ENERGY FORUM FOR AFRICA
CEO DISCUSSION
INNOVATIVE FINANCE

GREENCO

Member since 2021:

SAPP

Funded by:

InfraCo AFRICA

IFU

PID Private Infrastructure Development Group

Grant Support Provided by:

The ROCKEFELLER FOUNDATION

P4G Partnering for Green Growth and the Global Goals 2030

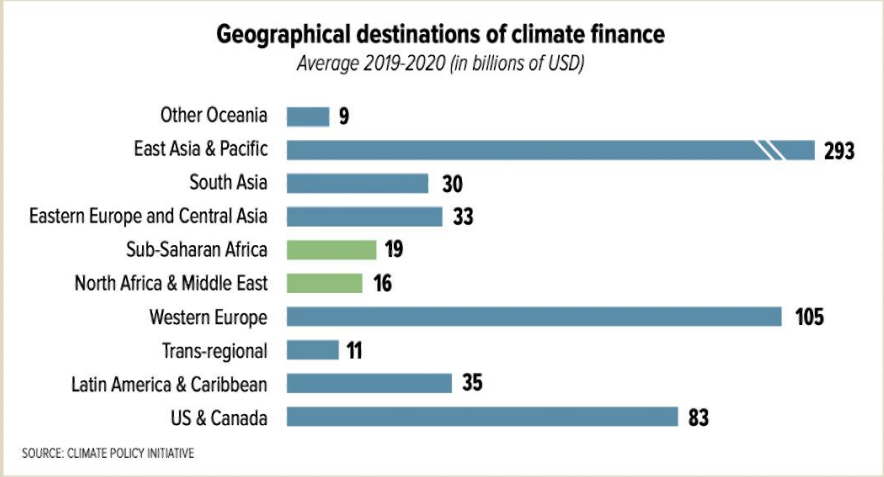
CONVERGENCE BLENDING GLOBAL FINANCE

PROJECT PREPARATION & DEVELOPMENT FACILITY

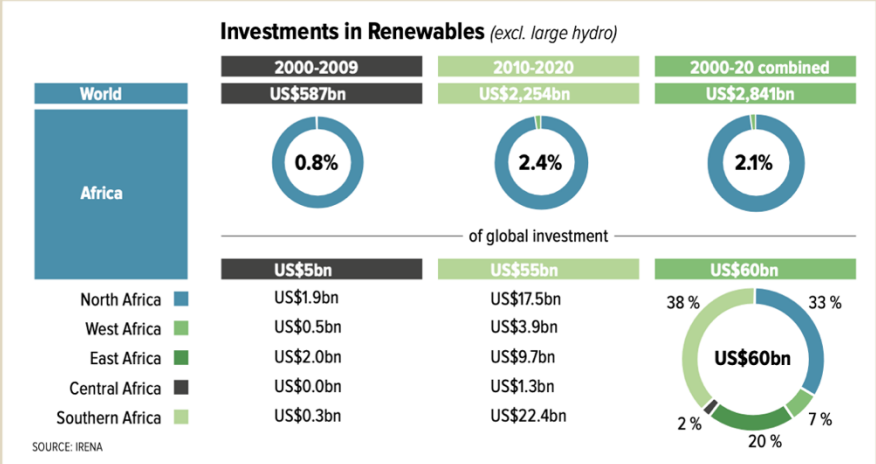
Double crisis of debt and climate change

- Africa grapples with a double crisis of debt and climate change
- The continent's debt exceeds 70% of GDP, making it highly vulnerable and making it difficult to attract finance
- Climate change projections suggest a 2–5% GDP loss annually by 2030 for most African countries.
- Creditworthiness significantly impacts access to finance, with lenders cautious about countries at high risk of default.
- Limited access to finance in many African countries hinders long-term investments, especially in climate and energy systems

a. Sub-Saharan Africa attracts less than 3% of climate finance...

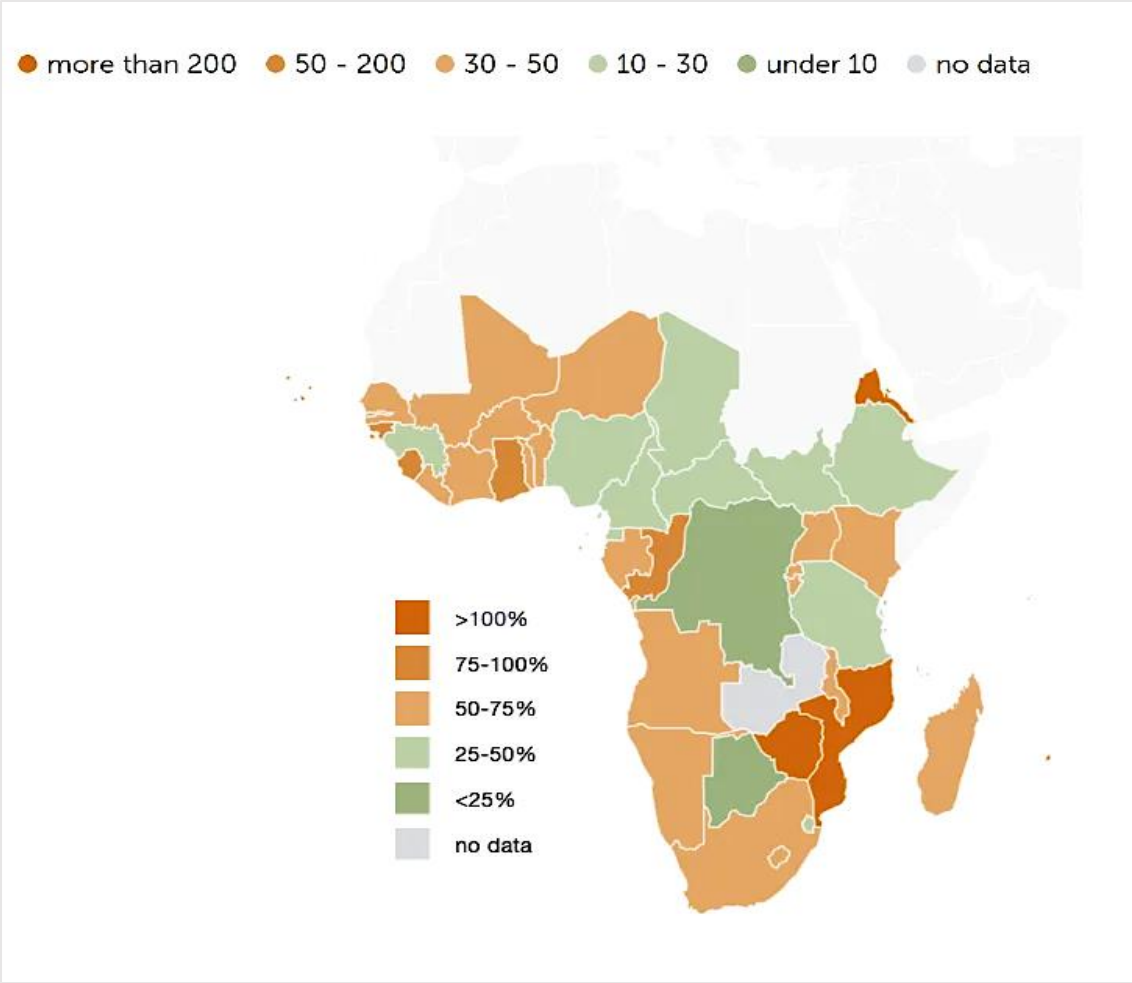


b. ...and 2% of global investments in renewables



Fiscal constraints and need for off-balance sheet climate finance models

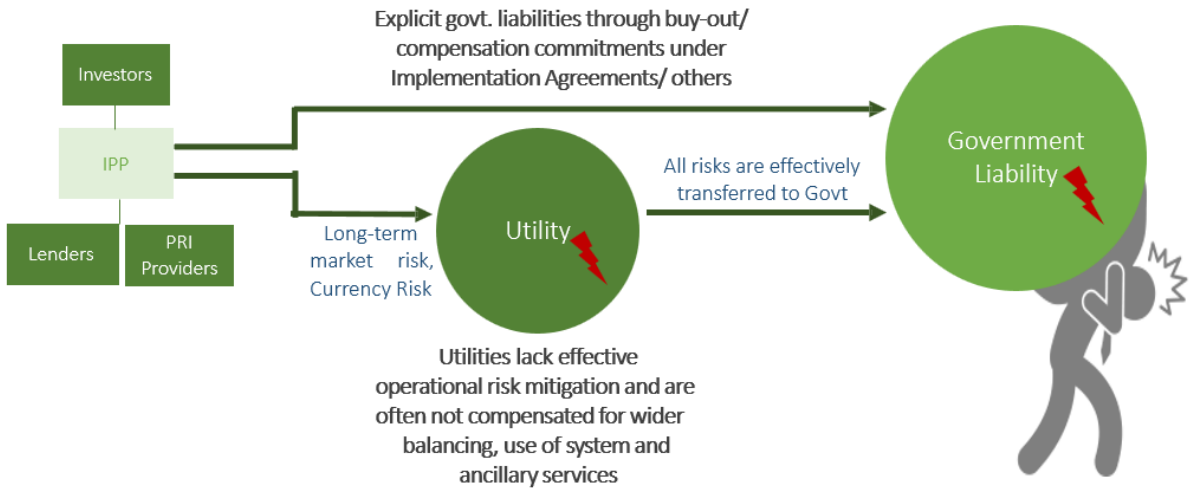
- Balance sheets of countries are heavily constrained and many state utilities are under borrowing moratoriums
- Off balance sheet options are needed
- For off balance sheet bankability to work there needs to be pooling of credit risk and demand/supply risk across the region so as to spread the fiscal impact across borders of individual countries



Map showing Indebtedness per Country

Context – current power sector structures do not work and impose too much risk on governments and state utilities

- *In order to contribute to the 2°C path and meet rising demand, **there is need for more renewable generation capacity and investment into distribution and transmission across the region.***



- *With the current project financing model, this is resulting in **escalation of contingent liabilities on governments due to sovereign guarantees on agreements tied to the state***

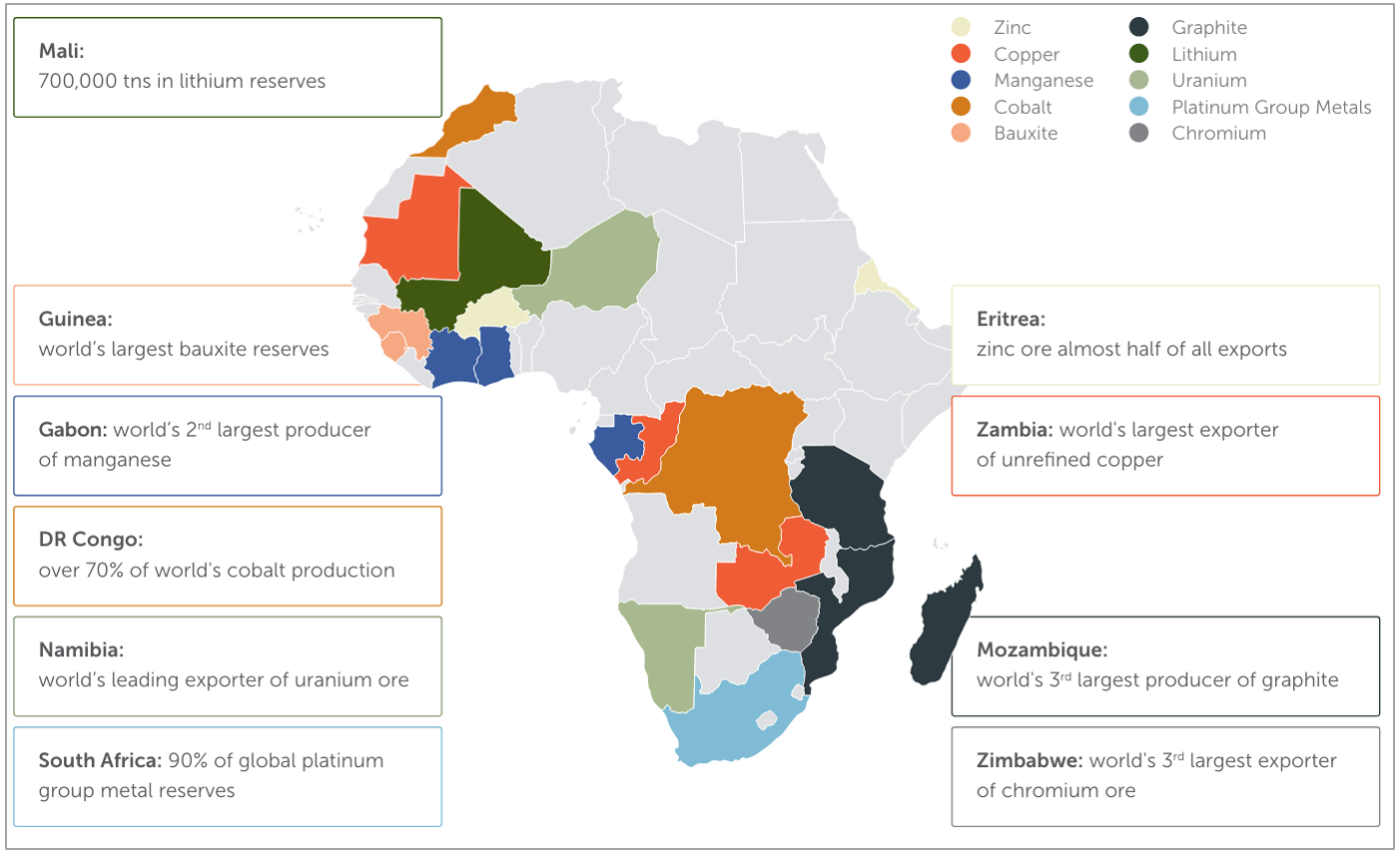
NEED FOR NEW FINANCING MODELS THAT PROMOTE INVESTMENT IN RENEWABLE ENERGY GENERATION, TRANSMISSION AND DISTRIBUTUTION WITHOUT COMPROMISING HOST GOVERNMENTS

ZAMBIA ENACTED OPEN ACCESS REGULATONS

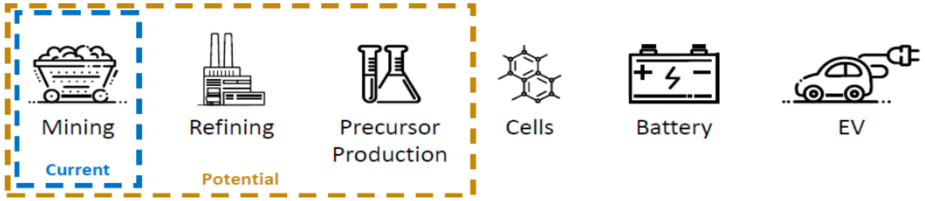
A way Forward : leveraging the mining-energy interface

Africa at the heart of a Low Carbon Future

An opportunity to be a key player in the value chain



Africa holds **30%** of the world's mineral reserves, many of which are critical to renewable and low-carbon technologies including **solar, electric vehicles, battery storage, green hydrogen,** and **geothermal**. To meet the expected rise in global demand, production of minerals and metals will need to increase by nearly **500% by 2050**. This cannot be achieved without Africa's resources.



Context : Mining, Energy and Climate Change

Country*	Demand (GW)	Commercial, Industrial, & Mining (CIM) % of demand **	Estimated CIM demand (GW)
Zambia	2.6	65.0%	1.4
South Africa	35.2	53.0%	18.7
Zimbabwe	1.8	58.9%	1.0
Botswana	0.6	77.0%	0.5
Namibia	0.7	99.9%	0.7
Angola	2.7	41.0%	1.1
Tanzania	1.5	54.8%	0.8
Mozambique	2.1	87.7%	1.9
Lesotho	0.2	51.0%	0.1
Eswatini	0.3	55.0%	0.1
Malawi	0.4	10.0%	0.04
DRC	2.0	65.0%	1.3
TOTAL	49.97		27.7

Over 55% of Southern Africa's demand is attributed to commercial, industrial, and mining customers; with mining being the largest consumer

Source: estimates from multiple regulator, utility, & statistical office reports and independent publications on countries

A way forward: leveraging regional connectivity

Power Sector Reforms through a regional systems lens are needed

- African electricity markets are reforming through the Continental Master Plan (CMP) but meeting ambitious 2040 targets poses challenges.
- The CMP offers the best chance for sustainable energy, emphasizing a least-cost model and cross-border electricity trading.
- Key aspects include a shift to renewables, increased transmission infrastructure investment, and the introduction of trading regulations, shaping significant developments in Africa's power markets in 2024.

ZAMBIA LEADING THE WAY ON OPEN ACCESS IN THE REGION

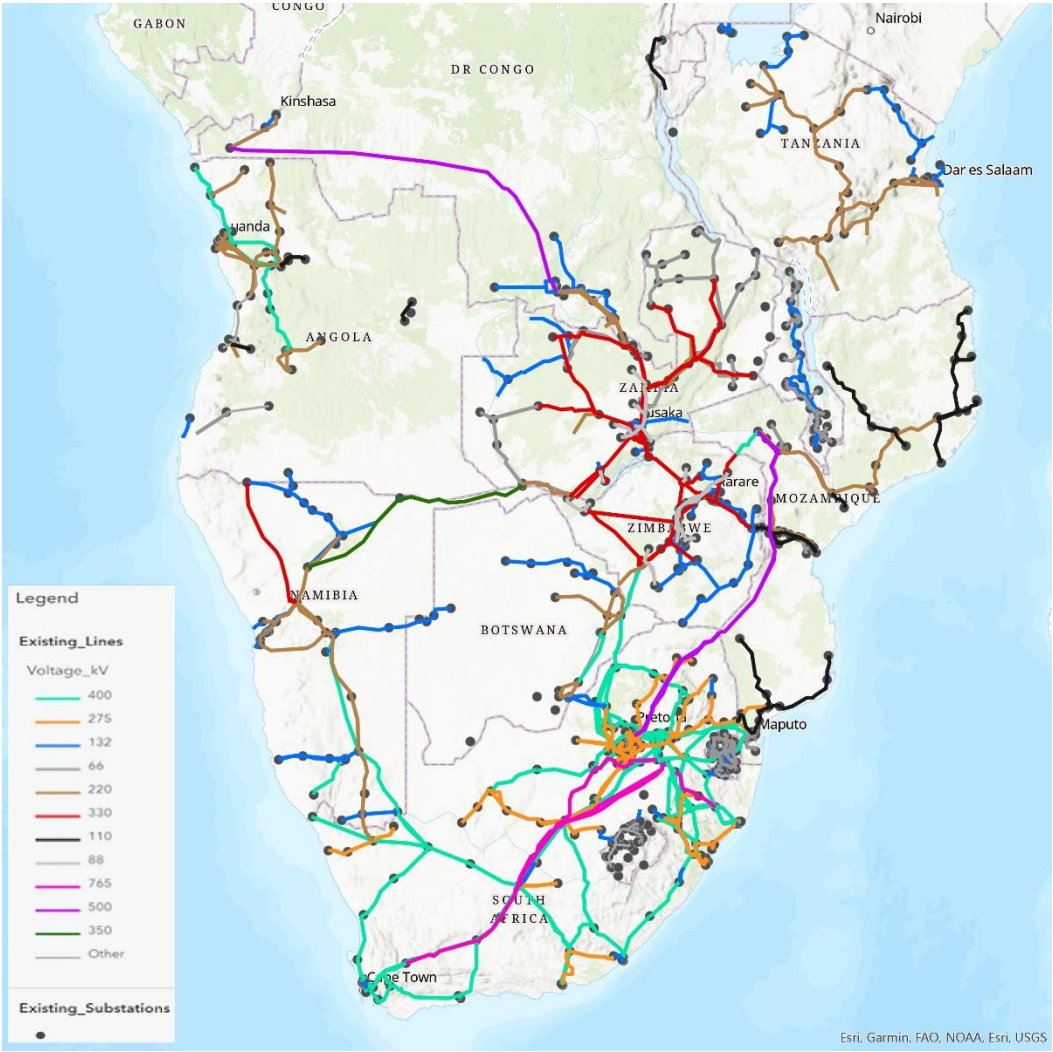
ZAMBIA: ELECTRICITY ACT 2019

ZAMBIA OPEN ACCESS APPROVAL BY CABINET: JUNE 2024

ZAMBIA ENACTED OPEN ACCESS REGULATONS SI 40 2024
JUST ANNOUNCED

Value of a Regional Integrated Approach
Generation, Transmission & Trading

- With an increase in demand, a huge amount of VRE generation will be built in the coming years,
- Facilitating the integration of Renewables through new **Transmission Capacity** at the least cost to consumers is required.
- **SAPP and SADC** are pivotal in guiding transmission investments and reinforcements to connect new generators through a comprehensive regional plan which can impact national transmission requirement bankability.
- A regional lens allows to pool sovereign risk and increase bankability.



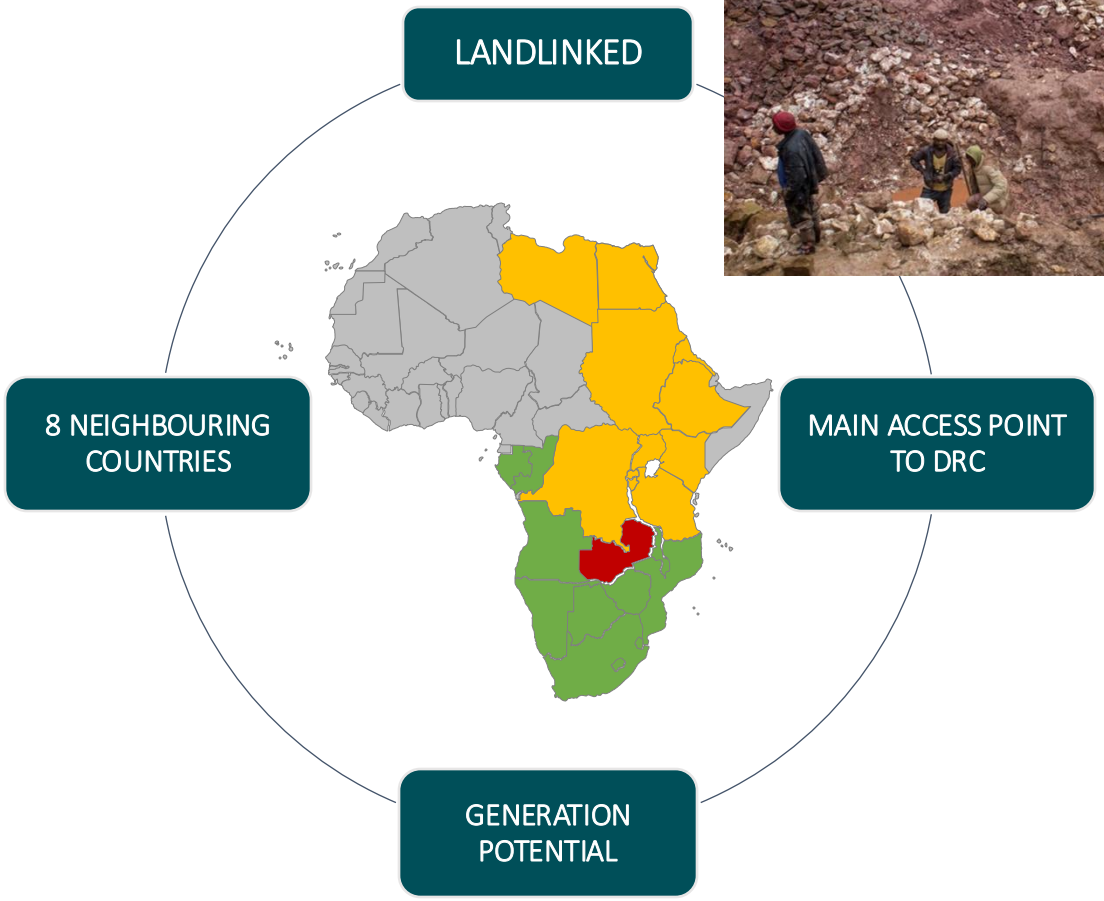
Leveraging Zambia's Geographical Position, Generation Mix & Mineral Reserves

CSIS | CENTER FOR STRATEGIC & INTERNATIONAL STUDIES

The U.S.-Zambia-DRC Agreement on EV Batteries Production: What Comes Next?

Why Zambia as a Regional Trading Hub?

- Zambia's land-linked position offers a unique gateway for trade routes to 8 neighbouring countries, making it an essential access point
- Rich in copper and cobalt reserves, serving as a vital supply base for essential minerals needed across the region and beyond.
- Central location offers opportunities to develop infrastructure that supports efficient transit of goods across Southern and Central Africa.
- Zambia's unique RE generation mix provides a reliable and diversified energy supply, enhancing its appeal as an investment destination for energy-intensive industries.
- Zambia can play a pivotal role in fostering regional economic integration, promoting stability and growth within SADC.



Structural reforms at country level, complemented by regional integration efforts, are essential for fostering a conducive environment for investment

Open Access in Individual Markets will lead to more Regional Integration and Trade

Enhanced security of supply
Expanded access to back-up and spinning reserve capacity, improving reserve margins and mitigating supply-shock risks

Access to more cost-efficient sources
Regional electricity trade can address power sector challenges and boost SADC's development agenda. The SAPP Pool Plan 2017 forecasts potential savings of **USD 37-42** billion by **2040**.

Better integration of low-carbon sources and improved climate resilience
Stronger integration of VRE into the energy system, and improved system resilience to climate and other shocks.

Optimum energy systems Eco-system

Increased potential for private sector participation
Improved financial sustainability of specific projects and mitigation of demand risks can contribute to crowd-in private capital.

Boosting energy security without compromising country's fiscal position
GreenCo seeks to increase generation capacity without governments underpinning IPP PPAs through government guarantees.

Increased universal access to affordable electricity
Optimization of national and regional resources contributes to delivering universal access to affordable electricity.

Regional electricity trade fosters integration of VRE, serving as a pivotal driver for SADC's decarbonization journey

Innovative finance structures

- Installed capacity across the continent would need to more than quadruple by 2030 to 1,218GW, from about 266GW today to reach SDG 7 electrification goals.
- This excludes the significant transmission and distribution investment requirements.
- A dramatic change of pace and approach - of almost 60GW of capacity every year from now until 2040 – would be needed to reach the target. We are at 9GW across Africa.
- To do this we need to start looking at power systems development on a regional scale through a least-cost model that includes cross-border electricity trading. **This change alone could reduce the cost of installing the power needed from about $2trn to $1.3trn**

Regional Power Systems Integration and a Systems Investment Lens is needed:

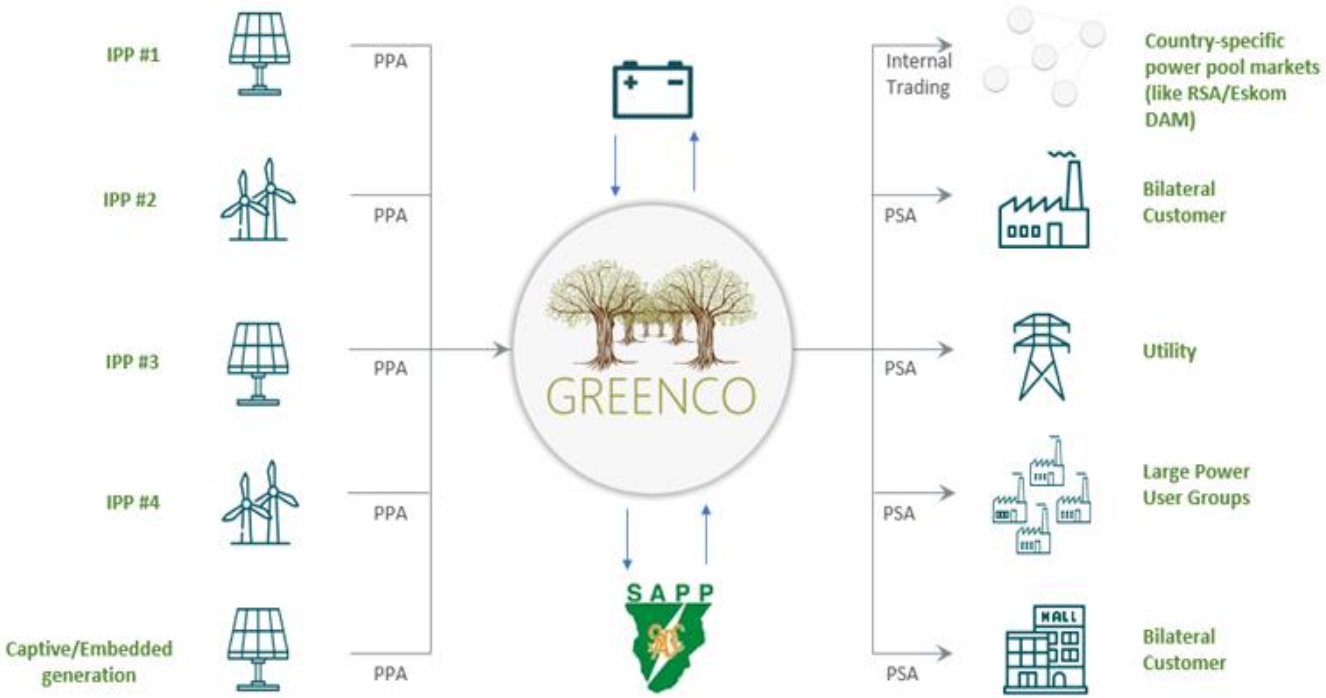
1. **Benefits include cost optimization, emergency support, and increased power system reliability**
2. **Pooling of risk and supply/demand on a cross border basis**
3. **Green Energy Planning and Renewable Energy Integration needs integration to faces challenges like intermittency and non-dispatchable nature.**
4. **Power system flexibility, reserves, and ramping capability are crucial for RES integration – for that power pool markets are key.**
5. **Strategies for RES integration, including operating reserves, interconnection, DSM, and energy storage need to be developed on a regional basis**

Regional Collaboration for Enhanced Value Capture

GreenCo's Role in facilitating Innovative Finance & Investments in Climate Resilience

Introduction – The Africa GreenCo Group

- A **creditworthy intermediary buyer of renewable energy.**
- A **reliable** and **affordable provider** of renewable energy to utilities, municipalities and large power consumers with **flexible supply solutions.**
- A **trader** on the Southern African Power Pool (**SAPP**).
- A **diversifier of risk** across a growing portfolio of supply and demand.
- An **operational aggregator** of renewable energy supply.
- A **scalable business for the region –** currently active in Zambia, Zimbabwe, Namibia and South Africa.



GREENCO

OUR MISSION

Addressing creditworthiness to increase generation and growth of renewable energy markets through partnerships and innovative solutions