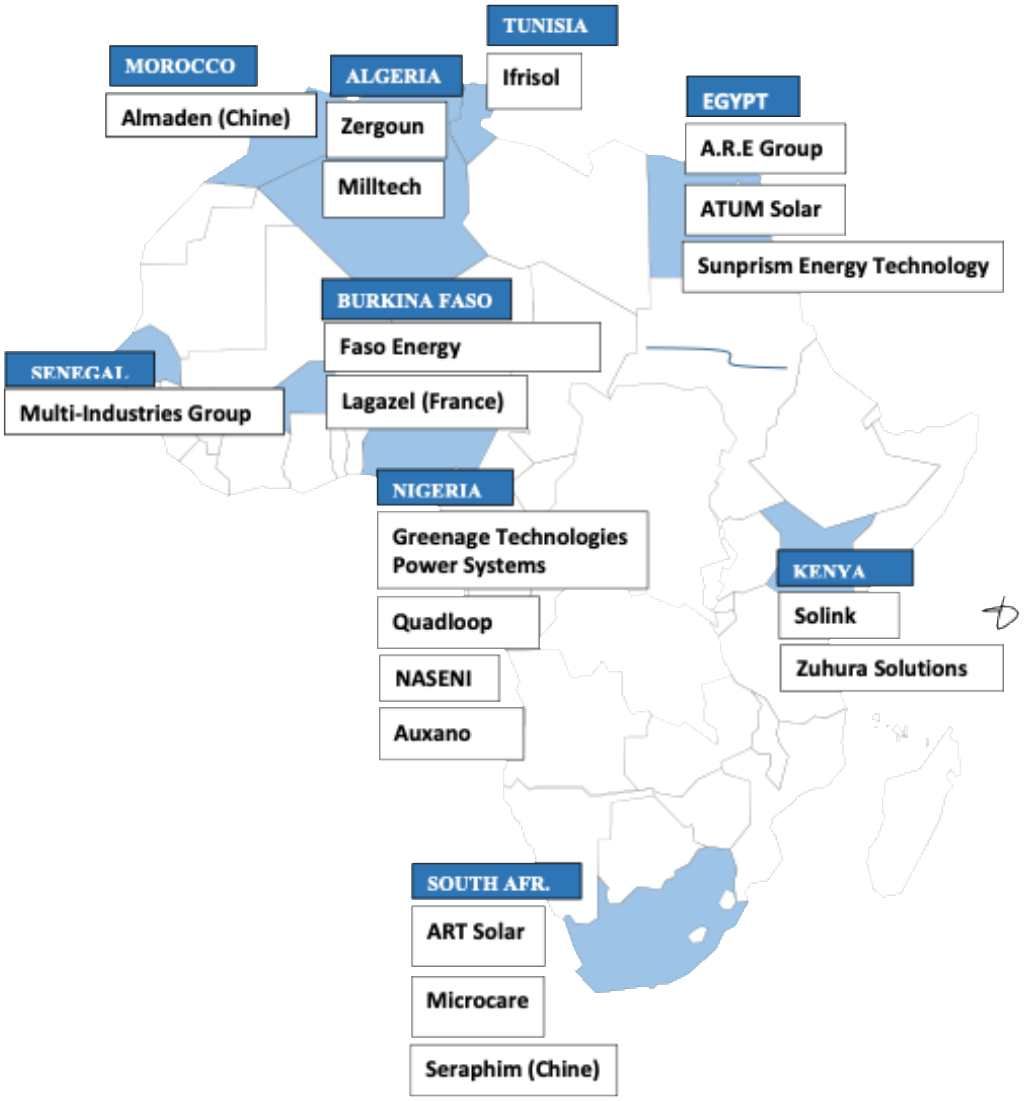
This case study describes this sector, analyzes its strengths and weaknesses, and sheds light on the prospects for European companies to participate in it.

Important note: The "Solar Energy" green sector pertains exclusively to manufacturing companies. The construction and operation of solar farms and mini-grids are not covered in its scope.

2. Geographic overview

As shown on the map, the distribution of the 19 companies is relatively even across the African continent. Ethiopia is notably absent.

Geographic location of the manufacturing enterprises involved in « Solar energy »



3. Photovoltaïc cells and panels manufacturers

3.1 Comparaison between supply and demand

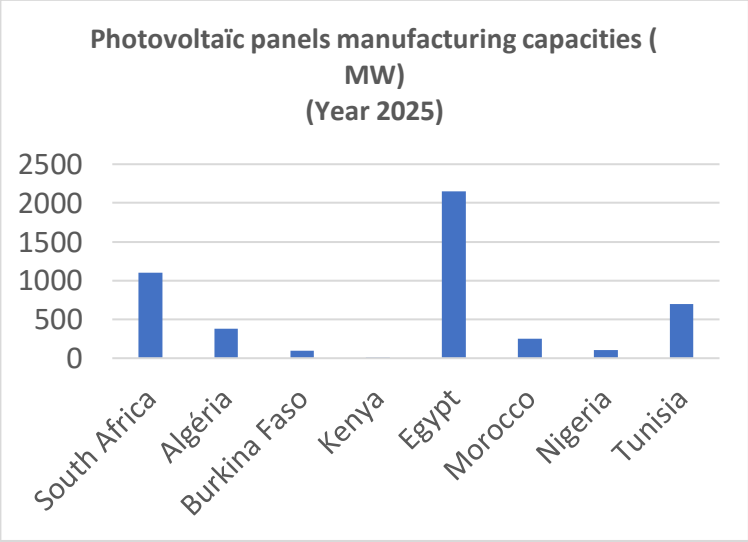
The macroeconomic approach compares the following aggregates at the level of the African continent as a whole for solar cells and photovoltaic panels:

- Installed manufacturing capacity
- Production volumes
- Imports
- Exports
- African market

Installed solar panel manufacturing capacity on the African continent

Based on data collected by the Observatoire Europe-Afrique 2030, the cumulative annual production capacity of the 13 African solar cell and panel manufacturers is projected to be approximately 4.8 MW in 2026.

South Africa and Egypt account for 68% of this production capacity.



Source : Observatoire Europe-Afrique 2030

In the absence of reliable data on the activity rates of the African companies surveyed, it is unfortunately not possible to quantify production volumes.

African market of photovoltaïc panels

Operational photovoltaic capacity on the African continent has grown significantly over the past three years, as shown in the table below. This strong growth has been driven by falling solar panel prices and a diversification of projects across the continent, with an increasing share of self-consumption and mini-grids.

	2023	2024	2025
Operational photovoltaic capacity on the African continent, at year-end (GW)	16,7	19,2	23,7
Additional capacity installed during the year (GW)	3,7	2,5	4,5

Source : ilboursa.com

Solar Panel Imports to the African Continent

Annual imports of solar cells and panels to Africa have recently seen strong growth. Between July 2024 and June 2025, the continent is estimated to have imported a total of 15 GW of solar panels, primarily from China, representing a 60% increase compared to the previous period.

The leading African importers of solar panels during this period are as follows, in order of importance:

- South Africa – The top importer, with 3.8 GW over the period
- Nigeria, with very strong growth
- Algeria, having increased its imports 33-fold in one year, reaching approximately 2.1 GW between July 2024 and June 2025
- Morocco, with domestic production rising sharply
- Kenya, among the top 10 African importers
- Tunisia – 6th place, with 655 MW imported over the same period.

Exportations de panneaux solaires depuis le continent africain

Exports of solar panels remain very limited. A few countries stand out for their export capacity, but the volumes exported remain marginal on a global scale:

- Tunisia has historically been a pioneer in solar panel production in Africa. It exported panels in the 2000s, but is now primarily an importer. It occasionally exports to other African countries.
- Morocco is beginning to export a portion of its solar panel production to other countries on the continent.
- South Africa is developing a local solar panel manufacturing industry. It could eventually become a significant exporter to neighboring countries.

Bilan offre-demande

A comparison of the data above inevitably raises the following question: How can we explain the ratio of approximately 1 to 4, on a continental scale in Africa, between the total supply of

solar cells and panels (local manufacturing + imports) on the one hand, and the additional capacity installed in solar farms and mini-grids in 2025 on the other?

"Supply-demand" comparison of photovoltaic cells and panels

across the African continent (in GW)

	GW
Cells and panels manufactured in Africa	4,8
Panels imports	15
Panels exports	negl.
Total « Supply »	19,8
Total « Demand »	4,5

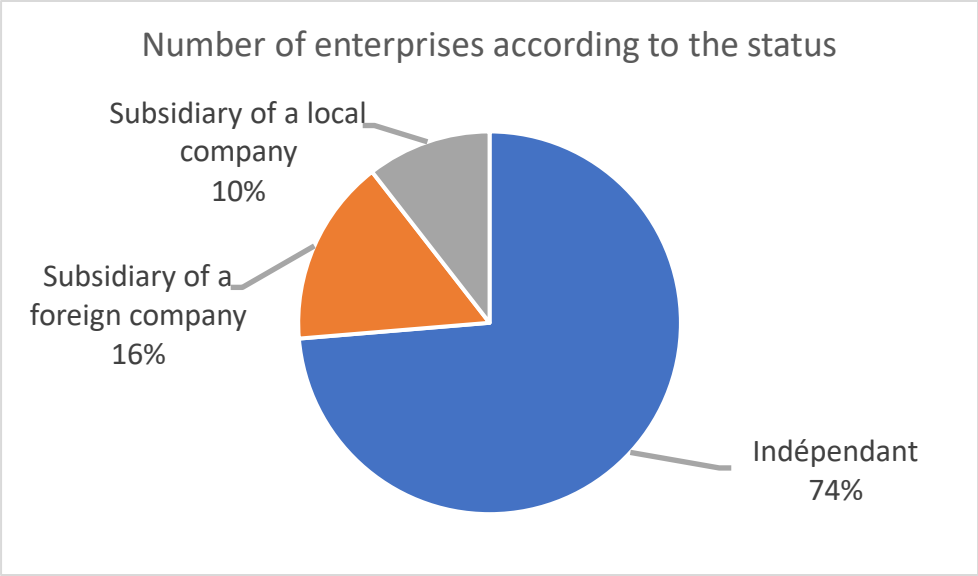
Several factors could explain this discrepancy:

- Not all imported panels are installed immediately. Some may be stored while waiting for power plants to be built, financing to be finalized, or infrastructure (grids, labor) to become available.
- Some of the imports are used to replace defective or end-of-life panels.
- Some imported panels are intended for projects currently under development, but not yet operational (due to administrative, technical, or financial delays).
- Some of the imported panels may be re-exported to other continents, especially if certain countries serve as logistics hubs (such as South Africa or Morocco).
- Many solar projects in Africa depend on external financing (World Bank, Green Funds, etc.). Disbursement delays can slow down installation despite the importation of equipment.
- The lack of stable power grids, skilled labor, or efficient supply chains can delay the installation of imported panels.

3.2 Enterprise status

Of the 13 solar panel manufacturers surveyed:

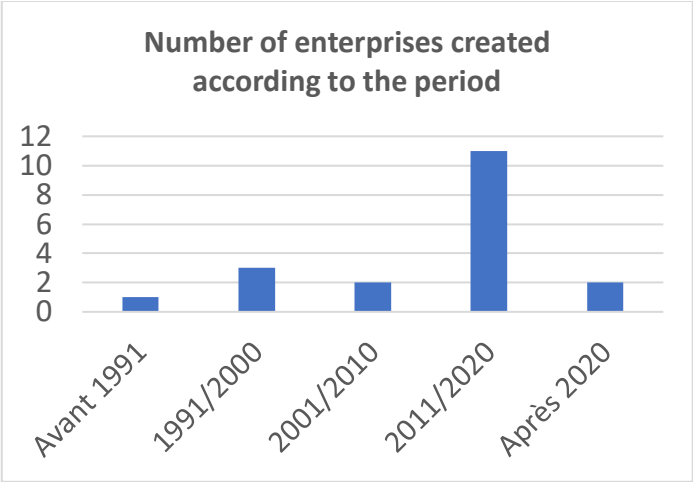
- 10 are independent companies
- 2 are subsidiaries of Chinese groups (Almaden (Morocco) and Seraphim (South Africa), a subsidiary of Jiangsu Seraphim Solar System Co. Ltd (China)
- 1 is a subsidiary of an African group



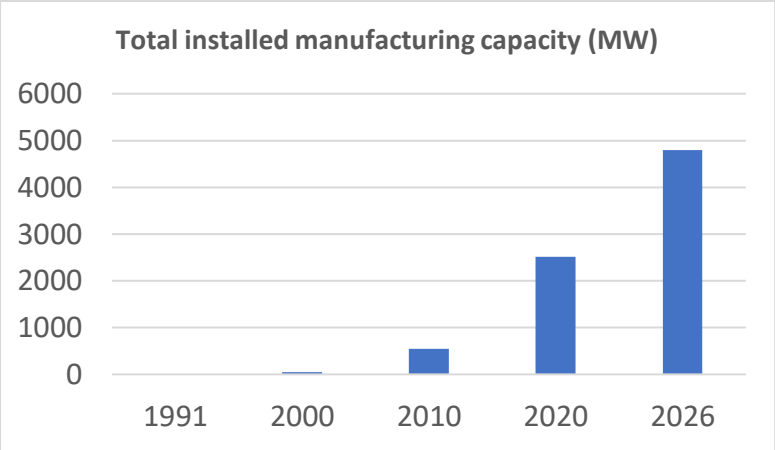
3.3 Timing of Investments

Investments in solar cell and panel manufacturing took off during the 2010s and 2020s, with individual capacities ranging from a few dozen to a few hundred MW per year.

No significant investments were made during the 2020–2024 period.



In 2026, a large-scale project was launched in Egypt. The investment announced by ATUM Solar, with a capacity of 2 GW, has led to a sharp acceleration in the growth of installed capacity across the African continent. Several similar projects are in the planning stages in Egypt, but are not included in the chart.



3.4 Local value added

The five main steps in the manufacture of solar panels are as follows:

- Production of "metallurgical" silicon. This involves a reduction process using a mixture of silica particles (usually quartz) and wood. The mixture is then heated to a very high temperature (around 3,000°C) before being purified to 99.9999% purity. This yields solar-grade silicon in the form of "small pebbles" or crystals. These are then fired at nearly 1,450°C to create silicon ingots.
- Once cooled, the ingots are cut into wafers no thicker than 200 microns—about the thickness of a sheet of paper.
- Silicon wafers undergo an anti-reflective treatment, which gives them a characteristic blue color, in order to increase the amount of light absorbed. They are then doped by adding phosphorus or boron.
- An electrical circuit is printed on the surface of the wafer so that the collected current can be transferred.
- The cells (between 48 and 72 per panel) are then connected, soldered, encapsulated between a glass plate and a polymer layer, and framed to form a photovoltaic panel.

Among the 13 identified manufacturers of solar cells and panels:

- Half of them perform cutting, molding, and welding operations, as well as final assembly.
- Four of them are limited to end-of-line assembly operations.
- For five of them, this information is not available.

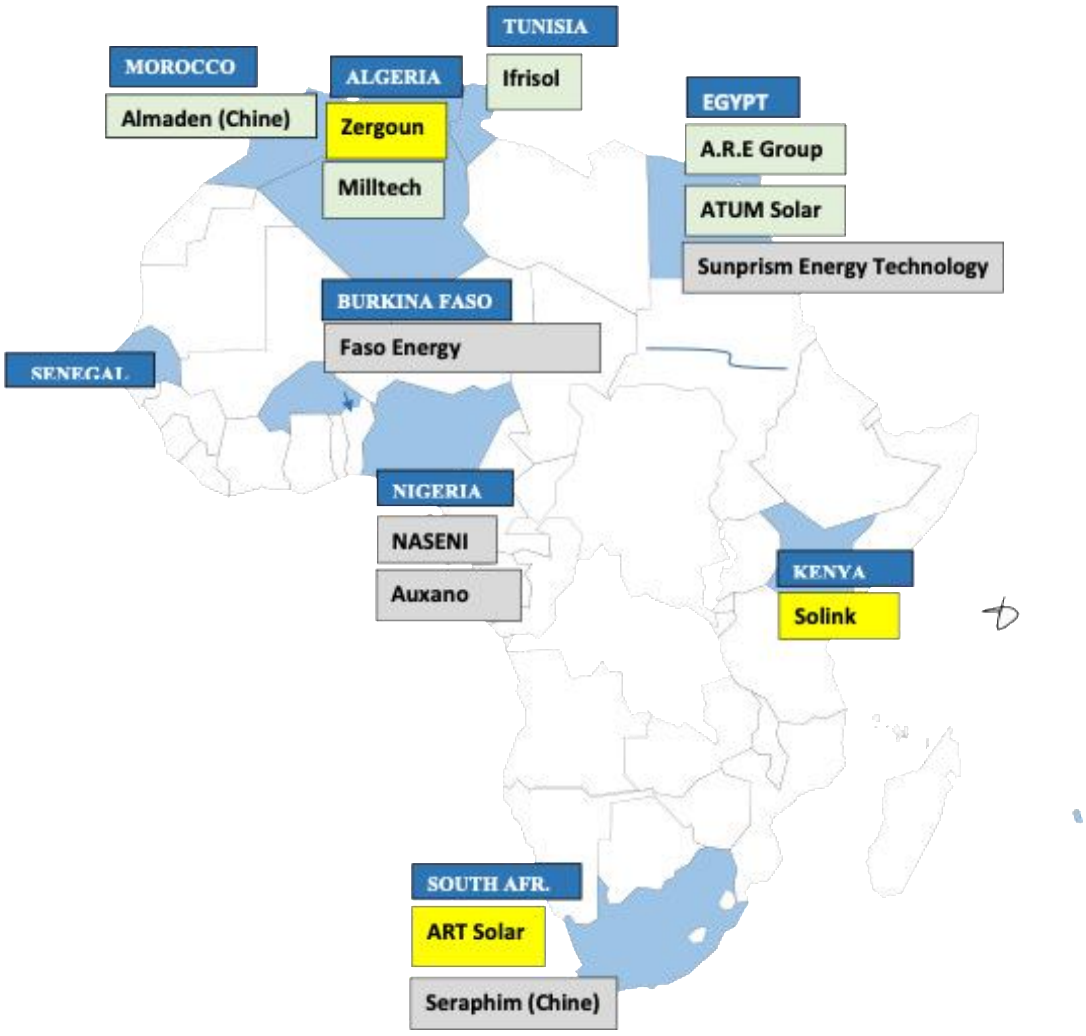
The following color code is used in the map on the next page to indicate the level of local value added for each company:

"Medium" to "high" level of local value added. The company designs and manufactures a significant portion of its products' components on African soil.

"Low" level of local value added. The company primarily performs assembly operations on imported kits on African soil.

Company for which information is not available.

Value added produced by the enterprises



4. Solar-powered equipment manufacturers

The six manufacturing companies identified all incorporate solar panels into their products. They do not manufacture solar panels themselves: streetlights, portable chargers, inverters, and individual lighting kits.

- Greenage Technologies Power Systems (Nigeria) manufactures solar inverters
- Lagazel (Burkina Faso, Senegal, Benin) manufactures solar lamps
- Quadloop (Nigeria) manufactures solar lanterns
- Microcare (South Africa) manufactures solar inverters and controllers
- Multi-Industries Group (Senegal) manufactures solar lighting
- Zuhura Solutions (Kenya) manufactures solar-powered tricycles

These companies are micro-enterprises or small and medium-sized enterprises (SMEs). For example, the combined annual production of solar lamps and lanterns does not exceed a few hundred thousand units.

By comparison, despite the highly fragmented nature of the available data, imports of solar lamps and lanterns are on a much larger scale. Thus, in 2023, it is estimated that more than 35 million solar lanterns were distributed in Africa. The partnership between Himin Solar and the African Development Bank alone enabled the delivery of 2 million solar lanterns to West Africa in the third quarter of 2023.

The share of African manufacturers in the market for these products is therefore quite marginal compared to imports.

5. Which perspectives and opportunities fot the european enterprises ?

The main strength of the solar cell and panel manufacturing sector in Africa lies in the size of the “theoretical” market across the continent. Many domestic markets are experiencing strong growth, with four leading countries (South Africa, Morocco, Egypt, and Nigeria). In 2024, South Africa and Egypt accounted for 78% of new installations, with large-scale photovoltaic power plants dominating (72% of the total).

However, three factors are dampening the appeal of this green sector for potential foreign investors:

- To date, no European or American manufacturer has entered this market. The two subsidiaries of foreign groups identified are Chinese.
- There is uncertainty surrounding the figures regarding the actual level of demand for solar panels on the African continent.
- Recent years have seen little growth in new manufacturing capacity.

In light of recent developments, however, the situation could take a more positive turn in Morocco and Egypt. For European investors, opportunities may arise to invest capital in a joint venture.

Morocco has structured its strategy for developing the solar panel manufacturing sector around several key areas:

- Launch of integrated investment programs, including the construction of solar panel manufacturing facilities, such as the Almaden plant (Al Hoceima), and the development of solar photovoltaic power plants, particularly in the provinces of Tangier-Assila and Tetouan. These projects are part of an effort to create a complete value chain, from production to installation.
- The country has shifted its strategy toward solar photovoltaics combined with battery storage systems, gradually phasing out concentrated solar power due to its high costs and technical challenges
- The "Moroccan Solar Plan" sets ambitious targets (4 GW of solar energy by 2030) and encourages private sector participation, particularly through tenders and public-private partnerships.

Egypt's strategy for developing the solar panel manufacturing sector is based on three key pillars:

- Construction recently began on an integrated industrial complex in the Suez Canal Economic Zone, dedicated to the manufacture of solar cells, photovoltaic panels, and energy storage systems. The complex aims to achieve large-scale industrial production by 2026, with a local content rate of up to 90%.

- The country encourages partnerships with private sector actors and international donors to finance and develop large-scale solar projects. The African Development Bank has provided $184 million in financing for the Obelisk solar project (1 GW) and a 200 MWh storage system, which will be operational by 2026.

- To effectively integrate new solar capacity, Egypt is investing in upgrading its power grids and in storage solutions to maximize the benefits of solar energy and meet peak demand.