IRENA INNOVATION WEEK 2025

Creating value locally:

Supply chains and Skills

Organised in partnership with

SUSTAINABLE ENERGY FOR ALL

ILO International Labour Organization

12 June 2025 | 15:30-17:00

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IRENA INNOVATION WEEK 2025

Word Cloud

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What is the ONE word that comes to mind when you think of INNOVATION and supply chains in renewable energy?

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Scene Setting

Celia García-Baños

Programme Officer - Policy, Socioeconomics and Gender
IRENA

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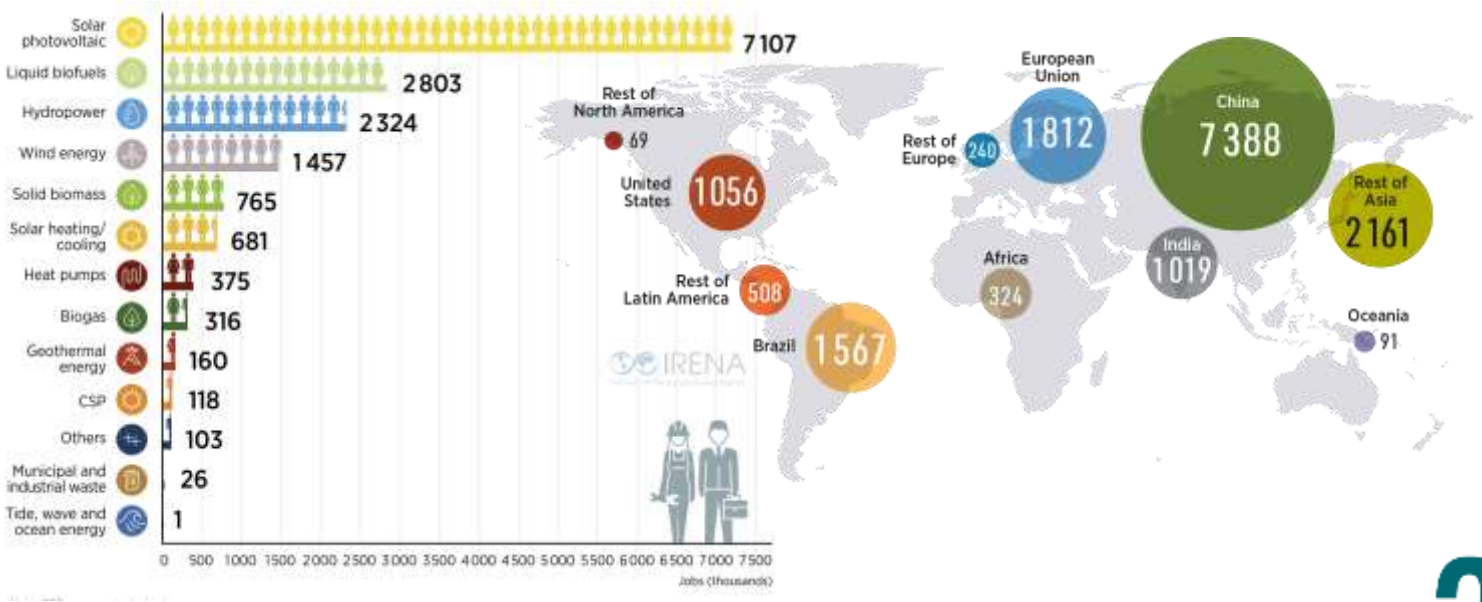
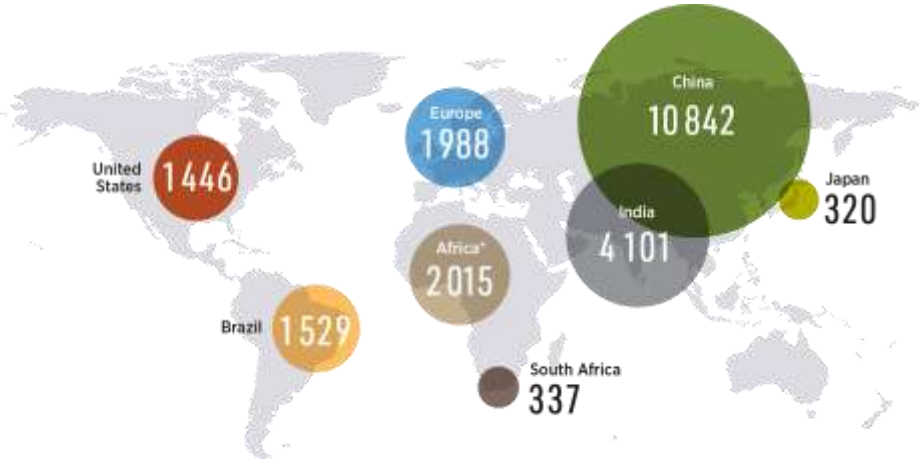
Renewable energy jobs in 2023 and in 2030 under pathway to 1.5°C

Jobs in 2023 across technologies and across the world (in thousands)



Expected jobs under the 1.5° C scenario in 2030 (in thousands)



16.2 million jobs in 2023

2x

PATHWAY TO 1.5°

30 million jobs by 2030

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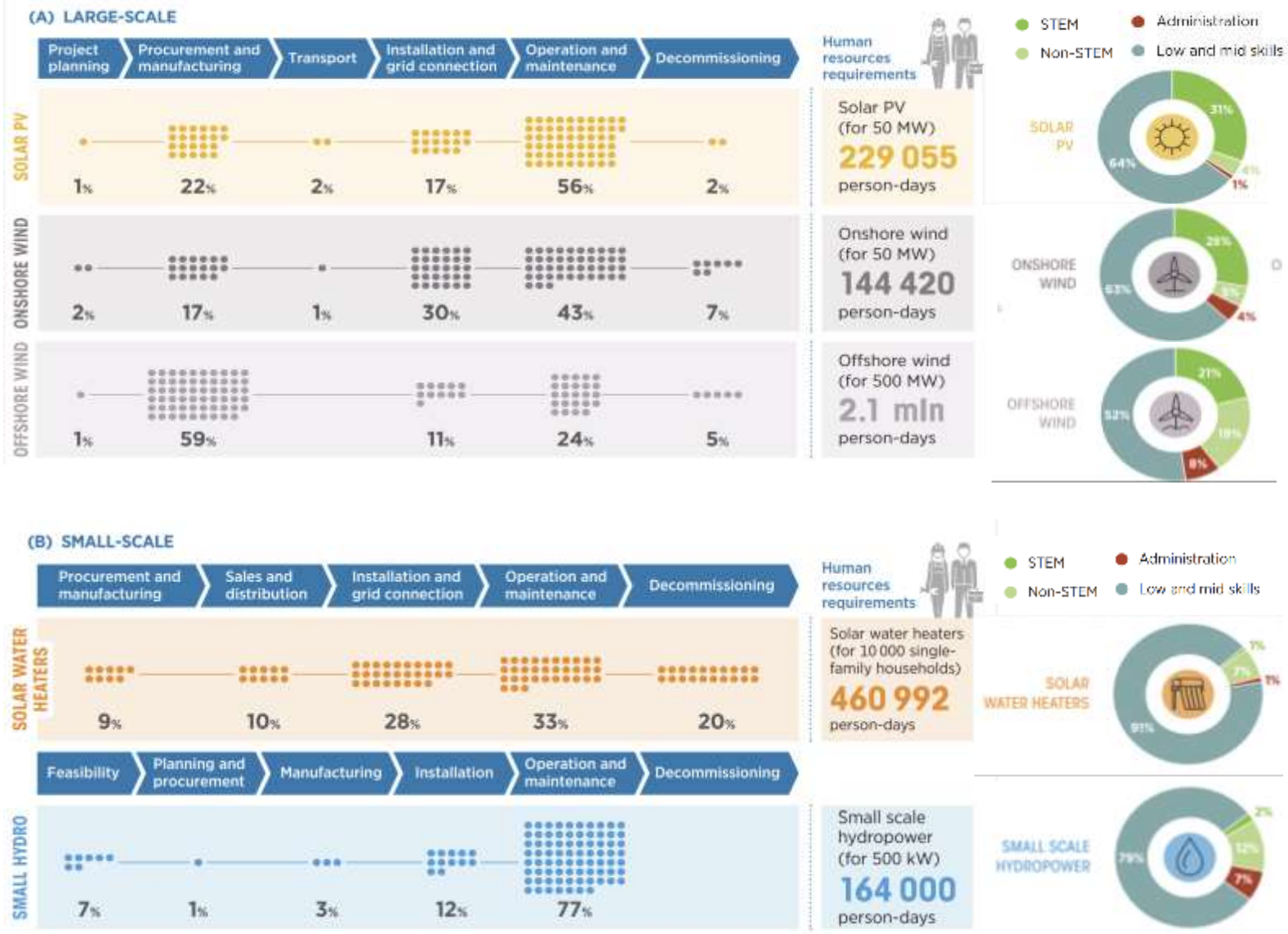
Capacities required across the value chain



- University Degrees
- Vocational and Technical Certification
- Apprenticeships
- Professional Training
- On-the-Job Learning

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Challenges to address to maximise value creation

Overcome Structural Barriers:

- Supply chain strengths and limits
- Fossil fuel structures
- Commodity, technology, trade dependence

Ensure Decent Jobs:

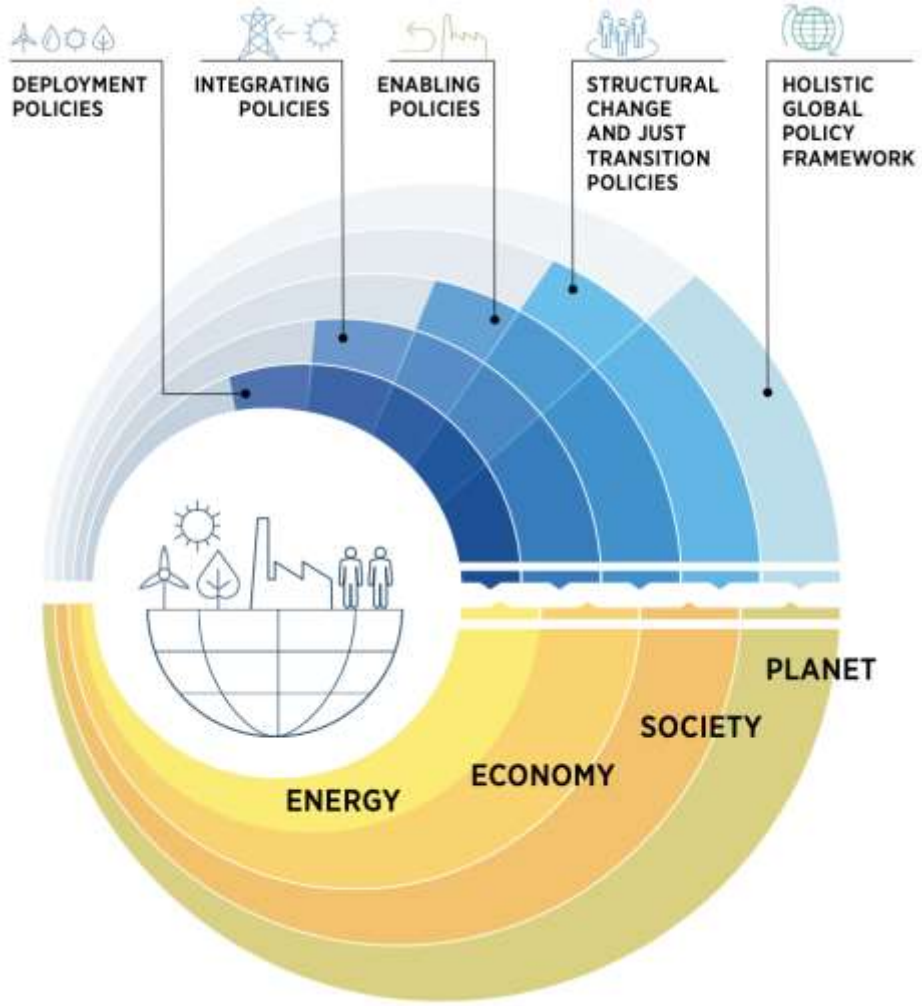
- Wages
- Workplace conditions
- Rights at work
- Collective bargaining

Address Labour Market Misalignments:

- Spatial misalignments
- Sectoral misalignments
- Temporal misalignments
- Occupational misalignments

Support Workforce Diversity:

- Gender
- Youth
- Minorities
- Marginalised groups



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Scene-Setting

Pavel Tereshchenko

Energy Analyst
Sustainable Energy For All

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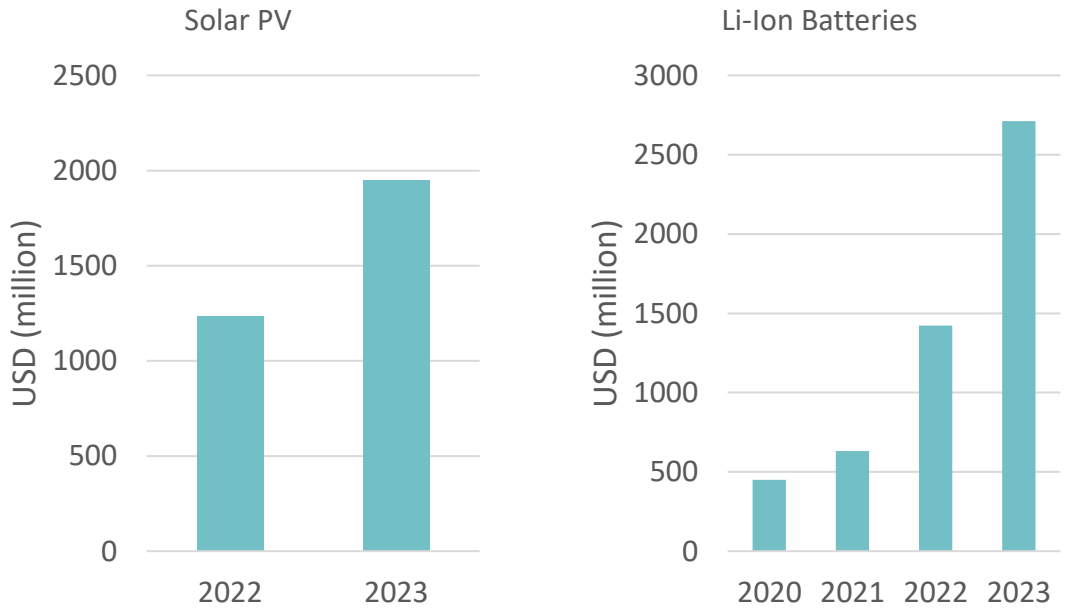
Energy Transition and Green Industrialization: A Socio-economic Development Opportunity for Africa

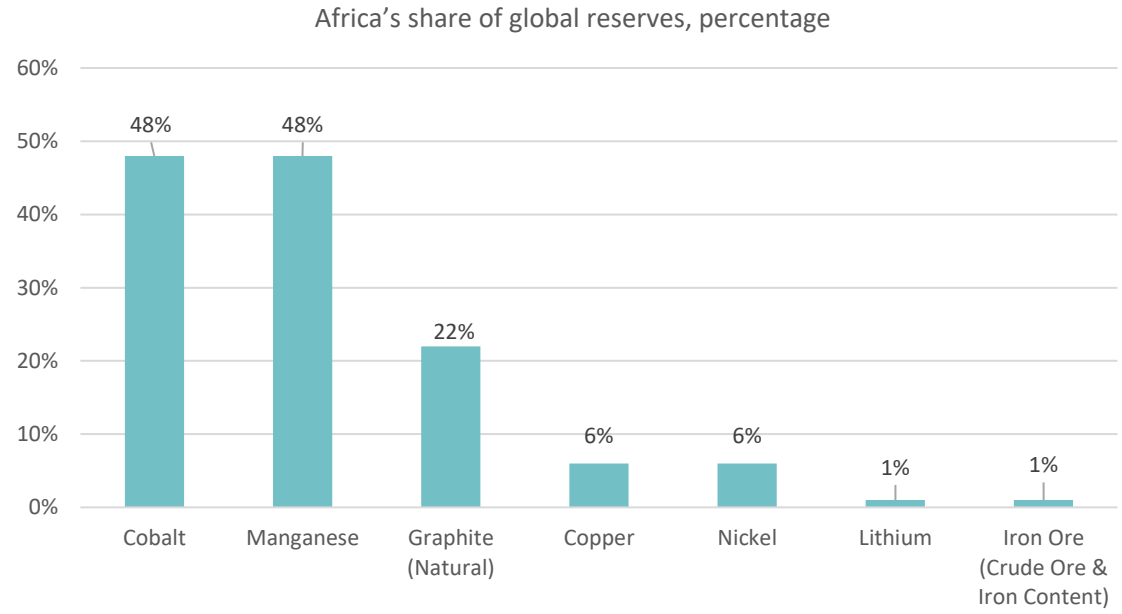
With growing ambition, countries looking to build local value chains for energy transition technologies with backward linkages to minerals to reduce import dependency, create local jobs and enhance resilience.

Solar module and lithium-ion battery imports into Africa



Source: SEforALL analysis based on UN Comtrade Database for HS Codes 854143 (Solar PV) and 850760 for Li-ion battery

Selected critical energy transition minerals reserves on the African continent



Source: UNCTAD calculations, based on data from the Knoema database, 2023

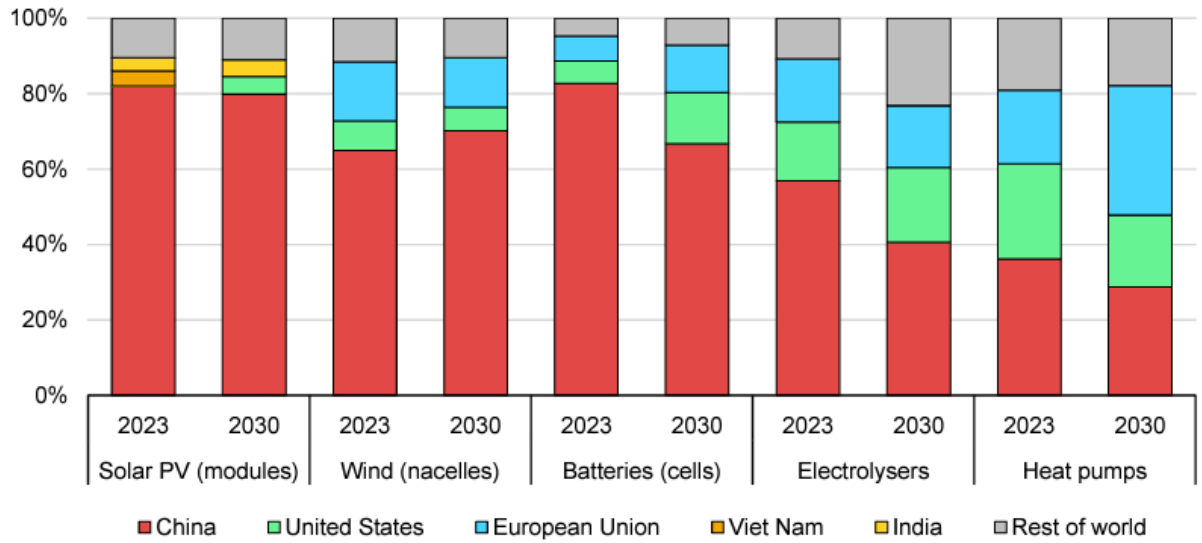
Energy Transition and Green Industrialization: A Global South Opportunity

Current trends in investments in new manufacturing capacity point to a trend of reinforcing existing hubs.

Clean technology manufacturing facilities, 2023

Source: IEA (2024), Energy Technology Perspectives 2024, IEA, Paris https://www.iea.org/reports/energy-technology-perspectives-2024, Licence: CC BY 4.0

Current and announced manufacturing capacity, 2023-2030

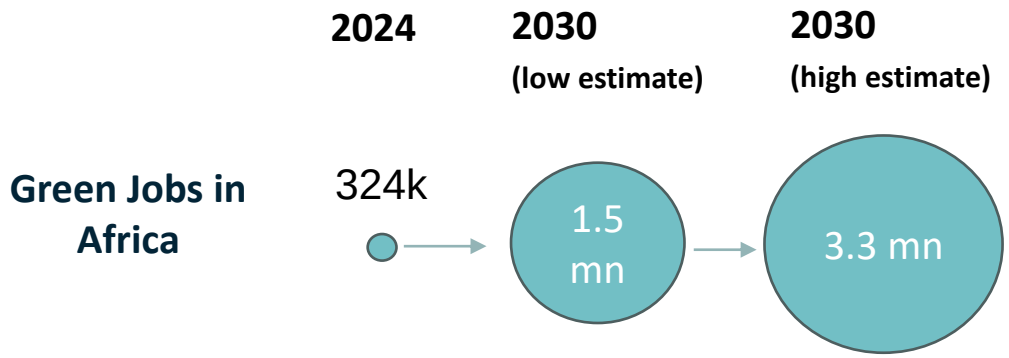


Source: IEA (2024), Advancing Clean Technology Manufacturing, IEA, Paris https://www.iea.org/reports/advancing-clean-technology-manufacturing, Licence: CC BY 4.0

Green Industrialization: an Opportunity

Key opportunities for local value chains

- Creating more jobs across renewable energy and manufacturing sectors.
- Accelerating industrialization and strengthening local industries.
- Enhancing resilience against global supply chain shocks.
- Unlocking opportunities across regional value chains.



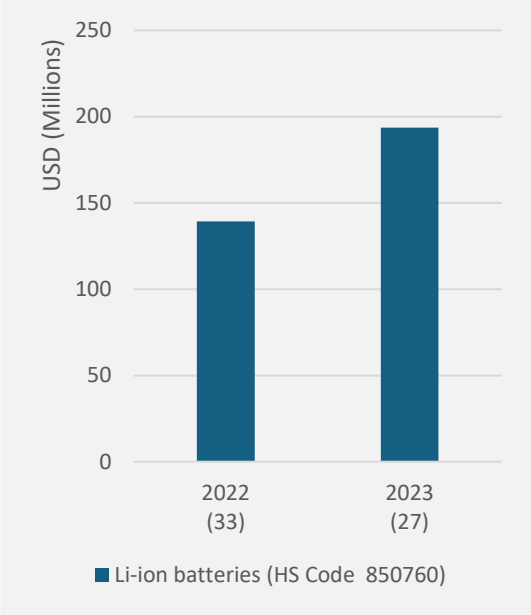
Source: IRENA and ILO (2024), Renewable energy and jobs: Annual review 2024, International Renewable Energy Agency, Abu Dhabi, and International Labour Organization, Geneva.

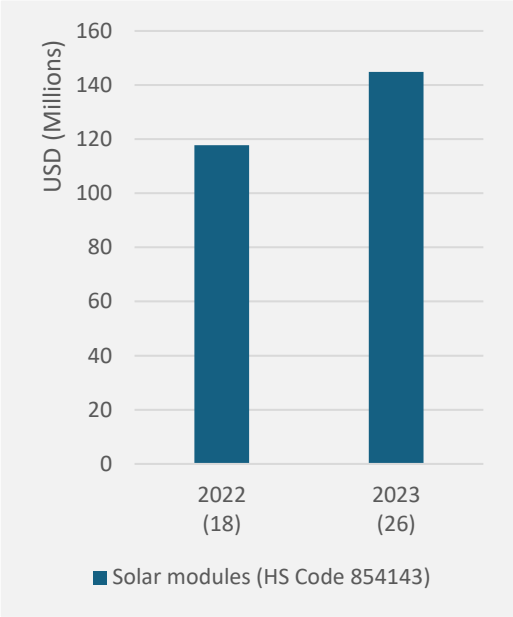
[1] SEforALL calculations based on labour intensity of 211 person-days/MW for module assembly as reported in IRENA (2017), Leveraging Local Capacity: Solar PV
[2] SEforALL calculations based on average module import cost of 0.22 USD/W from 2025 to 2035, with 20% value addition from cell to module assembly.

Opportunities for localization: Nigeria

Current demand opportunity

Solar module and lithium-ion battery imports in Nigeria





Source: Analysis based on data from UN Comtrade,

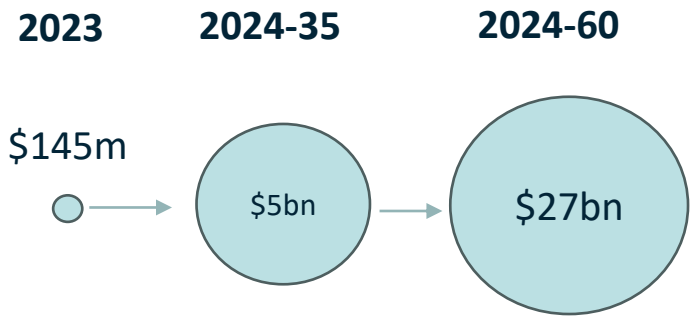
Nigeria imported solar PV modules valued at over $145m in 2023, up from about $118m in 2022.

Lithium-ion battery imports rose from $140m in 2022 to nearly $200m in 2023.

Projected import growth to meet domestic demand

ETP
Nigeria's Energy Transition Plan

PV module imports value (est, nominal)



Localization pathways

50%
local module assembly by 2035

2.5 GW of total module assembly

Ramp up existing 100 MW+ assembly capacity to 2.5GW by 2035

Impact opportunity to 2035 (excl. exports)

2.7m
person-days more employment in value chain[1]

$560m
value addition from local assembly[2]

$250m
investment in local assembly capacity

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[1] Based on labour intensity of 211 person-days/MW for module assembly as reported in IRENA (2017), Leveraging Local Capacity: Solar PV
[2] Based on average module import cost of 0.22 USD/W from 2025 to 2035, with 20% value addition from cell to module assembly.

SEforALL Green Industrialization Hub

Strengthening regional and country-level efforts to develop local value chains for energy transition technologies in the Global South, supporting industrialization and socio-economic development goals.

Africa Renewable Energy Manufacturing Initiative

Advancing renewable energy manufacturing for solar PV modules, batteries and electric vehicles in Botswana, Ghana, Kenya, Nigeria, Senegal, South Africa, and Tanzania focusing on industrial policy design, skills, enterprise support and investment facilitation.

COUNCIL FOR CRITICAL MINERALS DEVELOPMENT IN THE GLOBAL SOUTH

Building government-led platform to facilitate south-south collaboration and deliver tailored support towards upstream critical minerals supply chain development with forward linkages to manufacturing.

asean

Supporting the implementation of the ASEAN Mining Development Vision and the ASEAN Carbon Neutrality Strategy on regional green value chains.

Africa Renewable Energy Manufacturing Initiative: Pillars of Work

Africa Renewable Energy Manufacturing Initiative

SUSTAINABLE ENERGY FOR ALL

Policy:
Partner with governments to inform policy and incentive design to support domestic renewable energy manufacturing leveraging extensive stakeholder engagement and south-south experience sharing

Capacity Building
Strengthen Africa's manufacturing workforce and companies of the future by facilitating trainings and curriculum development for technical and non-technical skills related to renewable energy manufacturing by leveraging south-south cooperation

Demand Stimulation & Investment Facilitation

Engage with public initiatives and donor programmes to stimulate demand for domestic products, while extending end-to-end support to supply-side enterprises on financing and matchmaking across markets in Africa and other regions, including Asia

Market Intelligence

Deliver data-driven assessments and analysis on market sizing, financing opportunities, policy and institutional landscape to guide decision-making by policy makers, development partners, investors and local and international private sector players

Focus countries:

Botswana Ghana Kenya Nigeria Senegal South Africa Tanzania

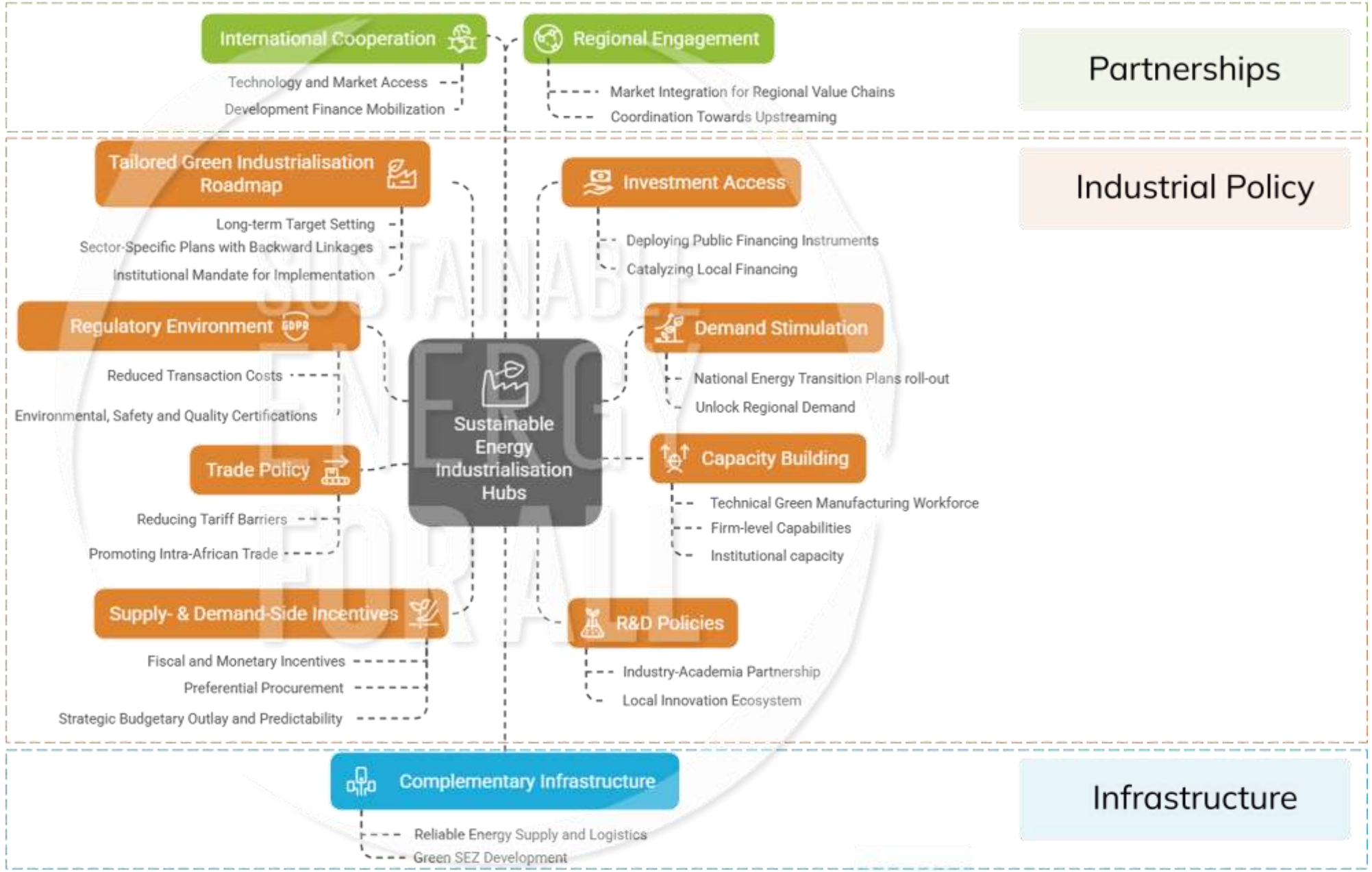
Green Manufacturing Policy & Investment Guides

Catalyzing Renewable Energy Manufacturing in Ghana Roundtable, November 2024

Moving Forward

Key learnings
Lack of country-level data to guide localization pathways
Limited access to curricula and educational infrastructure for green manufacturing skills
Constrained foresight on critical mineral demand to support the energy transition
Ambiguous policy landscape for green manufacturing

Spearheading Green Industrialisation



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Panel discussion

Moderator

Ute Collier

IRENA

Panellists

Fabian Barrena

Agora Energiewende

Fadhel Kaboub

Global Institute for Sustainable Prosperity

Lanz Gabriel Jabla

Yamog Renewable Energy Development Group

Omobola Omofaiye

Levene Energy

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Audience Q&A

What is the ONE word that comes to mind when you think of INNOVATION, local value, supply chains, and skills in renewable energy?

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Thank you!

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Reception at the City Hall

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