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# Africa GreenCo - An Overview

## Synopsis

**Africa GreenCo aims to attract more private sector investment to renewable energy generation in sub-Saharan Africa (SSA) at lower cost and with less reliance on government support through the introduction of an independently-managed but government co-owned creditworthy intermediary offtaker (GreenCo).**

GreenCo will fulfil the following roles:

- renewable energy creditworthy buyer and seller: GreenCo buys power from small to medium sized independent power producers (IPPs), on-selling through long-term contracts to utilities and private buyers; it also executes shorter-term trades through the Southern African Power Pool (SAPP);
- aggregator of risk and risk capital; strongly capitalised, GreenCo assumes credit risk of utilities and private buyers, resulting in reduced tariffs;
- operational aggregator of renewable energy supply;
- downside support; where buyers fail to pay, GreenCo sells to alternative buyers or through SAPP markets; where termination scenarios arise, GreenCo uses its capital structure to cover outstanding commercial project debt in affected IPPs; and
- champion of new renewable energy services and innovations for the region in partnership with the public sector.

GreenCo responds to Sustainable Development Goal 7 which aims to close the energy access gap and "ensure access to affordable, reliable, sustainable and modern energy for all" through a combination of national action and international cooperation. GreenCo can act as an implementation tool for key regional initiatives, such as the African Development Bank's New Deal on Energy for Africa and the Africa Renewable Energy Initiative and plans to be operational in Zambia in 2019.

In the long term, as GreenCo succeeds in attracting more private sector investment to the sector, at lower cost, and assists in the transition to cost-reflective tariffs and ultimately utility creditworthiness, GreenCo will make itself redundant in its role as a creditworthy intermediary. As this occurs, GreenCo will transition to being one of the many traders in the regional power markets it helps to develop. In the Southern African context the proposed GreenCo market intervention therefore fits neatly alongside the IPP framework being developed and implemented by the Regional Energy Regulators Association of Southern Africa (RERA), which aims to put in place the regulatory environment needed for an open and active regional power trading market.

## Market Context

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| **Bilateral IPPs** | With the exception of a handful of cross-border projects, IPPs within SSA are currently structured on a bilateral basis; i.e., with a single buyer and seller. |
| **Rehabilitation of utilities** | African utilities are often poorly funded – running an operating loss due to non-cost reflective tariffs, high overheads and substantial investment needs. In most cases they are entirely state owned and dependent on budget transfers – all of which combine to mean a low credit profile.<br><br>Critical steps to rehabilitate utilities are underway but sustainable and material improvements can only occur in the medium to long term. |
| **Lengthy and expensive transaction execution** | With notable exceptions such as South African REIPPP, GET FiT and Scaling Solar, IPPs are largely negotiated on an ad hoc project-by-project basis. Negotiations of project documents on individual IPPs are usually very lengthy and often last several years at least. Significant fully 'at risk' development costs incurred during those negotiations add materially to total project costs and require a high return to reflect the associated risk profile. |
| **Limited availability, sustainability and effectiveness of third party risk mitigation instruments** | Risk mitigants such as liquidity support instruments, early termination buyout regimes and partial risk guarantees are complicated and expensive to negotiate on a project-by-project basis. Even still, they do not fully mitigate the perceived risk of investing in immoveable assets in order to sell a commodity (electricity) on a long term basis to a single, often un-creditworthy, buyer. They are also heavily dependent on concessional capital and DFI support. |
| **Host Government fiscal burden** | Host Governments are expected to take on contingent liabilities in the form of 'put and call option' arrangements on early termination, or more explicit sovereign guarantees. Given the current fiscal position and the medium term macro-economic environment facing most host Governments, this is unsustainable. |

## Strategy

GreenCo addresses head on the core issues of (a) offtaker creditworthiness, and (b) the inefficiencies of exclusive bilateral sale and purchase between a single generation company and a single offtaker.

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GreenCo will play two complementary and synergistic roles in the African power markets:

| Intermediary<br>Creditworthy Offtaker / Aggregator | AND | Power Pool Participant / Trader |
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The first conceptual step is to interpose GreenCo between the buyer and the seller under an existing bilateral IPP structure; then repeat this on multiple IPPs so that:

- GreenCo is the buyer for multiple generation companies; and
- GreenCo is the seller for multiple offtakers.

From this position, GreenCo will be able to:

- catalyse third party private capital flows to IPPs by improving the risk profile of projects in the region;
- lower the electricity tariff required by IPPs for a project to be financially viable by reducing debt costs and investor return requirements to reflect a lower risk profile;
- provide a route to market for any excess contracted power, thereby mitigating an offtaker's obligation to pay capacity or 'deemed energy' charges for power they do not require; and
- divert power from a defaulting IPP offtaker to other willing buyers, thereby reducing the likelihood of early termination of an IPP's power purchase agreement and the resulting crystallisation of host Government contingent liabilities.

More broadly, GreenCo will:

- be fundamentally better equipped than a single generation company to mitigate the effect of an un-creditworthy and/or defaulting offtaker;
- also act as a power trader, thereby increasing liquidity and scale of regional power trade;
- assist in the development of power pools;
- support and promote regional standardisation of IPP project documentation; and
- assist in the development of fair and standardised electricity markets in the countries in which GreenCo operates.

GreenCo will act as intermediary offtaker only and would not manage the physical transmission and distribution of energy. It will not own any of the grid infrastructure or seek to replace existing utilities. Rather than replacing existing structures, it complements them, and can further act as a bridge to any future energy regional market liberalization and energy trade integration.

GreenCo aims to learn from, and where possible replicate, the dynamics of more advanced power markets, in particular building on the experience of the Power Trading Corporation of India (PTC India). PTC India was also set up in order to act as a credit risk mitigating intermediary offtaker for privately-financed regional power generators. In the process, it catalysed the entire Indian regional power sector trading market.

The full GreenCo feasilbility study is available to download at www.africagreenco.com

## GreenCo design principles

GreenCo has been developed to fulfil the following key design principles:

- Legally and financially creditworthy
- Co-owned and co-led by African Governments
- Financially sustainable
- Scalable
- Facilitating cross-border trade and investment
- Complementing and collaborating with existing initiatives
- Benefiting IPP investors, utilities and sovereigns
- Catalysing private sector capital
- Incorporating blended capital from concessional and commercial sources

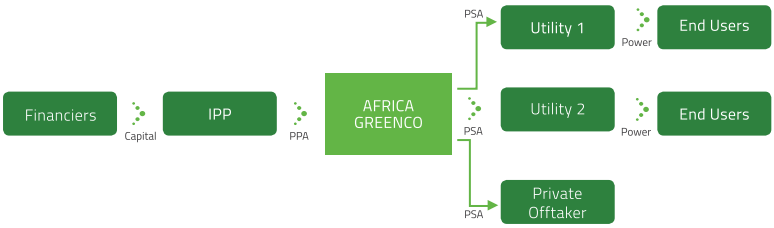
## GreenCo as an intermediary offtaker and aggregator

The following is a simple single utility offtaker example:


GreenCo will purchase capacity and energy from the IPP under a power purchase agreement ("**PPA**"), and sell that capacity and energy to the utility under a power supply agreement ("**PSA**"). The PPA and PSA will be on largely back-to-back terms; ***save that***:

- GreenCo will take credit risk on the offtakers, such that upon offtaker default under the PSA, GreenCo will have the contractual, regulatory and operational ability to keep the PPA 'alive' by securing alternative buyers whether on a bilateral basis or through short term trading, and will use all reasonable efforts to do so;
- GreenCo will earn a small margin between the tariff paid under the PPA and the tariff received under the PSA.

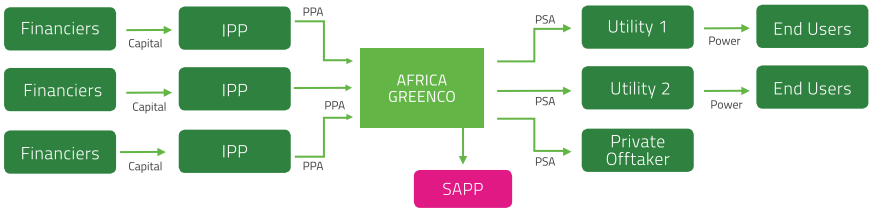
The following is an example of a more complex multi-buyer project, which may be suitable for larger IPPs and/or cross-border projects.




In the above scenario, the intervention of GreenCo will allow:

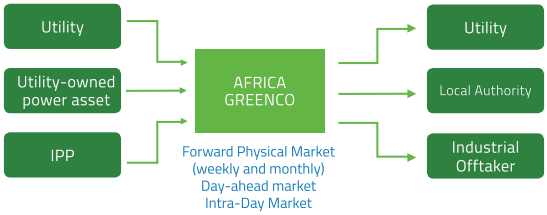
- individual offtakers to commit to purchase only a portion of the IPP's total capacity; and
- GreenCo to better manage the complex risks arising under, and documentation required for, multi-offtaker structures.

This structure will be repeated on multiple projects, building a portfolio of IPPs on one side and a portfolio of offtakers on the other. The portfolio effect will diversify GreenCo's risk and enable it to source alternative power or offtakers (as the case may be) in case of default under either a PPA or a PSA.




## GreenCo as a Power Trader

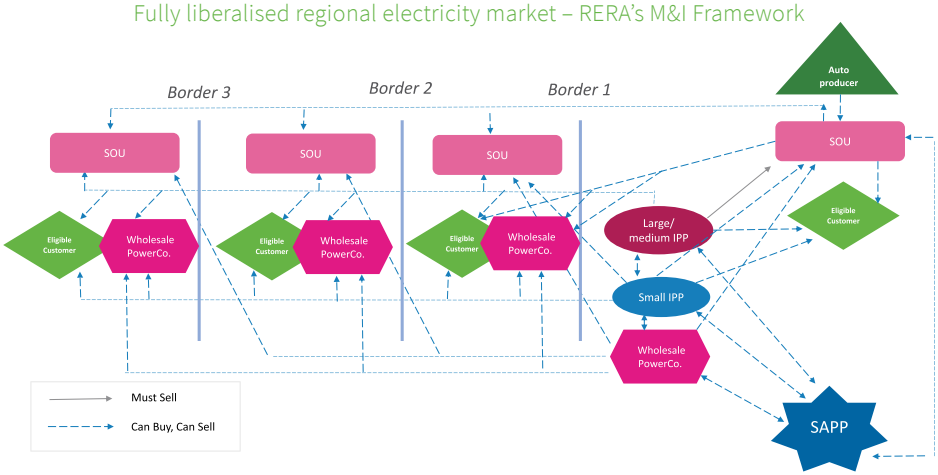
In addition to its role as an offtaker, Africa GreenCo will also participate in the competitive power markets, promoting cross border power transactions and a more dynamic and liquid short term power market.




## Greenco as a Stepping Stone to a Fully Liberalised Market

GreenCo will act as a stepping stone to a fully liberalized market, supporting regulatory change and demonstrating the benefits of competition and regional integration. Once SADC's power sector is strengthened, its utilities achieve creditworthiness and it has a liquid electricity market, the market can move away from long term bilateral contracts. GreenCo's role as an intermediary offtaker will become redundant and GreenCo will transition to being one of a number of traders in the power markets it will have helped to develop.

Fully liberalised regional electricity market – RERA's M&I Framework



## Impact of GreenCo on Project Companies

GreenCo provides the project company with a counterparty which (a) is creditworthy, (b) can mitigate risk via diverting power to third party customers, and (c) can diversify risk over multiple projects.

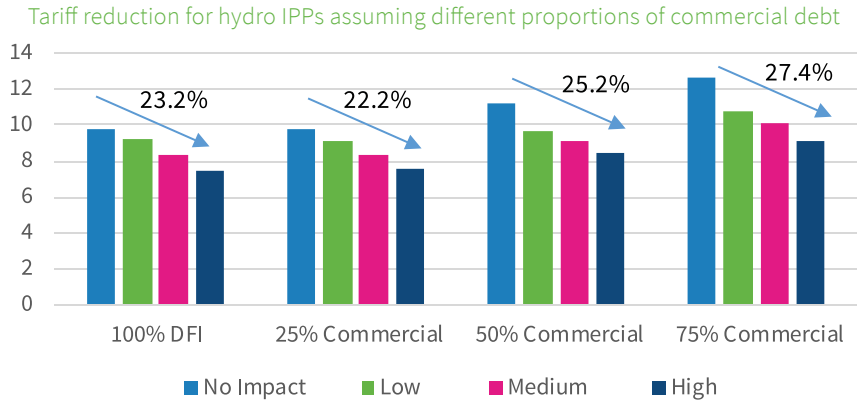
The intervention of GreenCo is expected to:

- reduce both total project costs and the cost of capital by:
  - reducing the cost of getting projects to financial close;
  - improving projects' credit risk profile and in turn:
    - reducing equity investors' hurdle IRRs;
    - reducing the interest rates and other covenants such as debt service cover ratios on project debt; and
    - increasing the tenors of project debt;
- make investing in, and lending to, African IPPs (whether at the outset or upon a refinancing) attractive to a wider pool of capital than is currently engaged in the market, in particular to private sources of capital, thereby increasing the available pool of capital; and
- allow for more efficient and effective credit enhancement, by building a portfolio of contract exposures which can be de-risked and/or re-insured on a pooled basis.

## Impact of GreenCo on Offtakers and Host Governments

GreenCo will:

- reduce the financial expense and utilisation of human resources incurred by the host Governments and offtakers in negotiating and executing IPP transactions;
- increase the installed capacity in the power system, facilitating more reliable power supply to end users;
- reduce PPA tariffs (on new IPPs) due to lower IPP development costs and cost of capital;




- lower the average cost of delivered power by utilizing otherwise idle generation capacity for generation and sales to third parties, and offsetting the revenue received from third party customers (less a small margin) against deemed energy charges otherwise payable by the Offtaker;
- help substitute short term emergency power with cross border traded power;
- reduce the fiscal burden on host Governments by reducing the probability of early termination buyout obligations or more explicit host Government guarantees being crystallised, and reducing the quantum of such obligations;
- reduce risk-weighted capital adequacy requirements in relation to loans to the power sector creating additional debt capacity which can be used to fund sectoral improvements;
- create fiscal space and release resources to focus on institutional capacity building, operational efficiency improvements and expansion and upgrades to transmission infrastructure; and
- facilitate the move towards local currency denominated PPAs.

## Regional Impact of GreenCo

GreenCo will:

- actively trade power in the competitive markets established within the existing power pools (SAPP, WAPP, EAPP etc), increasing liquidity and efficiency;
- be able to disaggregate the contractual supply of electricity from the physical flow of electrons;

- work with power pools, member states and utilities to match power surpluses and deficits, and to maximize the efficient use of natural resources on a regional basis;
- support efforts to integrate planning, power sector regulation and infrastructure investment across member states; and
- help to build the financial and economic case for more investment in regional transmission, interconnection and grid management by increasing traded volumes.

## Environmental, Employment, Social and Economic Impact

Based upon its modelled portfolio, GreenCo will:

- avoid 10.9m tCO2e emissions during Phase 1 and more than 198m tCO2e emissions over the life of the PPAs;
- help create almost 80,000 temporary jobs in manufacturing, construction and installation and over 3,000 long term O&M jobs;
- create additional employment as a consequence of access to more reliable power and savings relative to emergency power costs with a particular impact on small and medium size enterprises, such as women's cooperatives;
- improve access to basic services such as healthcare and education through improved electricity access;
- stimulate socio-economic development, including reducing infant and maternal mortality rates, improving literacy and facilitating community-based activities and training; and
- help avoid the economic impact of outages that can be as high as 4% of GDP and result in an average annual "drag" on economic growth of 2%.

| | MW Built | Private Sector Capital Mobilized | Avoided Financial Burden for Offtakers | GWh Generated / CO2e Avoided | Beneficiaries / Jobs Created |
|---|---|---|---|---|---|
| Phase 1 - Zambia | 100 MW | US$104m | US$191m | 11,232 GWh / 10.9mtCO2e | 711,603/ 34,548 |
| Total Portfolio | 2590 MW | US$3.2bn | US$4.4bn | 206,836 GWh / 198mtCO2e | 8.3m / 616,085 |

## Operating Strategy

GreenCo's operating strategy creates two main revenue sources for GreenCo:

- Sale of power purchased under long term agreements; and
- Sale of power on short term trades.

Each of these core operating activities will generate revenues through a margin applied to each unit of power bought and sold. For its role as a PPA offtaker selling power on to utilities/other offtakers through a PSA, GreenCo aims to select a margin level that generates a net reduction in the price of power paid by a utility/offtaker. The GreenCo base case model currently assumes a margin of 5%.

For short term trading, the GreenCo base case model uses a conservative assumption of 10% p.a. growth with an estimated market share for GreenCo of less than 5%.

## GreenCo Funding Requirements

GreenCo's core proposition is to:

- Reduce the likelihood of a termination event arising through the ability to trade out of default and continue to pay the obligations due under the PPA; and
- Protect commercial lenders in case of a termination event.

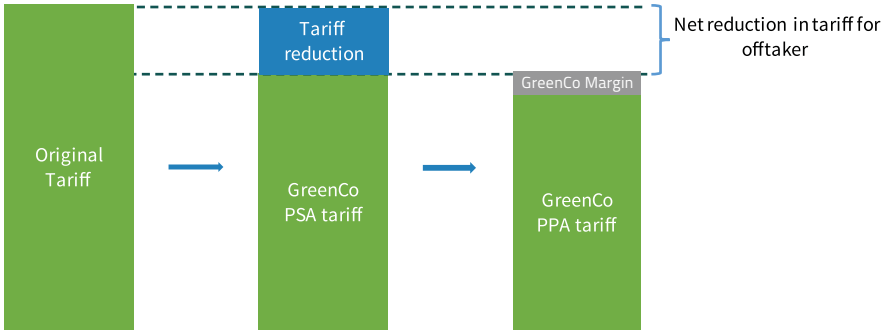
In order to clearly demonstrate GreenCo's creditworthiness to the IPPs' financiers in the early stages of its operations, GreenCo believes it will be necessary to ensure that its initial capital base is sufficient to cover (i) the aggregate of the commercial debt lent to IPPs in its PPA portfolio plus (ii) a liquidity buffer. This liquidity buffer will enable GreenCo to exercise its risk mitigation strategies and potentially incur some losses in the process without eating into the capital sized to cover commercial debt.

This high level of capitalisation is driven by a number of factors including:

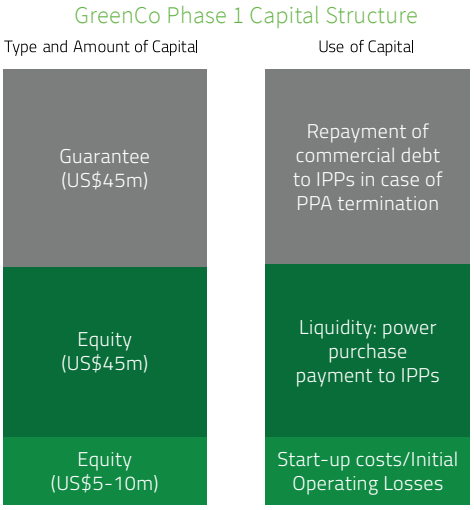
- GreenCo being a new market entrant with no track record; and
- GreenCo's operations starting in one country, resulting in highly concentrated exposures to a small number of offtakers, the majority (if not all) of whom will be located in the same country.

The quantum of capital required is directly linked to the size and nature of the underlying project portfolio. For Phase 1, GreenCo is seeking US$45m of equity to cover its liquidity requirements and US$45m of guarantees to cover its obligation to repay commercial debt at IPP level in case of PPA termination.

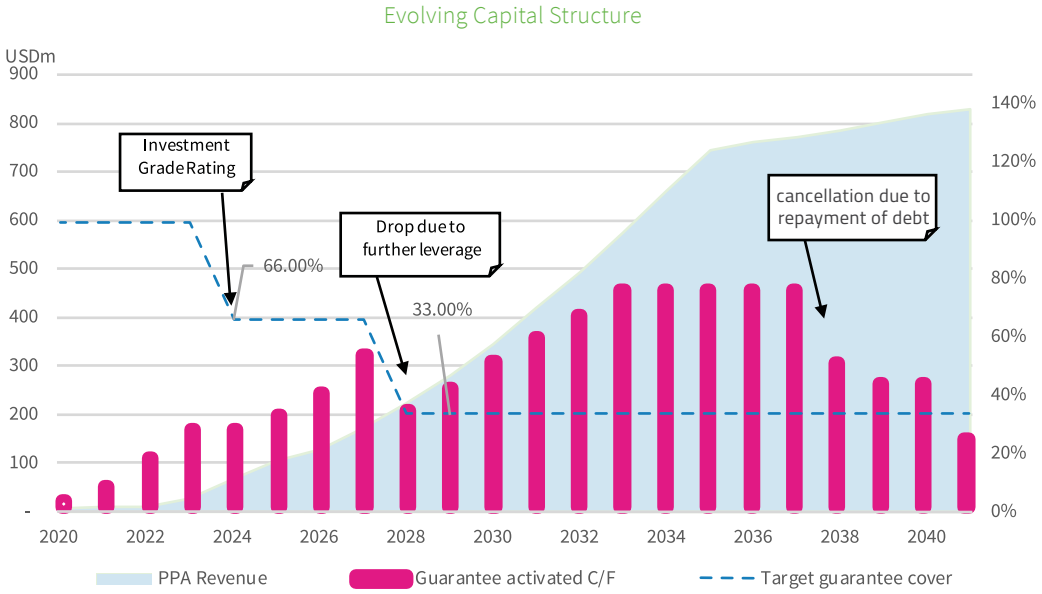
GreenCo's ability to reduce wholesale electricity tariffs for its offtakers is a factor of how much impact it can have on the cost of capital at IPP level and how much margin it charges between the resulting PPA tariff and the PSA tariff. The level of such margin in turn dictates the return it is able to generate and distribute to its investors.




It is therefore anticipated that in order to maximize GreenCo's development impact, the bulk of its initial capital will be provided by the governments of the countries in which it operates alongside equity and guarantees provided by the international development community and/or other impact investors. By providing such capital to GreenCo the international development community will mobilise significant amounts of private sector capital to invest at IPP level.

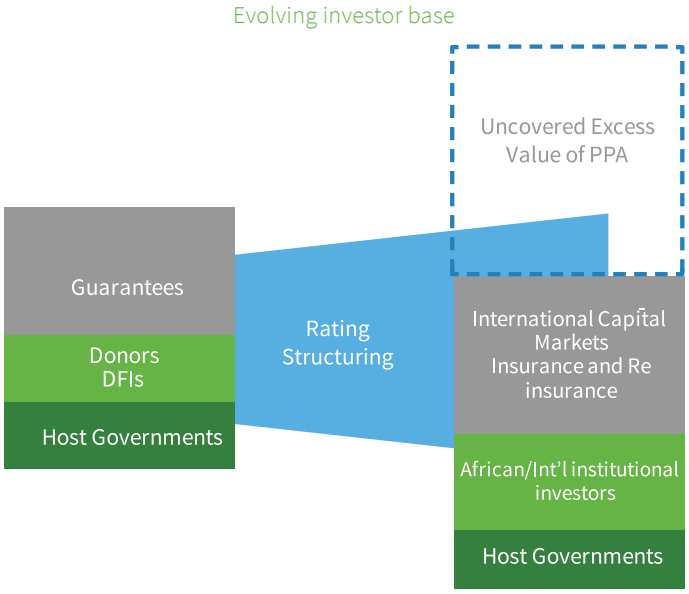



Once GreenCo has built a track record and its portfolio achieves a sufficient scale and degree of diversification, it intends to begin leveraging its capital base. Its ability to do so while maintaining its perceived creditworthiness is likely depend on its ability to secure an external credit rating or the willingness of commercial lenders to accept a larger amount of risk given the comprehensive coverage offered by contracting with GreenCo as the offtaker. The figure below shows the evolution of GreenCo's potential liabilities and leverage.



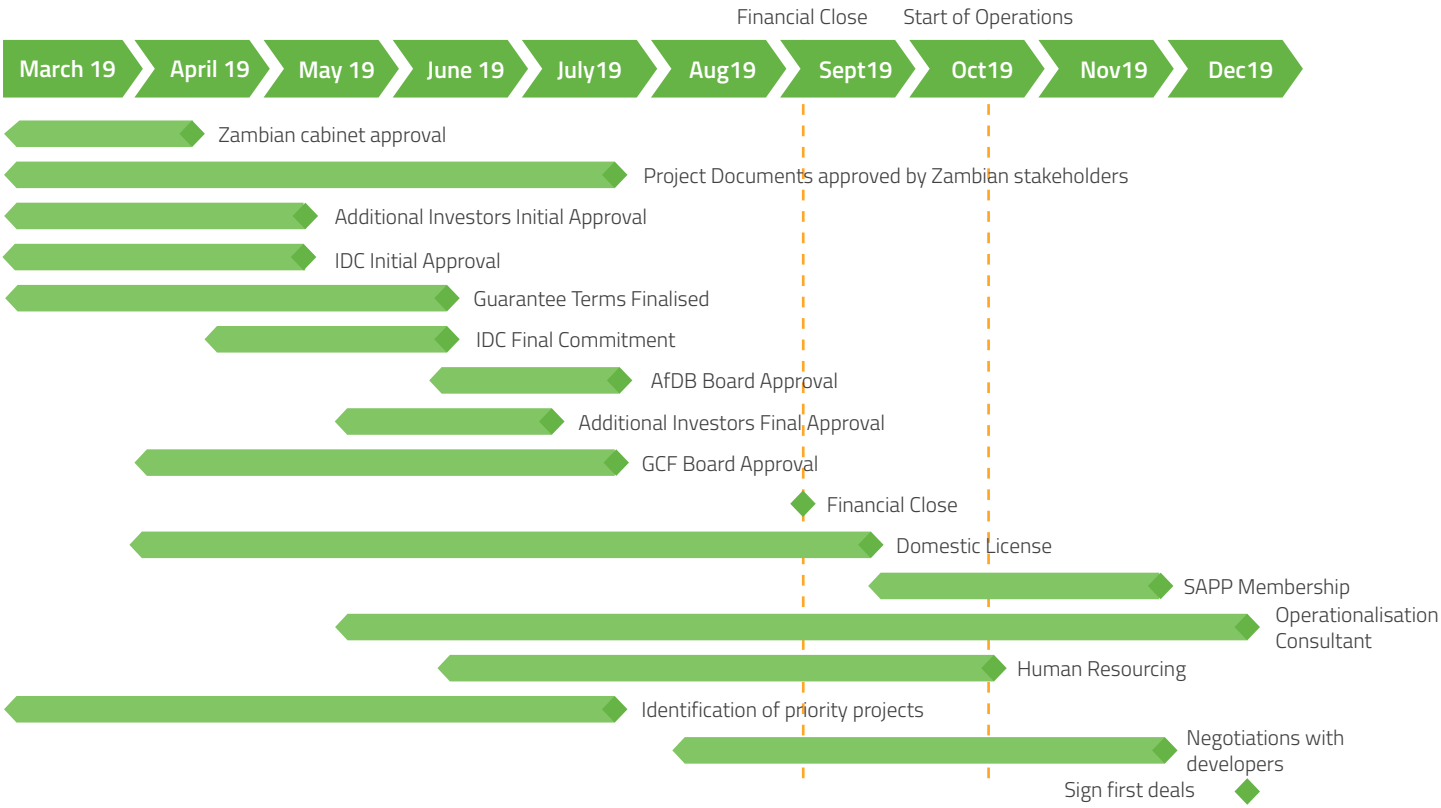
Once the GreenCo portfolio achieves critical mass and diversification and is able to leverage its capital base, the returns GreenCo is able to generate through charging a small margin on large volumes of power sales will increase the potential equity returns at GreenCo level and make investment in GreenCo itself an attractive proposition to private investors. As returns become commensurate with the business risk accepted by GreenCo's investors, the initial concessional equity can be replaced by non-concessional sources of finance and GreenCo will transform into a fully commercial long-term sustainable private sector-owned and operated business with significant development impact.




## Conclusion and Next Steps

GreenCo represents a scalable and sustainable means of helping more projects achieve bankability and bringing larger volumes and new sources of capital to African power markets. GreenCo can also help streamline African utilities' engagement with IPPs, reduce the time and effort required to bring transactions to close, relieve the burden of providing sovereign guarantees and, in the process, help to create the space necessary to implement measures to achieve long term creditworthiness of African utilities and improve domestic power markets. GreenCo has garnered significant momentum and interest from the African and international development community and the SAPP, RERA, the Association of Power Utilities of Africa (APUA), the African Union (via NEPAD) and the African Renewable Energy Initiative.

### 2019 Milestones



# Acknowledgements

The Association of Power Utilities of African (APUA) supports Africa GreenCo as a means of securing greater generation capacity at lower cost and supporting African utilities in their transition to creditworthiness.

The African Renewable Energy Initiative (AREI) supports Africa GreenCo as an efficient means of helping achieve AREI's goals by providing a sustainable and scalable structure within which the available concessional capital can be leveraged to unlock large amounts of private sector capital from a much broader range of investors and at significantly lower cost.

Convergence provides grant funding to Africa GreenCo and supports GreenCo as an efficient way to blend public and private sector finance in support of the development of Africa's power sector.

Africa GreenCo was honoured to be invited to present the concept at a side event co-hosted with the AfDB and The Rockefeller Foundation at COP22 and a side event hosted by the European Commission at COP23, the output of which was further validation of Africa GreenCo's ability to help create a liquid power market.

The Global Water Partnership Southern Africa and Africa GreenCo are collaborating to advance the broader energy-water nexus dialogue, recognising the importance of a coordinated cross-sectoral approach to climate change.

NEPAD supports Africa GreenCo as a catalyst for regional integration and a facilitator of cross-border power trade and energy policy harmonisation.

P4G recognises the importance of collaborative partnerships in achieving transformative change and supports GreenCo's innovative approach to market development.

Africa GreenCo is supported by RERA as it responds to Outcome Statement No. 8 of the SADC Ministerial Workshop on Water and Energy held on 20 June 2016 and to the Market and Investment Framework for SADC Power Projects approved by the SADC Ministers responsible for Energy on 21 June 2016, by addressing some of the risks currently undermining developer and investor/lender confidence in the reliability of independent power producers' long-term revenue forecasts.

Africa GreenCo would not have reached this stage without the support and funding received from The Rockefeller Foundation's Innovative Finance team. The Africa GreenCo team is extremely grateful to The Rockefeller Foundation for their trust, belief and for allowing us to present this ambitious concept to the market.

SAPP supports Africa GreenCo as its envisaged function is complementary to SAPP's focus of driving the regional agenda of promoting generation and transmission expansion, universal access and increased renewable generation penetration by 2030.

The GreenCo concept was included in the recommendations section of the SEforALL Finance Committee Report which was presented to Africa's Heads of State in Addis Ababa on 13th July 2015 at the Financing for Development Conference.

## Africa GreenCo Team

| | |
|---|---|
| Ana Hajduka | Founder & CEO |
| Cathy Oxby | Chief Commercial Officer |
| Douglas "Pug" Bennet | Chief Investment Officer |
| Lovemore Chilimanzi | Technical Director |
| Penny Herbst | Strategy Director |
| Johannes Baake | Finance Director |
| Haakon Olafsson | Special Advisor |
| Tantra Thakur | Special Advisor |
| Alex Simalabwi | Non-Executive Director |
| Philippe Niyongabo | Advisory Committee Member |
| Abyd Karmali | Advisory Committee Member |
| James Bond | Advisory Committee Member |

## Consultants

FIELDSTONE

Financial: Fieldstone
Fieldstone is an independent investment bank focused on energy and infrastructure with a 27 year history and over US$50 billion in completed transactions, providing a broad spectrum of financial advisory services including capital raises, project finance, buy and sell side M&A and structuring related financings within single markets and across borders.

Financial: Lion's Head
Lions Head is a specialized financial advisory firm based in London, Nairobi, and Lagos, experienced in designing and structuring innovative finance platforms with a focus on power and infrastructure.

NORTON ROSE FULBRIGHT

Legal: Norton Rose Fulbright
Norton Rose Fulbright is a global law firm with a market leading energy practice. It has been advising on energy projects in Africa for over 30 years and is currently advising on a number of the most significant and innovative energy projects on the African continent.

# Africa GreenCo Management

Ana Hajduka
Founder & Chief Executive Officer

Ana is qualified as a lawyer in both England & Wales and the State of New York, and is an infrastructure and energy professional with more than 14 years' experience in a variety of transactions including project finance, public-private partnerships and project development, working on energy and infrastructure projects in emerging markets.

Ana trained with Allen & Overy LLP and went on to work for Fulbright & Jaworski LLP and Trinity International LLP, advising on a diverse range of projects within the energy sector, predominately in Sub-Saharan Africa. In March 2015, Ana was appointed by the UNECE as the Team Leader responsible for a Project Team (comprising about 30 specialists) in charge of developing international renewable energy PPP standards as part of the Sustainable Energy for All agenda.

Cathy Oxby
Chief Commercial Officer

Cathy has more than 14 years professional experience in the infrastructure and renewable energy sectors, both as an adviser and an equity investor. She trained at Allen & Overy LLP where she worked on a diverse range of project finance transactions spanning energy and infrastructure before moving into a commercial role at HSBC Infrastructure Fund (which became InfraRed Capital Partners). After 6 years of structuring and negotiating equity investments in a wide variety of public-private partnerships and renewable energy projects, she established her own consultancy to help developers, investors and project companies deliver well-structured and efficiently run investments by assisting them through all stages of project development, implementation and operation and also acted as a consultant to the World Bank.

Douglas "Pug" Bennet
Chief Investment Officer

Pug Bennet is the former COO of GuarantCo's Management Company and was involved with GuarantCo since 2007, taking GuarantCo from a trial initiative to the leading local currency guarantor in such markets. As one of two original employees and always part of the management team, his role included a mixture of client and business focussed work with many ground breaking transactions. This experience required a flexible, practical, persistent and solution focussed approach and provided an understanding of both the private and public sector operators in such markets.

He started his career as a lawyer and has been advising, structuring, financing and arranging transactions, mainly in emerging and frontier markets, for over 20 years.

Lovemore Chilimanzi
Technical Director

Lovemore's core skills are in power system strategic management, operations and electricity trading having worked in this area for over 30 years. He has operated hydro and thermal power stations and transmission networks and has negotiated, implemented and managed numerous power purchase agreements. He is a founder member of SAPP and was a key member in formulation, implementation, monitoring and revising the SAPP control performance criteria and the SAPP regional trading rules that enabled launching of a competitive electricity market in SADC. Lovemore is a senior member of the South African Institute of Electrical Engineers (SAIEE) and has lectured power utility risk management and operations management in an MBA programme for more than nine years.

Penny Herbst
Strategy Director

Penny Herbst has over 30 years of experience in an utility environment most of this in Eskom's Treasury department, where she was exposed to a diverse set of financial, commercial and legal structures that emanate from its operations. Amongst others she has managed Eskom's foreign and interest rate risk, money and capital market investments, project finance transactions, and the structuring of projects to mitigate risks associated with projects in Africa. She led the formation of Eskom's Development Finance unit where in the role of Development Financing Manager she was instrumental raising, in excess of $6bn, from DFI and related institutions. This included funding for Eskom's first renewable projects where she spent some time in Eskom's Renewables Unit working on bridging the gap between financing and implementation.

Johannes Baake
Finance Director

Johannes Baake is an experienced financial analyst with over 13 years' experience in banking, project and development finance. During 10 years at KfW IPEX Bank, he worked in various roles. As a part of a highly specialized modelling team, he worked on dozens of large international project finance in various sectors. He also spent time at the KfW Climate Change Fund, where he designed a cash flow model for a portfolio of CDM projects, leading to his Master Thesis on "Innovative Financing Structures for programmatic Clean Development Mechanism". In 2016 Johannes started to work as an independent consultant and founded in 2017 financial modelling boutique b.linked GmbH which mainly advises large banks and funds on financial structuring energy projects in Africa.

For more information please see www.africagreenco.com or contact info@africagreenco.com

# Africa GreenCo Advisory

Haakon Olafsson
Special Advisor

Haakon has 26 years' experience within commodities and energy working for leading banks, utilities and trading houses. He recently led the successful establishment of Statkraft's power trading business in India. He has 18 years' senior management experience instigating, building, restructuring and leading profitable free-standing businesses in Europe and emerging markets and has provided high level advice on several energy related new ventures. He has an MBA from London Business School and a B.Sc. (Hons) in Economics & Finance.

Having managed front, back, middle office, logistics, technology, finance, legal and regulatory teams, he brings a deep understanding of the totality of a trading business, optimisation of physical resources. He has a firm knowledge of most forms of electricity generation as well as emissions and bulk energy storage.

Tantra Thakur
Special Advisor

Tantra is the former Head of PTC India with more than 40 years of experience with government, private and global companies in India, South Asia and SE Asia. Under his stewardship as Chairman and Managing Director from 2000-2012, PTC India became the first electricity trading company in India/ South Asia. He led the company to diversify into financial services through PTC India Financial Services Limited and co- sponsored the first Energy Exchange in India.

He now serves as a non-executive Member of Board of several companies including InfraCo. He has provided advisory services to many other companies in the Energy Sector in India including Fortnum India and the Essar Group. He was deputed to UNHCR for performance audit on behalf of the UN Board of Auditors. He served as a member of the Prime Minister's Task Force on the socio-economic development of Jammu & Kashmir in India

Alex Simalabwi
Non-Executive Director

Alex is the Executive Secretary, Head of Africa Coordination Unit & Global Lead on Climate Resilience for the Global Water Partnership Southern Africa. Alex is an international development professional with extensive expertise in water resources management, climate change adaptation, economic development, finance, investment strategy design and public policy. Through his career he has developed partnerships and collaborated with various international agencies: World Bank, UNDP, UNICEF, UNEP, UNFCCC, Green Climate Fund, UN Water, GEF, FAO, WMO, UNESCO, AfDB, ADB, EIB, IADB, SADC, ECOWAS, ECCAS, EAC and others. He has worked with more than 20 countries in Africa, to develop investment plans on integration of water into economic national development.

Philippe Niyongabo
Advisory Committee Member

Philippe is a well-known African energy expert. A former Head of Energy Division within the Department of Infrastructure and Energy, African Union Commission, he developed key energy programs including the Program for Infrastructure Development in Africa (PIDA-energy sector), the Geothermal Risk Mitigation Facility (GRMF) and the Geothermal Regional Program for the Eastern African Countries, the establishment of Africa-EU Energy Partnership which is the most successful of the eight partnerships Joint Africa-EU Strategy launched in 2007, the SE4ALL Africa Hub Action Agenda and Investment Prospectuses for African countries and participation at the elaboration of the Africa Renewable Energy Initiative supported by G7 and adopted at the COP21 in Paris, France in December 2015.

Abyd Karnmali
Advisory Committee Member

Abyd is Managing Director, Climate Finance at Bank of America Merrill Lynch and is point person for the bank's $10 billion Catalytic Finance Initiative as well as part of the team that oversees the bank's broader financial commitment to mobilise US$125bn for low-carbon investment opportunities by 2025. He has worked for twenty-five years on climate policy, carbon markets, and new approaches to climate finance and was selected in 2013 to serve as one of two inaugural private sector representatives to the Board of the Green Climate Fund. He also has advisory roles with the Global Innovation Lab for Climate Finance and the finance committee of the Sustainable Energy for All initiative. His non-profit roles include the Board of Directors for The Climate Group and chairing the Board of Just Energy, an Oxfam-seeded initiative.

James Bond
Advisory Committee Member

James is an emerging market infrastructure and climate finance expert with over 30 years experience at the Green Climate Fund, MIGA, the World Bank, the International Finance Corporation and in industry. He has extensive expertise in project and sovereign finance in emerging economies, particularly in infrastructure, energy and climate-related investments. He also serves a non-executive director on the boards of several companies and foundations.

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