The report explores the reasons behind Zambia's influx of concessional finance in the renewable energy sector over the past five years. It concludes that facilitative regulatory frameworks, engaged multi-lateral and commercial partners and the right incentives for the private sector attract investments in infrastructure.

Concessional Finance for Renewable Energy in Zambia

Briefing note

Michele Ruiters
May 2018

Executive Summary

Zambia's renewable energy sector is one of the positive stories in Africa but it should be considered alongside its reliance on income from the copper industry and its external public debt, which was recorded at US$9.1 billion in February 2018. In May 2018, the DBSA's Country Risk Desk produced a comprehensive document outlining the risks involved in Zambia, on which this document relies.

Zambia has experienced a 5% average growth rate over the past ten years and has a stable political environment. Some of the key challenges remain electricity deficits because of low water levels in the main reservoirs. The commissioning of Maamba Coal power plant (300MW) and the Itezhi-Tezhi 120MW hydropower plant has reduced the backlog in electricity supply. However, the deficit of 2000MW remains and continues to constrain economic development. The demand for electricity supply has been growing at 3% per annum due to the growth of the agriculture, manufacturing and mining sectors.

Zambia has introduced a number of regulatory changes that are aimed at facilitating private sector involvement in the energy sector. These range from the amendments to the Zambian Development Agency Act and to establishing clear requirements for businesses in the RE sector.

The GRZ has not pinned its hopes on a single development partner but has opened up the RE market to all interested partners working in RE. The Indians and the Chinese have also been approached to provide low interest loans to RE projects. Their RE strategy is not built on politics but on economic imperatives (to reduce tariffs and to increase manufacturing capacity).

The financial partnerships that have been established in the RE sector address two issues:

- Institutional capacity building
- Technology transfer for domestic solar manufacturing capacity
- Concessional finance such as grants, guarantees, low interest rates, long tenor

The GRZ has also derisked the Zambian energy sector through programmes that create more certainty, transparency, accountability and expertise within institutions and the utility. This process has crowded in private sector investors willing to follow the World Bank Group, the Europeans and other development partners.

The Zambian Development Agency (ZDA) Act of 2006 established the ZDA to identify investment opportunities, attract and facilitate FDi, LDI and promote re-investment in key sectors, one of which is energy. The amendment of the ZDA Act was in recognition of the need to reduce the cost of developing power plants and attract independent power producers to increase generation capacity. The energy mix was expanded to include RE such as solar, bagasse (biogas) and thermal power plants. Tax concessions were applied to the power sector and regulations were improved to attract external investments.

A number of programmes were introduced with partners over the past few years, which are briefly outlined in the next few paragraphs.

The Draft **Renewable Energy Feed-in-Tariff (REFiT)** policy and strategy, finalized in 2015, intended to promote private sector participation in the reneable energy sector. The World Bank dominates the solar and PV market through its support of the Basic Education Support to Infrastructure Projects (BESIP) and the Zambia Social Investment Fund (ZAMSIF). As much as 70% of PV sales are through large donor financed procurements.[1] The REFiT strategy provides a framework for deploying small and medium-sized RE projects of up to 20 MW with private sector involvement. The objective is to bring initially 200 megawatts (MW) of RE onto the grid within the next three to five years, divided into 100 MW solar PV and 100 MW small-hydropower.

KfW designed the **Global Energy Transfer Feed-In Tariffs (GETFiT)** program to assist the GRZ in the implementation of the REFiT Strategy. A total 100 MW solar PV will be procured through a competitive two-stage auction process in Phase I (to be launched in Q1 2018) while the second tender will call for small-hydro projects (scheduled in mid-2018).

Scaling Solar is a World Bank/International Finance Corporation (IFC) programme run in partnership with the Industrial Development Corporation (Zambia). In 2015, the Industrial Development Corporation (IDC), a state-owned investment holding company, was mandated with overseeing all parastatals including ZESCO, which is the biggest asset. The IDC was directed to procure up to 600MW of grid-connected, utility-scale solar energy power under the Scaling Solar initiative with support from the World Bank Group to address the energy crisis in Zambia.

USAID is working on a number of energy initiatives in Zambia, including technical assistance to the Ministry of Energy and the regulator to develop a Renewable Energy Feed-In Tariff (REFIT), complete with a standardized power purchase agreement (PPA). **Power Africa** draws on the combined expertise and abilities of 12 U.S. Government agencies, the World Bank Group, the African Development Bank, the Government of Sweden, the Government of Norway, the Government of Canada, the UK Department for International Development, the Government of Japan, the International Renewable Energy Agency, African governments, and private sector partners.

Renewable Energy and Energy Efficiency Partnership (REEEP) supports the UN programme Sustainable Energy for All (SE4All) through facilitating energy access in emerging markets. The REEEP manages the **Beyond the Grid Fund for Zambia (BGFZ)** valued at US$25 million on behalf of the Swedish Government. BGFZ aims to bring clean energy to one million Zambians and to accelerate private sector growth in energy generation and distribution. The programme will operate from 2016 – 2020 with a maximum fund level of €20 million. REEEP will provide

[1] ZDA Energy Sector Profile

knowledge-sharing platforms through an established monitoring, evaluation and learning methodology.

DFID's Africa Clean Energy Programme (ACE) Energy Africa is a campaign to accelerate the expansion of the household solar market in Africa, helping bring universal energy access in the continent forward from 2080 to 2030. It was launched by DFID in October 2015, and to date 11 countries have signed Partnership Agreements, including Zambia. The next step will be to agree on the specific areas of support that will be covered under the Partnership Agreement.

In 2016, the EU signed a **Financing Agreement for the Support to the Zambia Energy Sector: Increased Access to Electricity and Renewable Energy Programme**. This programme intends to support reforms in the energy sector and to promote deployment of viable renewable energy and energy efficiency solutions. It aims to increase access to clean, reliable and affordable energy services, especially in rural areas. The €244 million fund is provided by the 11th European Development Fund (EDF) to help Zambia meet the 7th NDP targets on sustainable energy.

Another programme focused on renewable energy for rural electrification, being a Zambia specific window of the EU **Electrification Financing Initiative (ElectriFi)** is also under preparation. ElectriFi is a blending facility funded by the European Commission and managed by FMO and the EFI Management Company.

In line with the initiatives to improve the energy sector in Zambia, the **UNDP and China** have established a fund that will create communities of practice in the sphere of RE in Zambia and China that will facilitate project implementation and continued cooperation.

Concluding remarks

- We have existing relationships with each of the institutions listed in this briefing note and we are a key stakeholder in discussions about the programmes being offered on the African continent. The main difference is that we do not offer grants or concessional finance to our African clients. It is not clear that our relationship with these programmes in this brief is also evident on the continent.

- Structured products should continue to explore partnerships with institutions that offer guarantees, concessional finance through blending and look at expanding its soft capacity building initiatives through the PACBP programme, which is already utilized as far as I know. The capacity building could be expanded into sector-specific training, like the programmes in this briefing note.

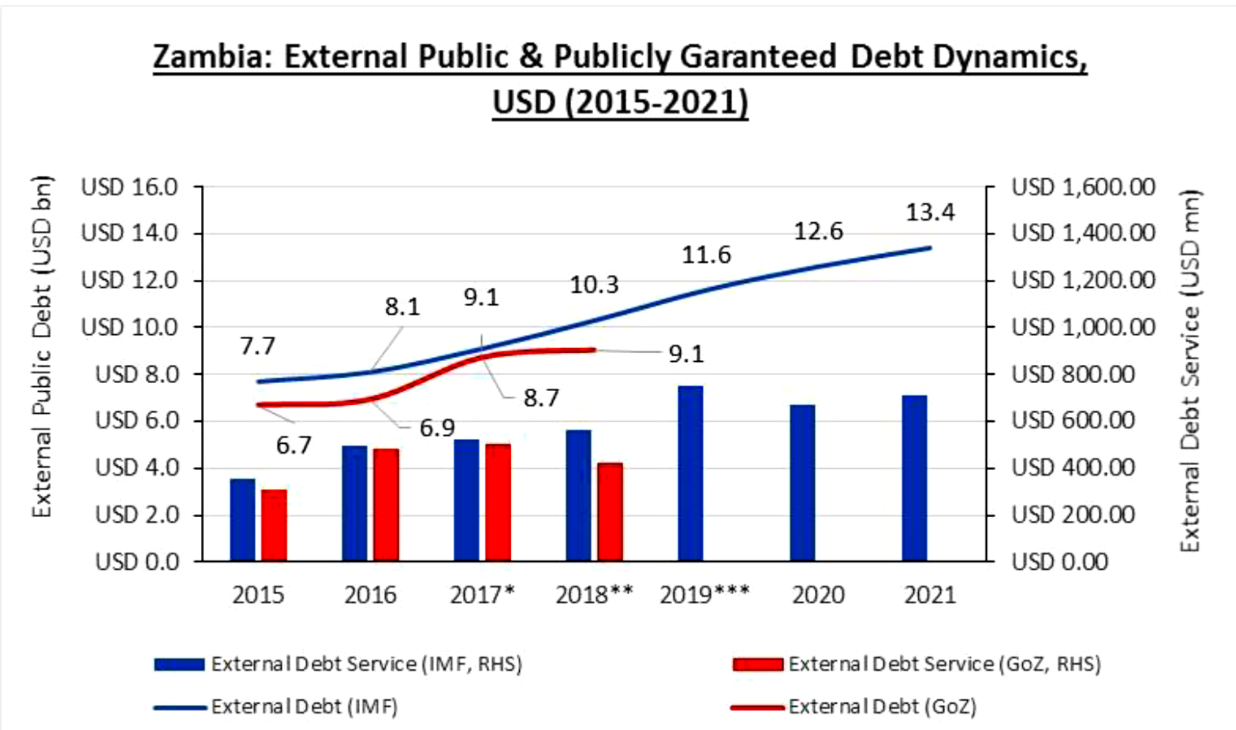
- The DBSA should explore relationships with the MDBs where the bank could identify opportunities and bring in the concessional partners to offer similar products to countries as they have in Zambia. By driving this programme, the DBSA would be involved from the onset and be an equal partner in the process.

Introduction

The Government of Zambia's (GoZ) relationship with the International Monetary Fund (IMF) has been cordial and the GoZ was expected to sign an Extended Credit Facility (ECF) programme in August 2017. However, the IMF halted discussion on the ECF after the August 2017 meeting because the debt management strategy presented by the GoZ would compromise debt sustainability. The GoZ presented quite a vague medium-term debt management strategy, consisting of terms of reference and principles of debt management, which seemingly did not meet the IMF expectations. The GoZ has since committed to undertake a detailed debt sustainability analysis as part of the IMF requirements to re-establish ECF talks.

A recent DBSA Country Risk paper evaluated whether the Government of Zambia (GoZ) has been underreporting its public debt. The paper concludes that rising public debt in Zambia has mainly contributed to its weaker currency and limited state capacity to quantify and monitor contingent liabilities but concludes that there is little evidence to support speculations that the GoZ is maliciously misleading creditors by hiding public debt.

Context[2]



Source: Country Risk Update: Zambia Public Debt, DBSA (May 2018)

The DBSA's Country Risk paper explains that the GoZ has had extensive discussions with the IMF and the IMF concluded its Article IV consultations in October 2017 with a number of critical

[2] The information for the introduction and context sections was sourced from the DBSA's Country Risk Update: Zambia Public Debt, May 2018.

recommendations due to concerns about public debt sustainability. Despite the slight discrepancies, there is no significant differences between the data published by the GoZ and IMF. Over the medium-term period from 2015 to 2018, the average difference between the GoZ and IMF external public debt data is USD 938.9 million6. However, this can be attributed to the fact the GoZ does not report its contingent liabilities and only reports public debt whilst the IMF reports public and publicly guaranteed debt7. In addition, the discrepancies in the data this can be attributed to exchange rate fluctuations given the different publication dates between the GoZ and IMF data.

The opportunities listed in this energy sector paper should be seen in the light of general political risks and the risk of sovereign default.

Zambia's energy sector

Until recently, Zambia has been one of the positive stories in Africa despite its reliance on income from the copper industry. It has experienced a 5% average growth rate over the past ten years and has a stable political environment. Some of the key challenges remain electricity deficits because of low water levels in the main reservoirs. The commissioning of Maamba Coal power plant (300MW) and the Itezhi-Tezhi 120MW hydropower plant has reduced the backlog in electricity supply. However, the deficit of 2000MW remains and continues to constrain economic development. The demand for electricity supply has been growing at 3% per annum due to the growth of the agriculture, manufacturing and mining sectors.

Energy generation in Zambia relies almost entirely on hydropower (nearly 90% of the total installed generation capacity of 2,826.9 MW) while the country's electrification rate stands at approximately 27.9%. A lack of sufficient private financing and short tenors (5-7 years from local commercial investors) have been pointed out as key barriers for Renewable Energy (RE) project financing in many Sub-Saharan African countries including Zambia.

Zambia's history of renewable energy IPP projects is limited and transactions have been dominated by DFI financing. There is a clear barrier for commercial financial institutions, both local and international, to participate in renewable energy projects in Zambia, which seems to be an outcome of their lack of appetite, limited experience with investing in similar types of infrastructure projects, and their high cost of capital which makes them unattractive to project sponsors. Facing a serious electricity supply deficit from recent droughts, the government of the Republic of Zambia (GRZ) now actively seeks to improve conditions for private investment for power projects. The GRZ has introduced regulatory changes that have facilitated the entry of significant amounts of concessional finance and private sector interest in the Renewable Energy (RE) industry in Zambia.

This briefing note records some of the programmes that have been introduced over the last three years and outlines the regulatory changes that have been introduced in Zambia. The objective is to map the reasons for Zambia's increased influx of concessional finance.

Regulatory changes

The Zambian Development Agency (ZDA) Act of 2006 established the ZDA to identify investment opportunities, attract and facilitate FDi, LDI and promote re-investment in key sectors, one of which is energy. The amendment of the ZDA Act was in recognition of the need to reduce the cost of developing power plants and attract independent power producers to increase generation capacity. The energy mix was expanded to include RE such as solar, bagasse (biogas) and thermal power plants. Tax concessions were applied to the power sector and regulations were improved to attract external investments.

The Draft Renewable Energy Feed-in-Tariff (REFiT) policy and strategy, finalized in 2015, intended to promote private sector participation in the reneable energy sector. The World Bank dominates the solar and PV market through its support of the Basic Education Support to Infrastructure Projects (BESIP) and the Zambia Social Investment Fund (ZAMSIF). As much as 70% of PV sales are through large donor financed procurements.[3]

The REFiT strategy provides a framework for deploying small and medium-sized RE projects of up to 20 MW with private sector involvement. The objective is to bring initially 200 megawatts (MW) of RE onto the grid within the next three to five years, divided into 100 MW solar PV and 100 MW small-hydropower.

In 2016, the Energy Regulatory Board (ERB) introduced the Renewable Energy Regulatory Framework (RERF) that is aligned to the National Energy Policy (2008), relevant energy legislation, the Biofuels Regulatory Framework, the Regulatory Framework for Off-Grid Systems and the REFiT Strategy. The RERF aims to:

- Facilitate the implementation of government policy to diversify the energy mix and provide modern forms of energy to rural communities;
- Consolidate and rationalize existing regulatory frameworks;
- Promote investment by having a clear regulatory framework that outlines the entry requirements into the sector; and
- Provide clear internal guidelines to facilitate their deployment.

Licenses would be provided to importers of solar equipment but efforts are being made to build local manufacturing capacity in the RE sector. In addition, rural electrification was prioritised with both on-grid and off-grid solutions being explored. The Zambian Renewable Energy Agency (ZARENA) was established as an interest group whose objective is to generate market knowledge, promote sustainable RE policies and instruments that foster RE education and training to make RE technologies and applications an effective tool for development.

Zarena lists its targets as follows:

- Improve regulatory frameworks for RE through enhanced policy advice;
- Improve the transfer of RE technology;

[3] ZDA Energy Sector Profile

- Improve skills and expertise for renewable energy;
- Produce a scientifically sound information basis through applied research; and
- Financing RE.

Renewable energy programmes

1. **The Global Energy Transfer Feed-In Tariffs (GETFiT) – KfW**

KfW designed the GETFiT Zambia program to assist the GRZ in the implementation of the REFiT Strategy. A total 100 MW solar PV will be procured through a competitive two-stage auction process in Phase I (to be launched in Q1 2018) while the second tender will call for small-hydro projects (scheduled in mid-2018).

In support of the development and implementation of the GETFiT projects, the AfDB proposes to provide debt financing to selected GETFiT projects and seeks co-financing by the Green Climate Fund, a pool of commercial banks, and the Zambian national pension fund managed by the National Pension Scheme Authority (NAPSA). The proposed AfDB-GCF financing envelope aims to provide USD 100 million of senior debt and standby loans (tenor extension instrument) to selected GETFiT projects, primarily targeting the first round 100MW solar PV projects and including a limited number of small-hydro (smaller than 20MW) projects from the subsequent tenders (up to 20% of the framework financing).

This financing structure will create a sustainable market for private investment with strong local participation, supported by credit enhancement instruments to make the overall price and tenor competitive. Leveraging the potential of commercial players and local institutional investors for RE project financing, this proposal presents a desirable and paradigm-shifting structure. A focus on small IPP projects under this program is expected to pave the way for the participation of local financiers and project developers.

In addition, technical assistance (TA) grants of up to USD 4 million, from the GCF and the AfDB will be provided with an aim to develop the ecosystem and value chain for RE-based electrification in Zambia. The TA will have two components:

- Assist the public sector (Ministry of Energy and Water Development, Rural Electrification Authority, etc.) to create an enabling environment for private investments in the mini-grid and off-grid sector. Activities under this component will catalyze the market for decentralized energy solutions and directly contribute to national energy access, translating the experience of small-scale IPP (GETFiT projects) into RE-based rural electrification.

- Build the capacity of selected local commercial banks, institutional investors, and the Zambian financial industry for its enhanced understanding on renewable energy and infrastructure financing, renewable energy project screening, due diligence, and monitoring. Participation of local investors in RE projects has been hindered by their limited capacity, little experience in the sector, and high-risk perception. It is envisaged that local participation can be scaled up in the subsequent rounds of the GETFIT program as well as in other public RE tendering processes (including mini and off-grid projects), building on the improved understanding and risk perception in the RE sector.

The proposed TA will promote small-scale, renewable and decentralized energy project development that will fast-track the country's electrification efforts with a diversified mix. Further, small-scale renewables development and rural electrification together have the potential to reduce the population's dependence on charcoal and firewood, thereby reducing emissions from land use which is one of the major sources of carbon emissions in Zambia.

Successful bidders will sign a standardized Power Purchasing Agreement (PPA) with ZESCO, a state-owned utility, as well as an Implementation Agreement (IA) with the Ministry of Energy and Water Development and the Ministry of Finance of the GRZ. In addition, the GETFiT program is supporting the GRZ to enhance sector regulations, licensing procedures and grid planning through technical assistance (TA) funded by KfW.

This financial structure is expected to do the following:

- kick-start the market for private capital investment into the power sector and build a process whereby a similar scheme will be opened to eligible banks for subsequent rounds; and
- enhance country ownership as it paves the way for active participation from local financial institutions.

Under this scheme, it is proposed that the AfDB will provide senior debt and standby loans to finance each of the selected and interested IPPs. The AfDB exposure will be limited to to one-third (33.3%) of the total project cost – USD 50 million for the whole framework. The GCF (through the AfDB as an Accredited Entity), a pool of commercial banks (backed by a standby loan) and the national pension fund managed by the Zambian National Pension Scheme Authority (NAPSA) will finance the remaining debt. The GCF's participation will be pari passu with the AfDB, therefore its total exposure including standard and standby loans will be equally limited to one-third (33.3%) of the total project cost.

In addition, as a separate intervention, technical assistance (TA) grants of up to USD 4 million from the GCF and the AfDB, will be provided to attain the following objectives:

- assist the public sector (Ministry of Energy and Water Development, Rural Electrification Authority, etc.) to create an enabling environment for private investments in the mini grid and off-grid sectors; and
- build the capacity of selected local financial institutions and the entire Zambian financial industry for its enhanced understanding on renewable energy and infrastructure financing, renewable energy project screening, due diligence, and monitoring.

For the first component, the TA will strengthen the capacity of the Rural Electrification Authority (REA) and other relevant stakeholders for the RE sector development including off-grid (standalone solar home systems) and mini-grid. Off-grid and mini-grid present new opportunities with a high potential to transform the entire electricity market, their growth however needs to be boosted by appropriate planning and policy incentives. Accordingly, this TA component aims to create an investment environment and policy certainty upon which the private sector can actively participate.

The second component will support the entire financial industry in Zambia and selected local financial institutions for them to build the requisite team, expertise and processes needed to originate, appraise, finance, monitor and supervise RE projects. It is expected that the TA for capacity building for banks/financial institutions will complement their participation in the co-financing of projects with the AfDB, enabled by the standby loan facility, which will help them develop their renewable energy investment appraisal processes on the job.

In order to assist the GRZ's ongoing efforts toward the power sector reform, the AfDB is developing a sector budget support programme under the Bank's sovereign operations window. A starting point is the Cost of Service Study, currently being undertaken with the support of the AfDB, which will set the benchmark for introducing a cost reflective tariff once completed. These programs, running in parallel with the AfDB-GCF framework, will improve the offtaker's financial stability as well as the overall power sector efficiency, which will in turn reduce the off-taker risk for private power projects in Zambia.

2. Scaling Solar – World Bank Group and the IDC-Zambia

Scaling Solar is a World Bank/International Finance Corporation (IFC) programme run in partnership with the Industrial Development Corporation (Zambia). In 2015, the Industrial Development Corporation (IDC), a state-owned investment holding company, was mandated with overseeing all parastatals including ZESCO, which is the biggest asset. The IDC was directed to procure up to 600MW of grid-connected, utility-scale solar energy power under the Scaling Solar initiative with support from the World Bank Group to address the energy crisis in Zambia. Through the Round 1 of the program, Italy's Enel and a consortium of a French firm Neoen and US-based First Solar were selected in June 2016 to develop a 34MW (Ngonye1) and a 54MW (Bangweulu) solar PV projects respectively (with the tariff of USD 0.0602 and USD 0.0784 per kWh).

A procurement process for the second round of the Scaling Solar (up to 400MW) is currently ongoing. For comparison, latest grid-connected renewable energy auctions in South Africa have seen prices fall to among the lowest in the world with solar PV prices as low as USD 0.064/kWh6.

In March 2016, Power Africa and USAID Zambia joined the World Bank and the IFC to provide over USD $2 million for IFC's *Scaling Solar* program in Zambia. This support will help finance the critical costs necessary to establish and implement a transparent, competitive bidding process to attract qualified solar power developers and to build institutional capacity and catalyze market growth.

Scaling Solar has created a transparent and coherent process that investors are able to work with. The IDC as the investment vehicle and ZESCO as the off-taker have predictability under this programme and have a clearly defined process that needs to be followed. Risks are reduced through Scaling Solar's processes that attract private sector investment in the RE sector. Scaling Solar has financing support from USAID's Power Africa, the Ministry of Foreign Affairs of the Netherlands, the Ministry of Foreign Affairs of Norway, and the Infrastructure Development Collaboration Partnership Fund (DevCo).

The World Bank Group approved an international Development Association guarantee of up to $2.8 million that will support Zambia in increasing its solar photovoltaic electricity generation capacity and diversify the country's primary energy sources. The guarantee will leverage approximately $4.8 million in private sector-led investment that will support the development of the photovoltaic power plant by Ngonye Power Company Limited.

3. Power Africa – USAID

USAID is working on a number of energy initiatives in Zambia, including technical assistance to the Ministry of Energy and the regulator to develop a Renewable Energy Feed-In Tariff (REFIT), complete with a standardized power purchase agreement (PPA). Power Africa draws on the combined expertise and abilities of 12 U.S. Government agencies, the World Bank Group, the African Development Bank, the Government of Sweden, the Government of Norway, the Government of Canada, the UK Department for International Development, the Government of Japan, the International Renewable Energy Agency, African governments, and private sector partners.

The first phase of the REFIT project focused on policy development, and has been completed. The policy is intended to guide and expand the role of the private sector in developing the country's renewable energy resources and diversify the supply and nature of energy production. The second phase of the project focuses on determining the cost to the offtaker for the various renewable technologies. As with many developing countries, the establishment of a REFIT has spurred the on-boarding of new, small, private sector-driven renewable energy power generation partners.

In April 2015, USAID-sponsored delegates from Zambia's Rural Electrification attended training on practical lessons about developing, financing, and implementing grid-connected and off-grid projects. USAID also funded a project that assists the Zambians in addressing utility loss reduction and competitive independent power producer (IPP) procurement assessments.

In October 2015, the Swedish International Development Cooperation Agency (Sida), a Power Africa engaging donor partner, and USAID's Development Credit Authority (DCA), facilitated a 50% loan guarantee that will help Zambian farmers finance and implement renewable energy solutions.

4. **Renewable Energy and Energy Efficiency Partnership (REEEP) and Beyond the Grid Fund for Zambia (BGFZ)**

REEEP supports the UN programme Sustainable Energy for All (SE4All) through facilitating energy access in emerging markets. The REEEP manages the BGFZ valued at US$25 million on behalf of the Swedish Government. BGFZ aims to bring clean energy to one million Zambians and to accelerate private sector growth in energy generation and distribution. The programme will operate from 2016 – 2020 with a maximum fund level of €20 million. REEEP will provide knowledge-sharing platforms through an established monitoring, evaluation and learning methodology. The partnership aims to improve the quality of energy provided and the service in the energy sector in Zambia. The BGFZ aims to catalyse private sector investments in the Zambian energy sector.

5. **DFID's Africa Clean Energy Programme (ACE)**

The programme will support:

- Technical assistance to improve the enabling environment for a market based approach for private sector delivery of solar home system (SHS) products and services (Policy and Regulatory Reform, investment readiness, learning and Coordination);
- Finance for businesses wanting to enter new and emerging SHS markets in sub-Saharan Africa for their start up and early commercialisation of ideas; and
- Test innovative approaches to stimulating private sector investment and market development.

Energy Africa is a campaign to accelerate the expansion of the household solar market in Africa, helping bring universal energy access in the continent forward from 2080 to 2030. It was launched by DFID in October 2015, and to date 11 countries have signed Partnership Agreements, including Zambia. The next step will be to agree on the specific areas of support that will be covered under the Partnership Agreement.

In 2017, the UK and Zambia signed an Energy Africa Partnership Agreement to accelerate the expansion of the household solar market in Zambia. The Energy Africa campaign seeks to secure the policy commitments, technical assistance and financing needed to transform the energy access landscape. The agreement also facilitates the right environment for effective private sector participation in the energy sector in Zambia.

The UK has already invested in several larger-scale hydropower projects in Zambia through InfraCo Africa. InfraCo Africa is a multi-government funded, privately managed company providing early stage capital and expertise to develop infrastructure projects in sub-Saharan Africa. It is working with Western Power to develop a 60MW hydro project at Ngonye Falls in the Western Province – the poorest and least electrified province in the country. DFID has also supported the IFC's Scaling Solar initiative, which aims to help the Government procure good quality, grid-scale solar generation projects transparently and efficiently.

6. European Commission and European Union

In 2016, the EU signed a Financing Agreement for the Support to the Zambia Energy Sector: Increased Access to Electricity and Renewable Energy Programme. This programme intends to support reforms in the energy sector and to promote deployment of viable renewable energy and energy efficiency solutions. It aims to increase access to clean, reliable and affordable energy services, especially in rural areas. The €244 million fund is provided by the 11th European Development Fund (EDF) to help Zambia meet the 7th NDP targets on sustainable energy.

Another programme focused on renewable energy for rural electrification, being a Zambia specific window of the EU Electrification Financing Initiative (ElectriFi) is also under preparation. ElectriFi is a blending facility funded by the European Commission and managed by FMO and the EFI Management Company. The programme aims to unlock, accelerate and leverage private sector investment to increase or improve access to affordable, reliable, sustainable and modern energy in developing countries, including Zambia.

ElectriFI, elaborated in close cooperation with representatives of the private sector and development financiers, is a flexible tool aiming to support investments providing access to reliable, affordable and sustainable electricity and energy services in developing countries. ElectriFI will constitute a comprehensive and inclusive platform for investment support services, rendering due attention to bankability at very early stages, whilst facilitating access to senior debt at later stages.

ElectriFI is open to contributions by partners from all over the world, including International Organisations, donors and financiers, foundations or CSR funds acting in line with the principles of transparency and equal treatment. The US Government has already confirmed, through Power Africa, the intention to contribute to ElectriFI an amount of USD 10 million. The aim of ElectriFI is to support renewable energy investments of a total budget above EUR 0.5 million. At early stages or during the pilot phase, own capital is expected to be in the scale of 50%. At later project stages and in view of scaling up, own capital is expected to be in the scale of 15-25% with a senior debt financing at the scale of 50-60%. The total amount contributed by ElectriFI will not exceed EUR 10 million per project. The debt repayment period would typically be 5-10 years.

The initiative is being implemented under the EU blending framework with an initial € 75 million delegation agreement concluded with the Dutch Development Bank (FMO) acting on behalf of all European Development Finance Institutions (www.edfi.eu) and several other financial institutions/EU partners under blending. The first invitation for applications under ElectriFI generated 290 project proposals requesting EUR 800 million of financial support to leverage for a total investment amount of EUR 8.5 billion for installing 3.7 Gigawatts new renewable energy generation capacity in 55 countries (35 countries being in Africa).

7. **United Nations Development Programme (UNDP)**

In line with the initiatives to improve the energy sector in Zambia, the UNDP and China have established a fund that will create communities of practice in the sphere of RE in Zambia and China that will facilitate project implementation and continued cooperation. The expected outcomes are to:

- Strengthen the enabling environment for the transfer and use of priority renewable technologies in Zambia; and
- Remove market barriers to the adoption of renewable technologies for the rural poor in Zambia.

This project, housed under China's South-South Cooperation initiatives, provides a fund of $2.624 billion for awards between $1-10 million. The trustee is the Ministry of Foreign Affairs for Denmark and the implementing agency is the UNDP.

Concluding remarks

- Zambia has introduced a number of regulatory changes that are aimed at facilitating private sector involvement in the energy sector. These range from the amendments to the Zambian Development Agency Act and to establishing clear requirements for businesses in the RE sector.

- The GRZ has not pinned its hopes on a single development partner but has opened up the RE market to all interested partners working in RE. The Indians and the Chinese have also been approached to provide low interest loans to RE projects. Their RE strategy is not built on politics but on economic imperatives (to reduce tariffs and to increase manufacturing capacity).

- The financial partnerships that have been established in the RE sector address two issues:
    - Institutional capacity building
    - Technology transfer for domestic solar manufacturing capacity
    - Concessional finance such as grants, guarantees, low interest rates, long tenor

- The GRZ has also derisked the Zambian energy sector through programmes that create more certainty, transparency, accountability and expertise within institutions and the utility. This process has crowded in private sector investors willing to follow the World Bank Group, the Europeans and other development partners.

Lessons for the DBSA

- We have existing relationships with each of the institutions listed in this briefing note and we are a key stakeholder in discussions about the programmes being offered on the African continent. The main difference is that we do not offer grants or concessional finance to our African clients. It is not clear that our relationship with these programmes in this brief is also evident on the continent.

- Structured products should continue to explore partnerships with institutions that offer guarantees, concessional finance through blending and look at expanding its soft capacity building initiatives through the PACBP programme, which is already utilized as far as I know. The capacity building could be expanded into sector-specific training, like the programmes in this briefing note.

- The DBSA should explore relationships with the MDBs where the bank could identify opportunities and bring in the concessional partners to offer similar products to countries as they have in Zambia. By driving this programme, the DBSA would be involved from the onset and be an equal partner in the process.

Selected References

https://www.usaid.gov/energy/mini-grids/financing/grants

Beyond the Grid Financing for Zambia https://www.bgfz.org/

DBSA Country Risk Update: Zambia Public Debt, May 2018

Energy Regulation Board, Renewable Energy Feed in Tariff Regulatory Framework for Zambia http://www.erb.org.zm/content.php?viewpage=rfit

EU intends to assist Zambia Drive renewable energy production, 1 February 2017, https://www.esi-africa.com/eu-intends-assist-zambia-drive-renewable-energy-production/

EU/Zambia Cooperation and Development https://ec.europa.eu/europeaid/countries/zambia_en

Zambia Renewable Energy Association – www.zarena.org