

STUDY SUMMARY

Satellite data, key allies for energy network management

Fact Sheet 6

To go further: resources, tools and communities

Because it doesn't all end on the last page



Large platforms for exploring a territory

These platforms provide access to spatial and cartographic data useful for analyzing a country, region or specific area.

GIS Catalogue for Energy Planning in Africa (IEA)

🗺️ A geographic database (GIS) on Africa: population, electricity networks, natural resources, consumption centers, etc.

💡 Useful for obtaining a global view of a territory to be electrified

🔗 [Free access](#)

Microsoft Building Footprints

🏠 Provides access to the footprints of millions of buildings detected by AI (36 million in Nigeria, 11 million in Tanzania, etc.).

💡 Used to estimate building density or identify areas with potential high demand.

🔗 [Free access on GitHub](#)

Africa Knowledge Platform (JRC)

📁 Platform that centralizes several decision-making tools (CEAP, CEAT) and data on energy access.

💡 A single point of entry for prioritizing, planning, or comparing areas.

🔗 [Free access](#)



Tools for estimating, simulating and deciding

These tools help you answer concrete questions: where to electrify? with what technology? at what cost?

Open Energy Maps

- 🔍 Estimates electricity demand at the building level, even without a meter.
 - 💡 Perfect for targeting unmetered areas and anticipating consumption.
 - 📍 Covers Ghana, Senegal, and Uganda.
- [Free access](#)

IRENA Electrification Planning Platform

- 🏠 Generates technical and economic scenarios: network extension, mini-grid, or individual solar.
 - 📊 Helps compare the most cost-effective options depending on the context.
- [Free access](#)

ESMAP – Global Electrification Platform

- 🗺️ Interactive tool for mapping needs, simulating electrification plans, and integrating renewable energy and storage
 - 👤 Ideal for national or regional planners.
- [Free access](#)

CEAP – Clean Energy Access Prioritiser

- 🎯 Prioritizes areas for electrification by combining demand, environmental, and socioeconomic data.
 - 📍 Useful for choosing where to intervene first.
- [Free access](#)

CEAT – Clean Energy Access Tool

- 🏫 Targets schools, health centers, and refugee camps: identifies the best technical solutions for each type of social infrastructure.
 - 📊 Helps plan projects with high social impact.
- [Free access](#)



To go further in technical analysis

These more specialized solutions make it possible to monitor infrastructures, anticipate risks, or automate image processing.

- 🌐 Public tool for monitoring ground movements across Europe (slides, subsidence).
 - 💡 Soon to be expanded to other regions.
- [Open data](#)

EGMS – Copernicus

- 🌐 Private provider of high-frequency radar (SAR) data.
 - 💡 Allows monitoring of sensitive areas (extreme weather, ground deformations), even without visibility.
 - 💰 Paid – by subscription or specific order.
- [Official website](#)

ICEYE

- 📏 Measure ground deformations of a few millimeters, detecting instabilities or invisible impacts.
- 💡 Very useful for predictive maintenance or post-disaster monitoring.

SAR/InSAR data

- 🤖 A French company using satellites and AI to monitor energy assets, detect anomalies, and assess event impacts.
 - 💡 Advanced management tools for operators and asset owners.
 - 💰 Commercial offer – usually subscription-based or via tailored services.
- [Discover](#)

KAYRROS



Actors to know and follow

For each actor, a site to explore and contact channels:

Actor	Type	Link / Contact
ESA – Agence spatiale européenne	Public space agency	esa.int
IRENA	International Renewable Energy Organization	irena.org
World Bank – ESMAP	World Bank Platform	esmap.org
MIT Energy Initiative	Research / Open Energy Maps	energy.mit.edu
JRC / CEAP – CEAT	European Commission / Joint Research Centre	africa-knowledge-platform.ec.europa.eu
ICEYE	Commercial SAR radar data	iceye.com
KAYRROS	AI + Satellite for networks	kayros.com