

# Africa energy context

Italy for Climate  
Stakeholder Forum sul Clima

**Roberto Vigotti**  
Secretary General

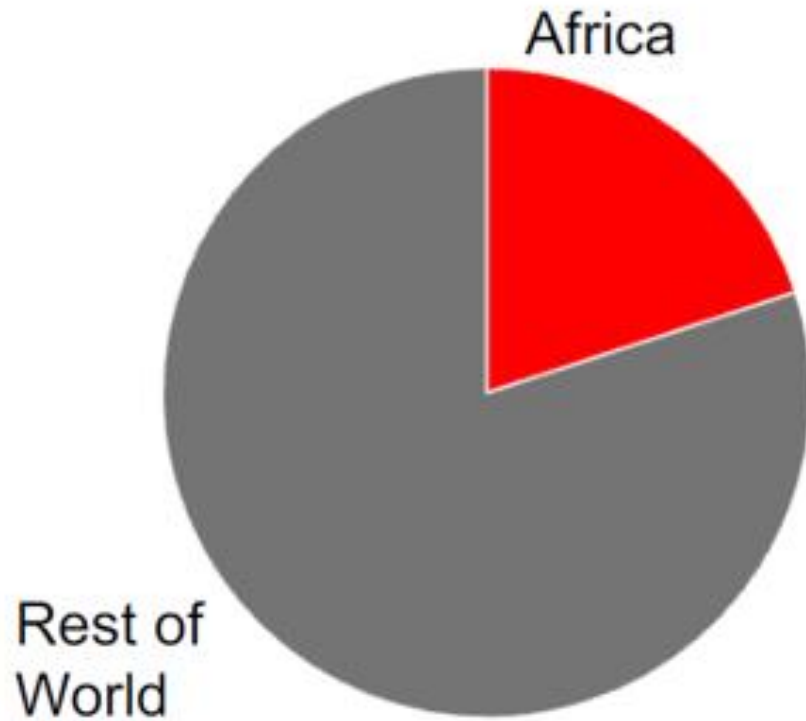


## Africa's natural and human capital give it a competitive edge with many of these technologies.

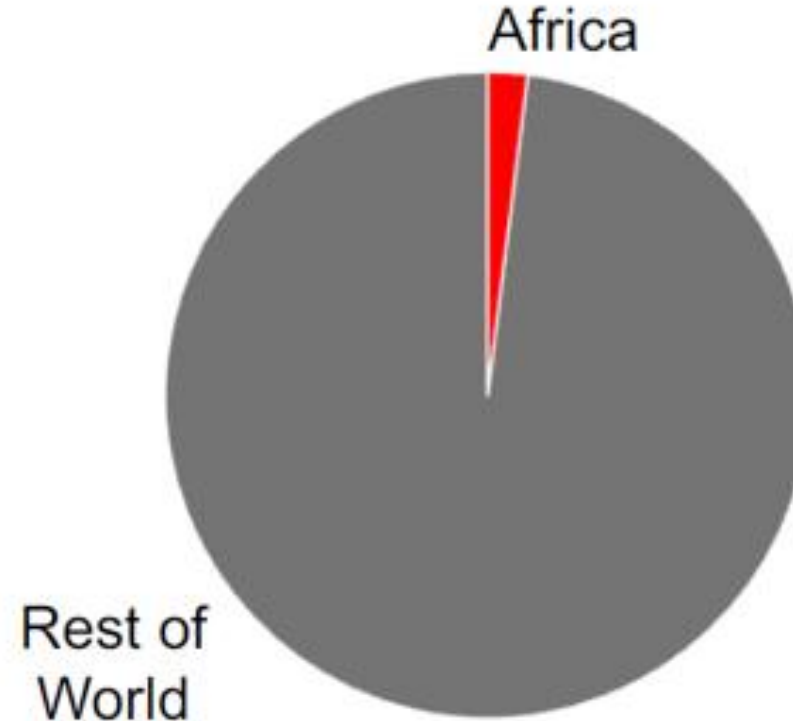
- the **world's richest solar resource**, with 1.4 million terawatt-hours (TWh) per year of potential (*50 times the world's total electricity consumption*), plus
- **30% of the world's critical mineral reserves**, soils that have not yet been degraded by decades of extractive farming, and a
- **workforce** that will swell to **800 million people by 2050** – including a population of college graduates that is growing at nearly 9% per year.

# Africa clean energy challenge

Population



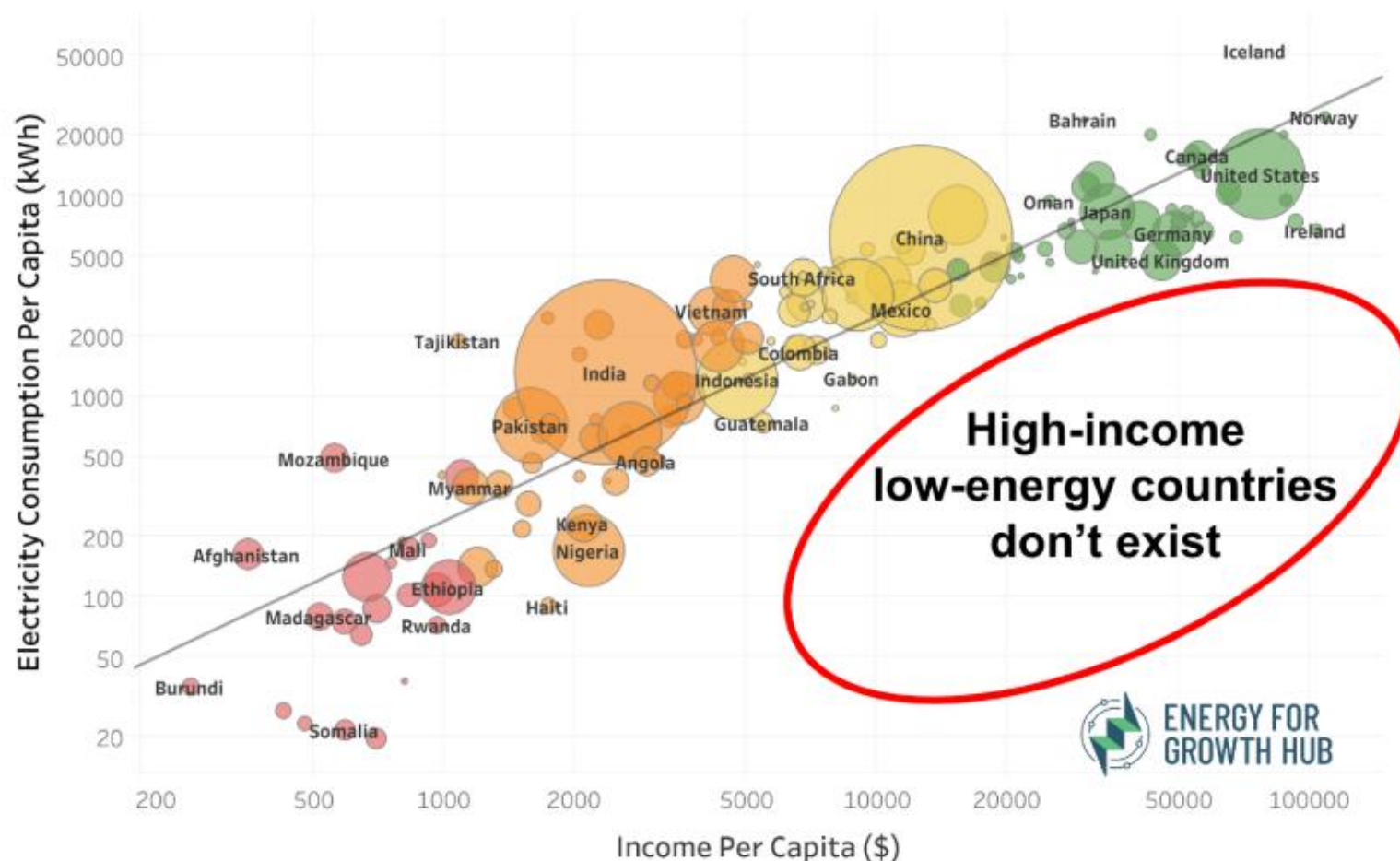
Clean energy investment



Source: IEA, Leibreich Associates

# The strong relationship between electricity consumption and income

Electricity consumption vs Income per capita, 2022



Sources: Our World in Data/Ember, World Bank

Notes:  $R^2 = 0.83$ ; both axes logged; data is for 2022, circles scaled to population; colors indicate WB income groups

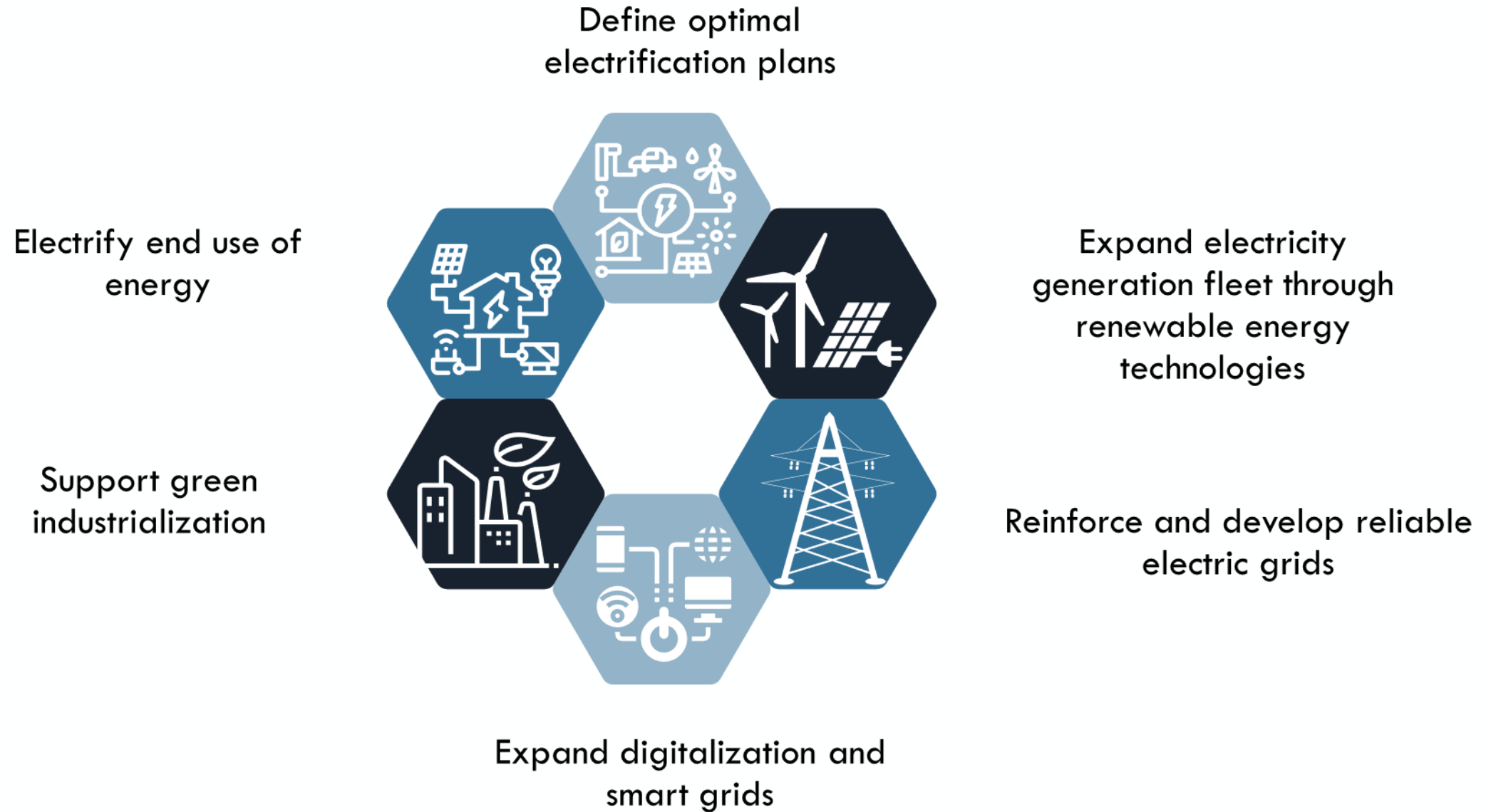
# Electrification is at the heart of energy security

**Electricity is increasingly being used** in place of fossil fuels **to provide heat, mobility and industrial energy demand.**

Innovations such as **smart grids and advances in the efficiency of electric motors and appliances** have also boosted the appeal of electricity.

The **share of electricity in total final consumption rises more rapidly** than in the past in scenarios and across nearly all regions.

# The sustainable electrification in a nutshell





## Emergent Climate Tech in Africa

Across the continent, *African countries aren't just setting climate goals* – they are hunting for the **smartest, fastest, and lowest-cost path to economic transformation.**

Their priorities are clear: **expand energy access for millions still living in the dark, unlock industrialization, and build businesses that represent the future, not the past.**

Compared to so-called “developed” economies, **African countries are often less burdened by sunk costs in outdated infrastructure and status-quo bias**

# Growing Africa will see demand for energy, buildings, food and mobility grow 3-5 x by 2050

Demand growth from 2022 (●) to 2050 (●)



Note: Demand trends vary with modeling assumptions about Africa's growth pathway. For example, industrial heat demand growth by 2050 ranged from 1.2–8x in models reviewed for this paper. RMI graphic. Source: IEA, Energy for Growth Hub, World Bank

By 2050, **driving massive new demand for electricity, buildings, food, mobility, and the other products, services, and industries will enable Africans to live the lives they want to live.**



# What is needed - 1

- **Address the barriers and identify the African countries' need** for deploying renewable and clean energy.
- **Raise awareness about renewable energy technologies' realities and benefits** to enable countries to achieve a sustainable transition.
- **Africa's energy leaders need to take stand and be supported.**  
**Institutional training will hopefully help create awareness**, compare international benchmarks and provide tools for the planning.
- **Sustainable electrification is a long-term investment, necessary to unlock a stable economic transformation. Plans to increase access should not be evaluated based on short-term benefits only:** in the long run, **electrification is essential for sustainable economic progress.**

## What is needed - 2

- **Enhance the policy and regulatory framework to foster innovation and attract the private sector and investments.**
- **Improve access to and scale up renewable energy investments by de-risking project opportunities in Africa.**
- **Accelerating and improving renewables-related infrastructure is critical.** "no transition without parallel planning of transmission, distribution, storage, digitalization and electrification of end uses."
- **Supporting industrialization by investing in innovative technologies and high value sectors** by fostering public-private partnerships that could facilitate risk-sharing arrangements.