

Overview of AfDB's Energy Initiatives

Meeting With Energy And Health Business Councils Of Foreign Economic Relations Board (DEIK)

16th November 2023



AFRICAN DEVELOPMENT BANK GROUP
GROUPE DE LA BANQUE AFRICAINE
DE DEVELOPPEMENT



AfDB: At the Center of Africa's Transformation

UN Sustainable Development Goals (SDGs)



AfDB Ten Year Strategy 2013–2022

Twin objective: inclusive growth and transition to green growth

Operational priorities

Infrastructure development

3 4 5 6 7 9 10

Regional integration

6 9 16 17

Private sector development

5 8 17

Governance & accountability

5 7 8 9 16

Skills & technology

4 5 9 10 17

Areas of special emphasis

Fragile States

Agriculture & food security

Gender

AfDB 'High 5' priority areas

Light up & power Africa

3 4 5 7 9 13

Feed Africa

2 5 13

Industrialise Africa

5 7 8 9 12

Integrate Africa

6 9 17

Improve the quality of life for the people of Africa

3 4 5 6 8 10 11

The Mandate of The Power, Energy, Climate Change and Green Growth Complex is to implement the New Deal on Energy for Africa and deliver on the Bank's Climate/Green Growth Strategic objectives (SO/NSO)

KEY RESPONSIBILITIES



Originating, designing & implementing energy projects



Driving policy dialogue in the climate/energy space



Serving the entire Bank on Climate Change and Green Growth issues



Developing, implementing & driving innovative initiatives



Mobilizing climate finance at scale

TWO GOALS

Delivering on the first High 5 priority area “Light-Up and Power Africa” and meeting targets under the Bank’s Strategy for the New Deal on Energy for Africa

+160 GW of new grid capacity

+130 million new connections to the grid

+75 million new off-grid connections

+130 million households with access to clean cooking

Delivering the Bank’s strategy on transitioning to green growth while mobilizing climate finance at scale for all sectors in line with the Climate Change Action Plan

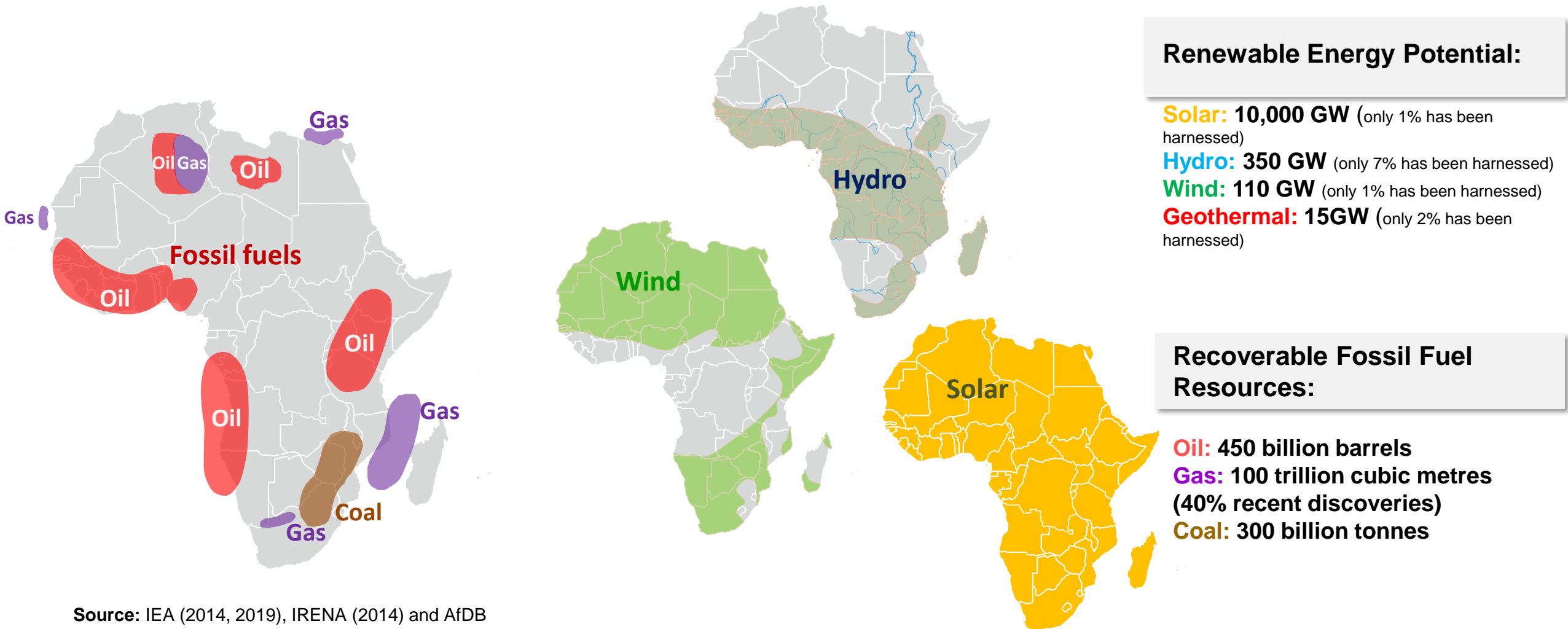
Increase climate finance share of all Bank investments to 40%

Mobilize a cumulative total of US\$25 billion of climate finance between 2020 and 2025

Achieve a 50/50 allocation between adaptation and mitigation finance

Context of Priorities

Africa is rich in energy resources ...



Source: IEA (2014, 2019), IRENA (2014) and AfDB

Context of Priorities

...but poor in terms of energy access and supply



Access to Electricity

Close to 600 million Africans lack access to electricity.



Clean Cooking

900 million don't have clean cooking solutions.



Energy Demand

Africa accounts for only 6% of global energy demand and little more than 3% of electricity demand.

Africa's share of historical emissions < 3%

Bank Group's Operation

NDEA predicated on understanding that Africa's economic transformation, and the realisation of development ambitions in various sectors, depends on reliable and affordable energy access

POWER GENERATION

TRANSMISSION & DISTRIBUTION

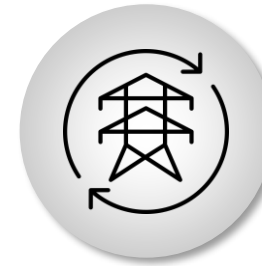
ACCESS TO ELECTRICITY

Expected impacts of 2016-2023 AfDB energy commitments

USD 8.3 billion approved from Bank resources between 2016-2022, 87% towards renewable energy projects. USD 950 million in co-financing resources mobilized.



3.4 GW of which **2.6 GW** from renewable energy sources



+ 7,744 km of transmission lines, of which 3,700 are regional interconnections
+ 75,000 km of distribution lines



+ 20 million people through grid and off-grid systems



Sector & Financing Expertise of the AfDB across the entire energy sector value chain

New focus areas

UTILITY TRANSFORMATION

- Financial sustainable sector
- Cost reflective tariffs
- Supportive regulatory environment

ENERGY EFFICIENCY

- Commercial/Industrial
- Public buildings & street lighting
- Efficient appliances

CLEAN COOKING

- Enabling environment
- Integration in energy access programs
- LPG & new business models (Pay-Go)

The Bank's operations contributing to Africa's energy transition

Morocco: 510MW Noor Ouarzazate |
World's Largest CSP Plant



Kenya: 310 MW Lake Turkana Wind Power
- Africa's largest wind farm



Kenya: MENEGAI
Geothermal Energy Development



Tanzania: JUMEME
Award-winning Mini-grid





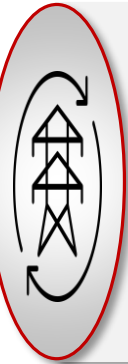
Synergizing Africa's Energy Agenda with Turkey's Investment interest

Opportunities

Growth in electricity access in recent years....and the Bank will continue to support Africa's low carbon trajectory



Electricity access rates increased from 44% to 56% between 2010 and 2020— but gains concentrated in a few countries. Africa requires **USD 100 billion annually to meet demand and SDGs between 2020 and 2040**



Access rates have increased mainly based on grid connections — 75% of the of the world's rural population are without access to electricity, therefore **decentralised energy systems will continue to gain traction** given the imperative to reach distant communities and the high cost of extending the grid.



The Bank will continue to extend and strengthen national and regional grids — To build strong regional power markets in a bid to accelerating universal energy access and fostering regional integration in Africa. The Bank has a **strong collaboration with the powerpools (SAPP, WAPP, EAPP, CAPP, COMELEC)**



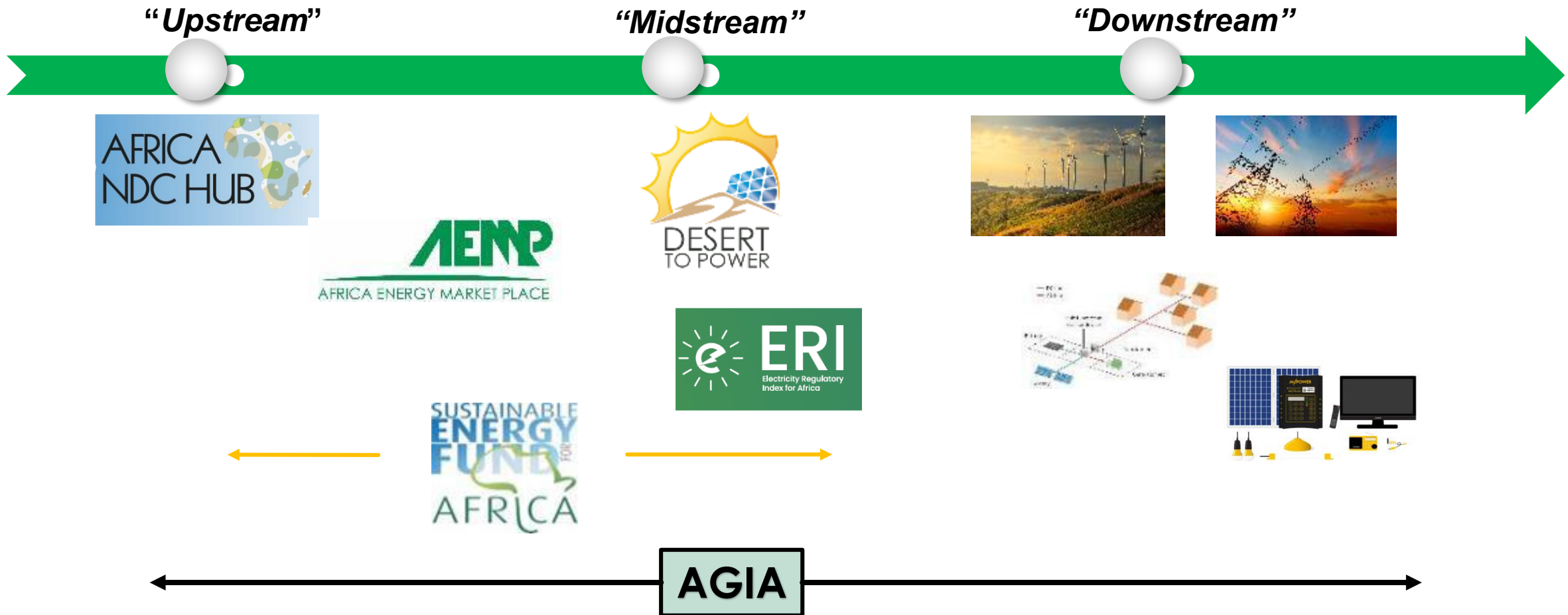
The Bank will support countries through all phases of their energy transition efforts

In order to accelerate the transition, the Bank will support:

“upstream” national-level planning processes

“midstream” enabling environment

“downstream” project-level interventions



Sustainable Energy Fund for Africa (SEFA)

SCOPE. Catalytic financial instruments to unlock private sector investment in renewable energy, from technical assistance to project finance.

- **Capital** Total capitalisation (paid-in and pledges) of US\$463 million from 10 donors.
- **Deployment SEFA 1.0** First cycle spanned an 8-year (2012-2019) and funded 71 projects in 30 countries for a total of US\$84 million.
- **Deployment SEFA 2.0** Second cycle initiated in 2020 and approved to date US\$128 million for 21 projects, including seven catalytic investments.

Three thematic areas



Green baseload

to increase the penetration of renewable energy in power systems, focusing on power systems stability and alternatives to fossil-fuel baseload generation options (e.g Gabon Kinguele Hydro project)



Green mini-grids

for underserved populations in rural areas



Energy efficiency

focus on optimising generation capacity and reducing energy intensity

Different instruments

Technical assistance

Reimbursable grants for project preparation, and grants for activities that will directly unlock investments

Concessional investment

Investment grants including results-based financing mechanism; **Junior equity** in intermediated structures; **Concessional debt** in project finance structures.

Eligibility

Private sector*

Proven track-record, some pre-feasibility work carried out, evidence of Government's endorsement, equity available or evidence of interest, project in countries with limited/no experience in RE, etc (TA and CI)

Public sector

Regional member countries, energy sector agencies, parastatals and regional bodies (only technical assistance).

Overview of the Desert to Power Initiative

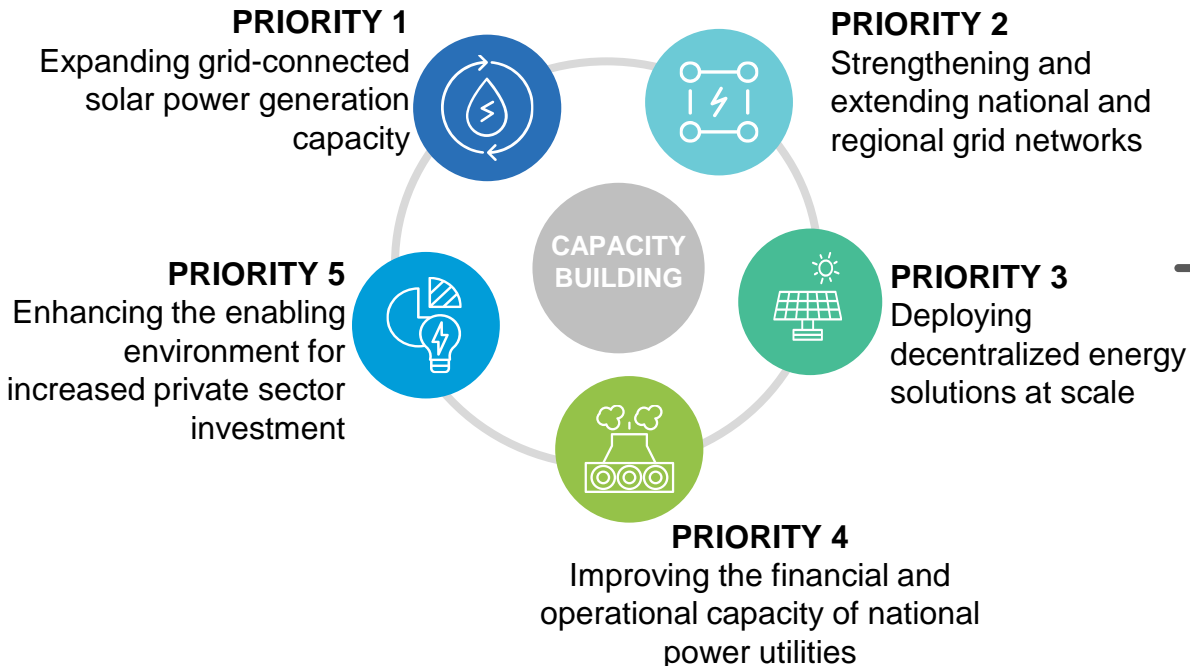


Build 10GW of new solar generation capacity to provide **electricity access** for up to **250 million people**

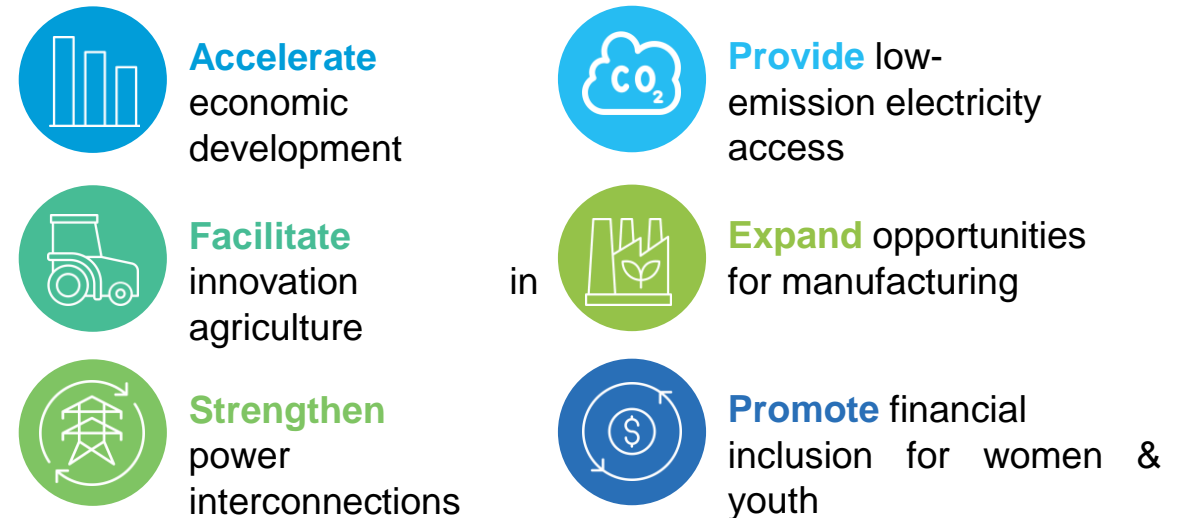
Implemented across 11 countries: Burkina Faso, Chad, Djibouti, Eritrea, Ethiopia, Mali, Mauritania, Niger, Nigeria, Senegal, Sudan

First Phase prioritized **G5 Sahel** - Burkina Faso, Chad, Mali, Mauritania and Niger. **Similar investments and opportunities** will be identified in the remaining Sahel countries.

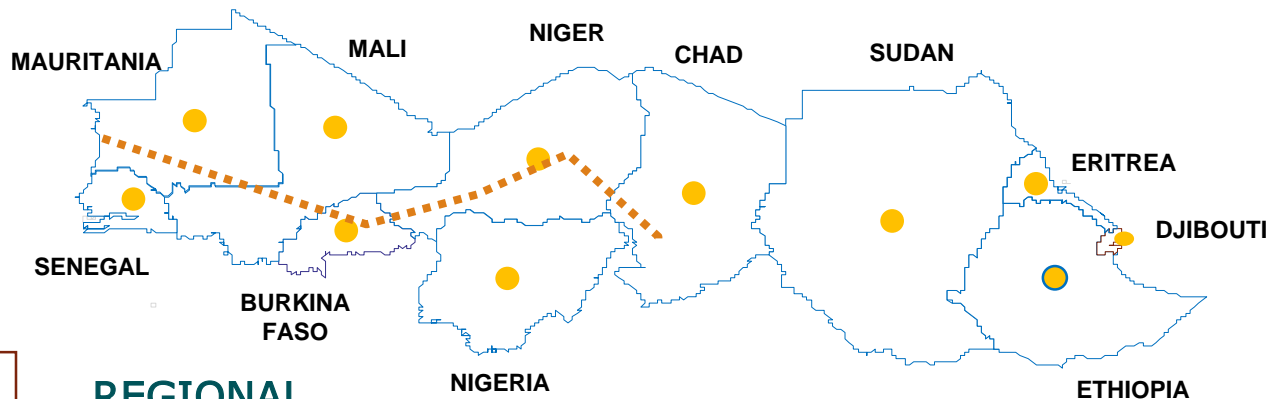
Key priorities



Expected results and impact



Implementation progress since the roll-out of DtP



BURKINA FASO

Yeelen On-grid

- 52 MWp
- 30 000 new households
- 200 000 beneficiaries

Yeelen Off-grid

- 23 MWp
- 100 000 beneficiary households

PEDECEL

Electrification Project

- 218 400 beneficiary households across 50 localities
- Will absorb generation from Yeelen

REGIONAL

- West African Regional Energy Program - WAREP (West Africa) Prefeasibility of the Trans-Saharan Backbone (5,725 km line) by West African Power Pool, ECREEE Regional Mini-grid Program

CHAD

- Djermaya 32 MW solar project
- 32 MWp installed capacity
- Supplying 10% of country's generation

NIGER

- Feasibility studies for regional solar parks, associated battery storage and grid investments
- RANAA – 40.5 MW Solar
- 40MWp installed capacity
- 0.5 MW of off grid capacity installed

TECHNICAL ASSISTANCE

- SEFA DtP Technical Assistance (TA) program for: Burkina Faso, Chad, Mali, Mauritania, and Niger Transition Support
- Facility TA to Chad, Mali, and Niger
- Mali Technical Assistance of under the Scaling-up Renewable Energy Program (SREP)
- SEFA project preparation support for Nigeria Jigawa Solar Program

SUDAN

- Solar PV powered pumping for irrigation
- Supports 1,170 farms by replacing the diesel-powered water pumps with solar PV

Opportunities for Turkish Investors (discussion)

- ❑ **Support to Africa's Just Energy Transition**
- ❑ **PPPs in Transmission Lines**
- ❑ **Development of Power Interconnectors**
- ❑ **Battery Energy Storage systems**
- ❑ **Commercial and Industrial Clients (C&I)**
- ❑ **Clean Cooking using natural gas**

Contact

Caroline Mwangi Makenzi
Principal Program Coordinator
Power, Energy, Climate & Green Growth Complex
African Development Bank
c.mwangi@afdb.org



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