

# COUNTRY ORIENTATION PAPER

# The Africa Energy Marketplace



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Presented  
By:



## I. BACKGROUND

The Africa Energy Market Place (AEMP) is the Bank's new energy-investment-delivery platform, the first event of which will take place at the African Development Bank in Abidjan on July 5<sup>th</sup> - 6<sup>th</sup> 2018. The first batch of countries selected includes:

1. Côte d'Ivoire
2. Egypt
3. Ethiopia
4. Nigeria
5. **Zambia**

AEMP is a tripartite platform established with the goal of removing barriers to private sector investments in the energy sector by bringing together key **government representatives, development partners and private sector investors**. **AEMP will also pave the way for showcasing transactions** at the Africa Investment Forum<sup>1</sup> to be launched by the African Development Bank in November 2018 in South Africa. Key AEMP objectives include:

1. **Country-specific discussion focusing on removing barriers/issues to private sector investments.** This entails country roundtables to (i) prioritize and accelerate the necessary sector reforms to attract private investment across the energy sector; (ii) review and fast-track priority transactions; and (iii) generate new deal pipeline by identifying project opportunities that could be advanced from concept to bankability.
2. **Peer-to Peer learning and knowledge exchange.** AEMP offers opportunities to Government officials to engage with peers in other countries and draw on lessons, insights and best practices of relevance to effect energy sector transformation.
3. **Networking and partner engagement.** AEMP offers opportunities for interaction with senior representatives from the development partner and private investor community, allowing for the identification of financial support and investment opportunities.

The following sections of this **orientation paper** have been informed by stakeholder consultations in order to identify the most pressing issues for discussion at the country roundtables, with a view to facilitate focused dialogue and convergence on priority actions to be undertaken by each stakeholder group. Specifically, these sections include (I) a brief overview of the energy sector, (II) a pipeline of priority projects, (III) key on-grid sector challenges/actions, (IV) key off-grid sector challenges/actions, (V) and other sector challenges. The paper concludes with an action matrix (VI) capturing key deliberations on issues discussed.

As a key outcome, participants are expected to actively co-create and commit to **Joint Action Plans**, which will serve as roadmaps for delivery of identified actions towards unlocking investments.

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<sup>1</sup> The Africa Investment Forum is a multi-stakeholder, multi-disciplinary collaborative platform for the economic and social development of the continent. AIF is a transactional marketplace dedicated to advancing projects to bankable stages, raising capital and accelerating closure of deals. The African Development Bank is championing the first edition on the 7-9 November in Johannesburg, South Africa. For more information visit [www.africainvestmentforum.com](http://www.africainvestmentforum.com).

## II. OVERVIEW

- **Energy is one of the most strategic sectors in Zambia.** Current installed capacity: 2,800 MW; of which 85%, or 2,380 MW, is hydro and much of this is large hydro with aging infrastructure (e.g., 50+ years old) Electrification access, 67% urban; 4% rural; 31% overall. Recent droughts (2014-15) triggered triggering downstream collateral damage leading to power-cuts, lowered economic activity, GDP, and weakening Kwacha.
- **ZESCO produces 90% of the total generation.** There are also two private sector players Copperbelt Energy Corporation and Lusemfwa Electricity Company that primarily produce captive generation for Mines. ZESCO is the sector sole off-taker. ZESCO has weak credit-worthiness and struggling to service its liabilities. Over 50% of power produced goes to the mining sector. Zesco is the sole oftaker. Tariffs are not costs reflective.
- **Zambia has a unique geographic border** with eight countries besides being main interconnection (Zambia-Tanzania-Kenya) connecting East Africa Power Pool (EAPP) and Southern Africa Power Pool (SAPP) grids and electricity markets. Zambia market sector should be viewed in context of potential regional and continental Hub enabling IPPs to export electricity and participate in regional/continent electricity trading markets.
- **Zambia is characterized by imbalanced demand-supply** nodes - the generation primarily in North and demand in south and is also reflected in transmission and distribution network, by-passing rest of country, primarily rural areas. Supply-demand is required to be balanced including coverage for the rural areas and solutions weighed against high system losses (~18%).
- **Activities & Resources** - There are two programmatic approaches for solar PV underway (Scaling Solar and GETFiT) and majority of the rest of public and private pipeline is skewed towards solar and hydro (with exception of one wind project). The rest of renewable energy technologies are still nascent and needs to be developed in sector.
- **Sector is characterized by demand increase of >5% p.a.** (200 MW/yr) but concurrent generation addition. From a net exporter of power, it is now an importer within the Southern African Power Pool (SAPP) with significant regional spillover impacts.
- **Private sector**, international and local financing, is stymied from investing due to a variety of reasons including fiscal weakness; legal and regulatory framework provisions that restrain mobilization of capital (planning, procurement, licensing, energy efficiency, rural electrification, etc).
- **2020 Goals** - 900 MW of clean energy is planned with 1 million connections and electrification of 300 health centers (1 m patients) with cost reflective tariffs and increased integration of IPPs and non-hydro RE. ZESCO reform and Strengthen off grid enabling environment

### III. PRIORITY SECTOR CHALLENGES – ON GRID

ROUNDTABLE TOPICS	ON GOING ACTION	SUGGESTED SUB TOPICS
<b>DISCUSSION TOPIC I</b>		
<p><b>ZESCO emergency rescue and reforms</b> Debt Distress at both National level and ZESCO (mandated single buyer) pose a clear and present danger of eroding investor confidence that could setback Zambia’s progress. Hence imperative to accord urgency to executing reforms that address this and help ameliorate Zambia’s critical situation.</p>	<ul style="list-style-type: none"> <li>• Country Partners working with GZR (Government of Republic of Zambia) to identify immediate actions required to restore investor confidence.</li> <li>• Cost Of Service Study is a strategic input</li> </ul>	<ol style="list-style-type: none"> <li>1. Government: To communicate to stakeholders and investors on the reforms and the approvals by cabinet including the roadmap and deliverables; share plans and progress made towards financial recovery of ZESCO as viable off taker for new generation projects.</li> <li>2. WBG: proposes to address the ZESCO liquidity and National debt concern by preparing a guarantee package for ZESCO debt restructuring. In addition, USD10 million technical assistance funding will be provided to support reform initiatives within the sector. The debt restructuring to be done in two tranches spread over 12 months starting early 2019.</li> <li>3. AfDB: proposes to respond with potential support initiatives towards this reform program:               <ol style="list-style-type: none"> <li>a. ALSF support to ZESCO for government prioritized renegotiation of high tariff PPAs</li> <li>b. TA finance towards the development of the Integrated Resource Plan</li> <li>c. Support in providing program office resources (embedded resource) to manage the ZESCO reform program</li> <li>d. The Bank would like to use the RBF facility (USD250 million) to support the sustainability of the Zambia energy sector, support the financial viability and increase operational efficiency in ZESCO. Further consultation with government and ZESCO is required to design such an operation, as the RBF requires proof of actual expenditure towards support of the reform program. Contributions towards debt repayment is not an option. Category I projects are also excluded. The RBF operation is however also dependent on a positive outcome from the internal Country Risk Assessment exercise.</li> </ol> </li> <li>4. Discuss Projects – Batoka Gorge and CEC</li> </ol>
<b>DISCUSSION TOPIC II</b>		
<p><b>Peer to peer-South-South Cooperation roundtable:</b> Both countries have expressed keen interest. Zambia public sector entities (ERB, Ministry of Energy and ZESCO), have sent their areas of interest that has been shared with Government of Egypt</p>	<p>Lessons learnt and sharing on scaling Renewable Energy; harmonization between Govt entities; Program Management; Tariff increases, etc.</p>	<ol style="list-style-type: none"> <li>5. AEMP to help kick-start the facilitation of South-South (SS) cooperation between Egypt and Zambia:               <ol style="list-style-type: none"> <li>(a) AfDB is liaising with both Government entities to identify specific issues/areas of interest to enable fruitful start of SS cooperation (lessons and cases etc. to share their lessons learnt on harmonizing institutional/Banking/ Fiscal/ Power/ and Gas liberalization to facilitate private sector participation.                   <ul style="list-style-type: none"> <li>• Follow-up is expected at APUA (Africa Power Utilities Association) meeting in Cairo soon after</li> <li>• Opportunity for Private Sector players to explore investment opportunities in Zambia</li> </ul> </li> <li>(b) Egypt Government has offered hard and soft infrastructure support to help scale RE and EE regionally and in Sub Sahara (e.g. training and capacity building; laboratory testing of RE and EE equipment; opportunities for importing and exporting private sector services to and from Egypt)</li> </ol> </li> </ol>
<b>DISCUSSION TOPIC III</b>		
<p><b>Off-Grid Renewables</b> Supporting Universal access targets in Zambia</p>	<p>Off-grid Task Force was set up ( Feb 2018) to help coordination and develop the sector</p>	<ol style="list-style-type: none"> <li>1. AfDB will invest USD 100 Mn (USD 50 Mn each from GCF and AfDB) for Projects and TA in Off-grid sector. Additionally, SEFA could potentially fund USD 1.5 Mn TA (for REA and Sector Off-grid Task Force).</li> <li>2. The roundtable would focus on               <ol style="list-style-type: none"> <li>a. Help developing and discussing key issues and constraints in financial models on Tariffs and payback mechanisms</li> <li>b. ZESCO and REA seem to differ on strategies and vision for universal energy access, and ZESCO proposes to bring options at AEMP to enable alignment of roadmap and/or process with REA including regulations, frameworks etc.</li> <li>c. Explore options to align and harmonize efforts and initiatives across Sector entities and Development Partners</li> </ol> </li> </ol>

## IV. OTHER SECTOR CHALLENGES

### Off Grid

- Regulation of mini-grids, procedures and permissions to operate off-grids; differences for sizes, and location, if any
- Regulations, standards covering mini-grid interconnection with main electricity grid
- Delineate targets for service levels (e.g., power availability, number of guaranteed hours of power supply, etc.) for both grid and off-grid
- Financing gaps in E2E value chains of grid, off-grid and stand-alone systems

### On Grid

- Delay in the Cost of Service Study (COSS) being done by ERB and tariff regime for different sector projects
- Guarantees from the government
- Non cost reflective tariff (excluding programs such as Scaling solar and GetFit)
- Clarity of process flow of approvals, licensing, and No-objections
- National Plans (2008) need to be updated to capture renewable technologies, and targets
- Negligible access to local seed, mid- and long-term financing across project cycle

### On Going Action by Development Partners

#### USAID/POWER AFRICA

- (i) Supported Government Zambia launch a 20 MW Renewable Energy Feed-in Tariff (REFIT) Strategy aimed at accelerating private investments in small and medium sized renewable energy projects in Zambia
- (ii) Technical assistance to the government to develop a standardized power purchase agreement (PPA)
- (iii) The Power Africa Beyond the Grid Fund: A new undertaking to bring clean energy access to one million Zambians and accelerate private-sector growth in energy generation and distribution in the country.

#### WORLD BANK/IFC

- (i) IFC Industrial Development Corporation (IDC): Scaling up solar program (objective 600MW of solar projects). The First Scaling Solar project was auctioned in May 2016 for two solar PV plants of 50 MW each and were awarded to international energy developers.
- (ii) Scaling-up Renewable Energy Program for Low Income Countries (SREP): Facilitating development of an Investment Plan (IP) for projects and programmes on Renewable Energy in Zambia. Under the SREP program, a total amount of up to \$40 million will be made available for Zambia through the World Bank
- (iii) Lusaka Transmission and Distribution Rehabilitation Project (LTDRP)

#### KFW

- (i) GETFiT: \$34.8 Million to implement a Renewable Energy Feed-in Tariff (REFiT)-Strategy which aims to cope with climate change and the energy scarcity in the by supporting private investment in renewable energy facilities
- (ii) Finance the Phase 1 of ZESCO Southern Division distribution rehabilitation and extension project

#### EIB /EU

- (i) Finance the Phase 1 of ZESCO Southern Division distribution rehabilitation and extension project and ZESCO Lusaka Transmission and Distribution Rehabilitation Project (LTDRP)

## On Going Action by Development Partners

### **UNDP**

- (i) Implement the China Zambia South-South Renewable Energy Technology Transfer Project on Solar and small-hydro: providing investments to policy and regulatory reforms and capacity building aimed at improving the enabling environment for private sector participation and public officers being ready to provide required.

### **SNV**

- (i) Energy for Agriculture (E4A) project, supported by SIDA, supports the construction of 3,375 bio-digesters

### **JICA**

- (i) Increased Access to Electricity Services (IAES) project: Working in collaboration with the Government through the Ministry of Energy and Zesco to increase access to electricity