



AFRICA GREENCO

OVERVIEW

AIP TECHNICAL WORKSHOP

SEPTEMBER 2018



Grant Support Provided by:



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Recommended by the SE4All Finance Committee Report:



Legal Advisors:



Financial Advisors:



MARKET CONTEXT

Utility Operating Environment

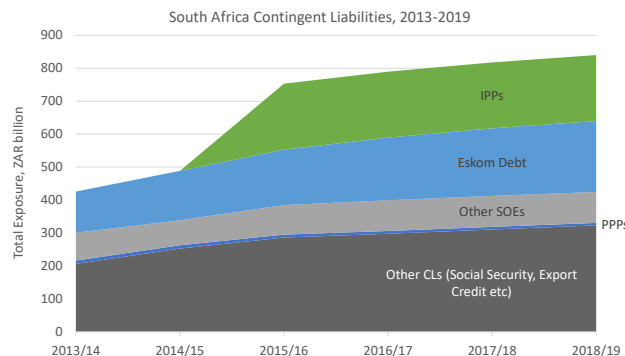
- Cost reflective tariffs are a challenge – regulatory environment and affordability
- Operating within a new sector business model – IPP's
- Climate Change Impreatives & Renewable Energy (RE)
- Operational efficiencies have been raised as a concern
- Aging infrastructure, new build and maintenance – System reliability

Consequences

- Financial Sustainability – Sector and Government Impacted (Creditworthiness)
- Debt spiral – Increased cost of borrowing = Increased Financing Requirement
- Macro Economic Impacts – Growth (Affordability)
- Pressure on Sector and and Government - Budgetary support (direct and / or contingent)

NEW BUSINESS MODELS / STRUCTURES URGENTLY REQUIRED (as opposed to financial instruments)

- Utilisation of regional power pools as a structured route to market will reduce reliance on government support
- Improved integration for balancing, efficiencies of aggregation and introduction of transparent pricing
- Blending at an operational level



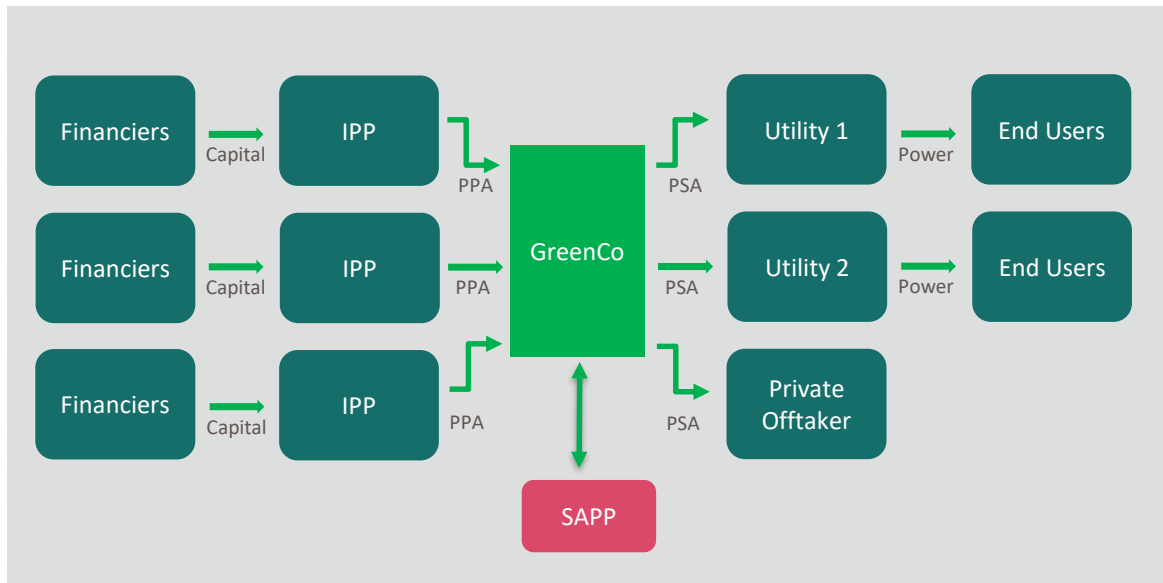
In 2015/6, the South African Treasury updated its reporting framework on contingent liabilities in line with international best practice. This resulted in the addition of ZAR200bn (US\$13bn) additional liabilities representing Eskom's renewable energy 20 year PPA obligations – essentially an overnight increase of 36%.

INTRODUCING GREENCO

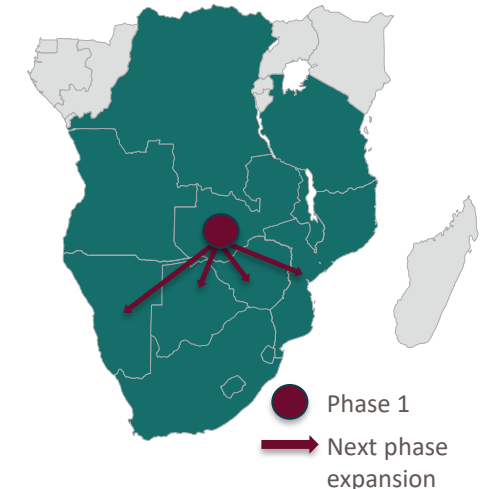
An independently managed but government co-owned **renewable energy** creditworthy intermediary aggregator and power services provider (trader).

- Risk aggregation through portfolio approach – economies of scale, risk reduction
- Strong credit due to capitalisation structure – reduce investment risk profile /crowd-in investment
- Work with utilities to ensure sustainability of the power market
- Ability to sell power to third parties on default – operational risk mitigation
- “Service Provider” in SAPP – risk reduction through wider market participation
- Aggregation for increased efficiencies
- Blended Financing with structural risk mitigation

The GreenCo portfolio approach (aggregator of small to medium size renewables)



Southern African Power Pool



INITIAL FOCUS SADC/SAPP

SADC market features:

- Capacity for regional transmission and cross-border trading
- Active and established short term electricity markets
- Enabling environment for IPPs
- Local political support for Renewable Energy

Alignment with regional initiatives:

- RERA M&I Framework
- REESAP
- Regional Infrastructure Development Master Plan
- SACREEE
- SAPP Transmission Financing Facility

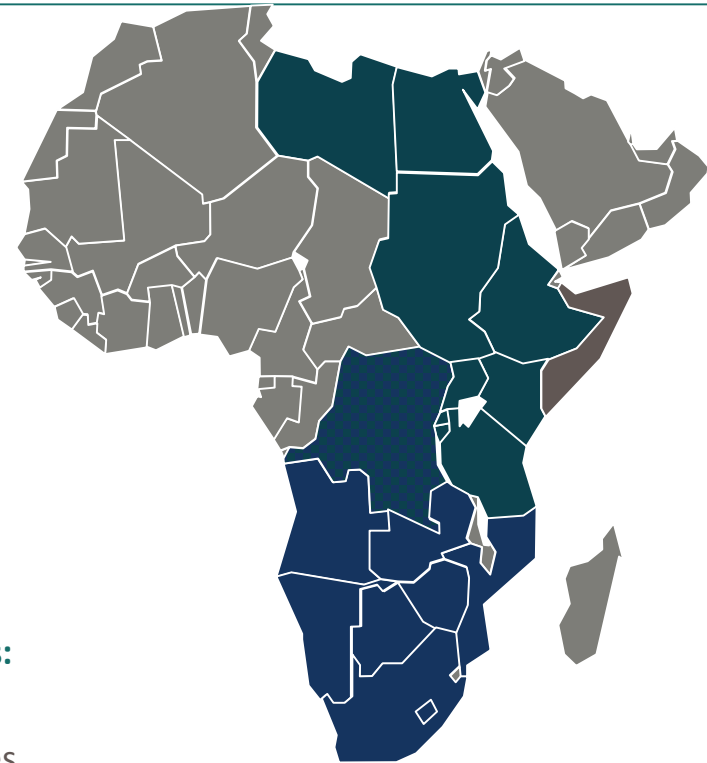
Complementary with wider power sector structures and reforms:

- SAPP provides for 'Service Provider' members
- Open access regime being considered in a number of countries

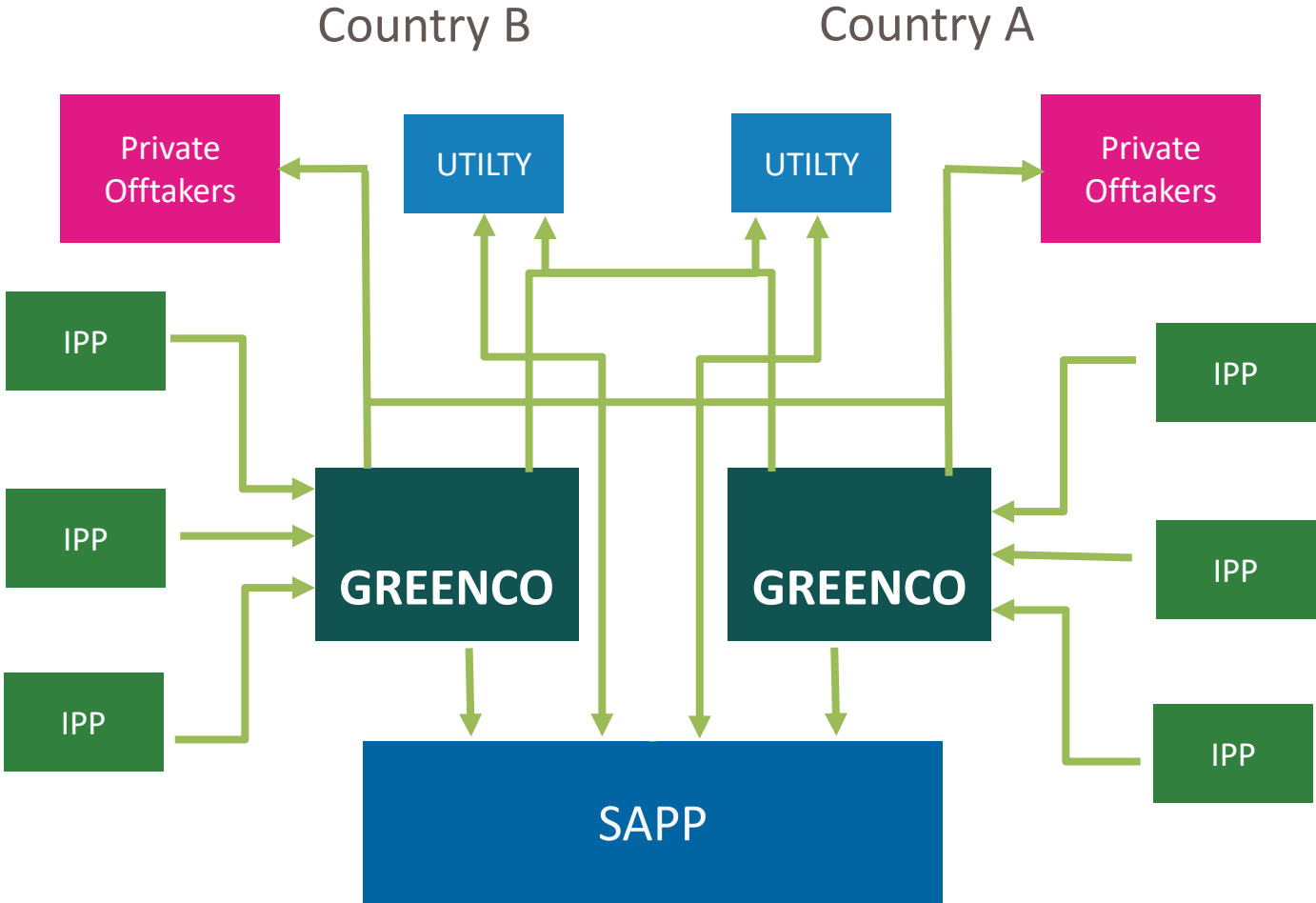
GreenCo will continue to engage with the the other RECs and power pools with a view to subsequent rollout

GreenCo is not: A market operator, TSO, TSP, or Power Exchange

Anticipated Phasing: Phase 1 Zambia, Phase 2: other SAPP connected countries



COMMERCIAL RISK MITIGANT: REGIONAL PRESENCE



GREENCO – ELEMENTS FOR SUCCESS

GreenCo has secured support in principle from a number of major international development organisations including AfDB, AFD, European Commission (EFSD) and GCF

- Ministry of Energy
- Ministry of National Development Planning
- Ministry of Finance
- Utilities
- Regulator
- Ministries of Environment

Zambian and Zimbabwean Government Engagement including NDA

- Ministry of Energy
- Ministry of National Development Planning
- Southern African Power Pool
- Regional Electricity Regulators Association
- Association of Power Utilities' of Africa
- New Partnership for Africa's Development
- African Renewable Energy Initiative
- MIGA
- Standard Bank
- Nedbank

Letters of Support

- Green Climate Fund application through AFDB/DBSA as AE – Pitch for the Plant – Mobilising Funds at Scale RFP
- AFD Guarantee - \$45m
- AFD supported application to EFSD for €28m counter Guarantee

Funding Applications

- Small to medium scale renewable energy projects

Pipeline

Operationalisation of GreenCo

Grant Funding Secured

Development Funding for Advisors Secured

Ongoing Development & Structuring



PROJECT PREPARATION & DEVELOPMENT FACILITY



GREENCO CAPITALISATION STRUCTURE PHASE 1

US\$100m to back initial 100 MW of greenfield renewable energy projects



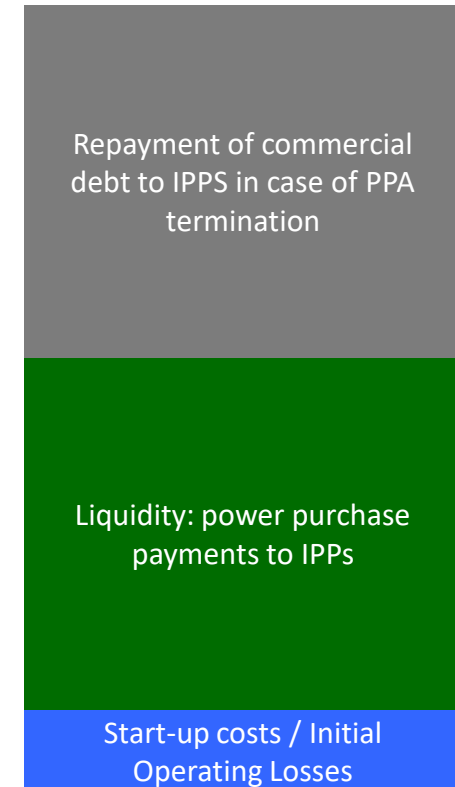
Type and Amount of Capital



Anticipated Sources



Use of Capital



GREENCO: TARIFF IMPACT

Forecast tariff reductions per technology with GreenCo

Cost of Capital: Up to 60% of the PPA tariff is due to cost of capital

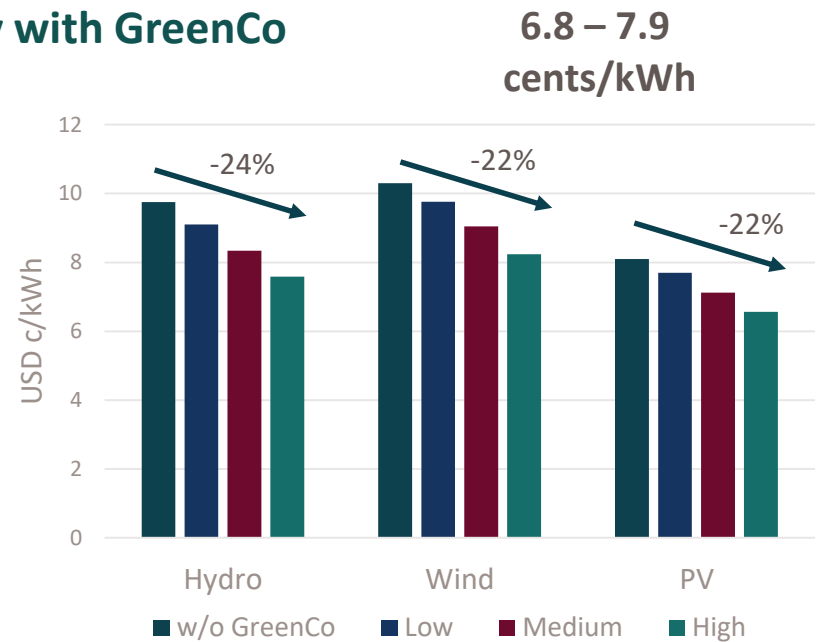
Risk: High risk profiling due to lack of creditworthiness results in high project cost and tariff

Creditworthiness leads to lower risk profiling hence lower project cost and tariff

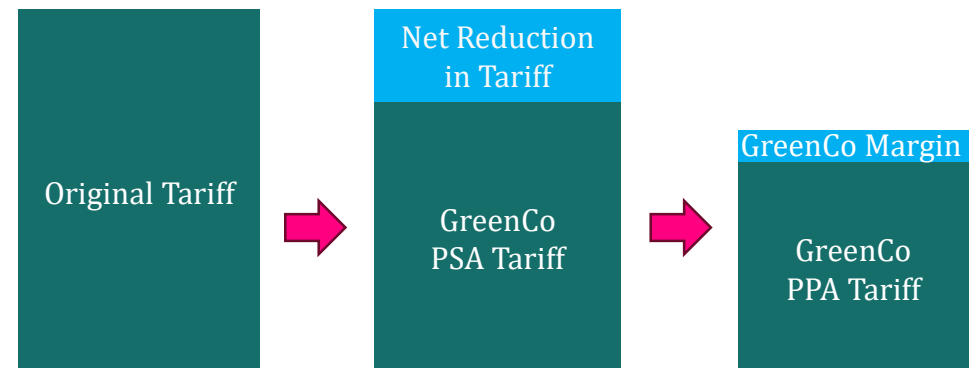
Tariff savings: Tariffs between 6.8 and 7.9 US\$/kWh in renewable energy technologies are achievable with GreenCo

Across a portfolio of 100MW this results in USD162m (Phase 1) savings

GreenCo Margin: fraction of the tariff saving



Net tariff savings



A vertical strip on the left side of the slide contains several overlapping financial charts and graphs. These include a candlestick chart at the top, a line graph with a peak and trough in the middle, and a bar chart at the bottom. The charts are rendered in a light, semi-transparent style, showing various data points and trends.

GREENCO BENEFITS

Attracts investment in generation due to creditworthiness of offtaker

- Increases availability and security of supply in country
- Facilitates achievement of universal access
- Facilitates economic development

Contributes to diversity in generation mix (renewable energy sources)

- Increases resilience to climatic effects on generation
- Facilitates optimisation of resources

Contributes to grid/national de-carbonisation

Provides cheaper power to utilities

- Reduces average supply cost
- Aids movement towards cost reflectivity (may lead to reduction in subsidies)
- Leads to downward pressure on end user tariff in the long run
- Avails financial resources to utility for performance improvement programmes

Creates opportunity for alternative market (renewable energy)

Releases funds for government priorities in other sectors (education, social upliftment, security etc)

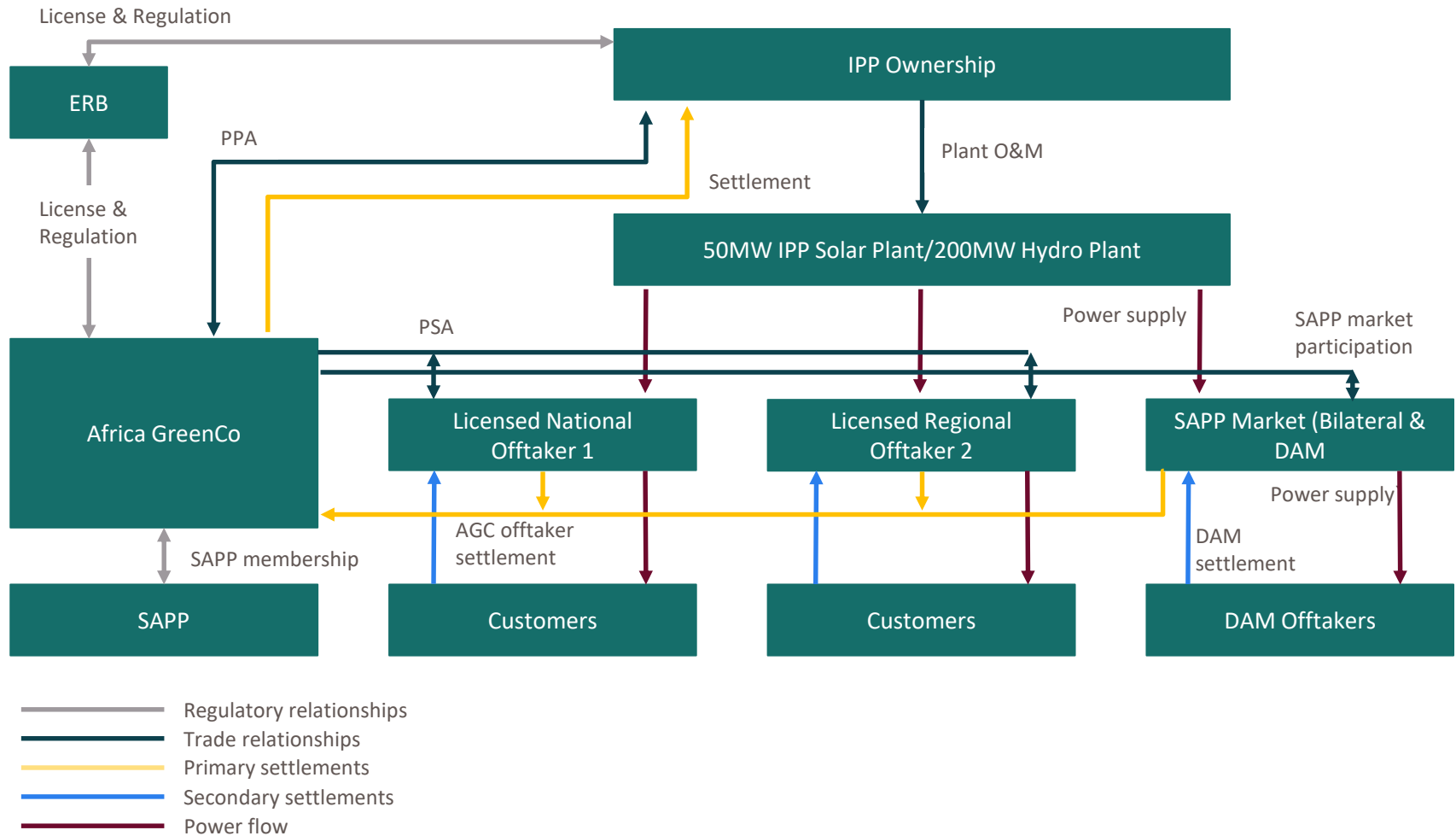
Under open access regime, GreenCo increases competition

- Positive impact on tariffs
- Improved market efficiency
- May contribute to regulator's realisation of choice of supplier by customers

Can be a contributor to market development in the country

Facilitation - employment creation

PROJECT FUNCTIONAL RELATIONSHIPS





GREENCO ENABLERS – WAY FORWARD

- Stakeholder acceptance of concept –On-going
- SAPP engagement and feedback so as to avoid any surprises
- Engagement with key stakeholders (SAPP Subcommittees, RERA, SADC – On-going)
- SAPP membership
- Meeting market participation requirements
- Facilitative statutes and regulation (RERA)
- Support from host countries – On-going

THANK YOU

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IMPACTS



DETAILED IMPACTS



1st Phase



Total



Energy



New green energy capacity

100 MW

2,590 MW

Produced clean electricity

11,200 GWh

206,900 GWh

Beneficiaries

711,000

8,345,000

Access to energy (households)

282,000

2,787,000

Climate







Mitigated CO2 emissions

10.9mt CO2e

198.5mt CO2e





DETAILED IMPACTS



	1st Phase 	Total 
Avoided Costs 		
LC Costs	17.3m USD	363.3m USD
Lower tariff payments	162m USD	4,830m USD
Commercial Investments 		
Mobilised comm. Equity	65m USD	1,254m USD
Mobilised comm. Debt	43m USD	1,699m USD
Mobilised comm. Capital	108m USD	2,953m USD

DETAILED IMPACTS



	1st Phase 	Total 
Employment 		
Direct	3,900	83,900
Indirect	31,600	561,800
Economy 		
Total Investments	240m USD	4,470m USD
Stimulated GDP	3,100m USD	65,200m USD
Econ. Rate of Return	12.3%	15.8%