DEVELOPMENT PARTNERS FORUM

PROMOTING PRIVATE SECTOR PARTICIPATION IN AFRICA’S POWER GRIDS

2024

Position Paper 2
This paper includes:

- A brief introduction of the context of the Development Partners Forum (DPF) and previous workshop
- Re-emphasizing the objective of the DPF
- Cross-border transmission opportunities in Africa
- Global trends in private sector participation in transmission
- Financing transmission: Focusing on early-stage development of projects
- Enabling environment and regulatory aspects
- Showcases from SAPP and Uganda

I) Context

The RES4Africa Foundation ("RES4Africa") and the International Finance Corporation (IFC) launched the DPF to promote private sector investment in grid infrastructure projects in Africa. The DPF constitutes a series of workshops that aim at bringing together development partners, public institutions, and private sector parties from across Africa to share case studies with best practices of private involvement in transmission infrastructure projects.

The first workshop was held on 22nd November 2022. Presenters, including subject matter experts, IFC, SAPP-RTIFF, and KETRACO, discussed current investment projects in Africa, lessons learned, and viable ways to increase investment in future transmission projects under 5 themes: 1/ wayleaves; 2/ business models, remuneration, and payment security, 3/ affordability and value for money, 4/ ownership, operations and maintenance, and 5/ policy, regulations, and capabilities. The main takeaways were summarized in the first position paper [LINK].

The second workshop was then held on June 19th, 2023. The purpose of this workshop was to explore the important points that were emphasized in the initial workshop and introduce additional related topics to ensure a comprehensive understanding of the entire transmission spectrum. The topics of the workshop covered 4 themes, 1/ financing, 2/ payment mechanisms and credit enhancement, 3/ enabling environment, 4/ showcase of successful examples. Each theme was addressed by a speaker to share experiences from a selected case. Presenters included Panos Vlahakis, Senior Investment Officer, IFC; Samson Masebinu, Energy Specialist, Power Africa; Elisha Mutambudzi, Finance Specialist, SAPP; Nadia Rhazi Khawar, MD, Business Development, Structured Finance and Insurance, U.S. International Development Finance Corporation (DFC); Aderito Sousa, General Manager, Mozambique Transmission Company (MOTRACO); and Ziria Tibalwa Waako, CEO, Uganda Electricity Regulatory Authority (ERA). Participants formed 4 groups to reflect on the lessons learnt and discuss best practices and challenges in attracting private investments in grid infrastructure projects in Africa from the perspectives of Development Partners (DPs), utilities, regulators, and the private sector perspectives.

II) Re-emphasizing The DPF objective

‘Private Sector Participation (PSP) in transmission development has gained interest from several institutions for years and there are a lot of documents that have been published and many presentations made in conferences. ... The Objective of the DP Forum is not to have another one of these events, but
rather to think together and be clear on what needs to be achieved, for example, define a project and deliberate about how to move it forward.”, Panos Vlahakis, IFC

III) Cross-border Transmission Opportunities in Africa

There is a compelling need for cross-border transmission interconnections across Africa to increase access to electricity, development of large-capacity generation, increase access to efficient low-cost supply options and securing energy reserve requirements at lower cost. The shift from just adding more generation capacities into a single grid to cross-border trade leverages (i) the spatial and temporal distribution of renewable resources across regions, (ii) the least cost of generation from renewable resources, and (iii) the differences in load peak times. Figure (1)\(^1\) shows that each region is developing its intra-regional connections, but there are almost no cross-border connections among the regions.

“So just in West Africa alone, if the desert to power initiative goes through and provides solar energy from the Sahara Desert to the West African region, there is about $32 billion that could be saved in West African countries. This includes renewables, gas and hydro just for the region”\(^2\), Samson Masebinu, Power Africa

The lack of alignment among governments on projects of common interest is one of the main challenges facing regional power trade, within a region or across regions. Sometimes, the focus is concentrated on selling power to a neighboring country rather than exchanging power based on least cost attributes.

Showcase 1 – Updates on SAPP Regional Transmission Infrastructure Financing Facility (RTIFF)

The workshop provided a much-needed platform to learn about the progress of the development of a SAPP Regional Transmission Infrastructure Financing Facility (RTIFF) introduced during the previous workshop.

IFC, as an interested anchor investor, is working closely with SAPP and RTIFF’s Fund Manager to advance the development and financing arrangements including: the RTIFF’s financial design and sustainability plan, its

\(^1\) There might be some updates to the shown networks, but not significant

\(^2\) West Africa Trade Outlook - USAID
governance frameworks, and review of the legal and regulatory frameworks, including resource mobilization.

While RTIFF will initially mobilize funds from donors, the design of RTIFF must ensure its financial sustainability. Part of the work is to develop a financial stability plan so that RTIFF does not fully rely on donor funding. There is donors’ interest to support RTIFF once the fund is established.

IV) Global Trends in Private Sector Participation in Transmission

Lots of investments in Latin America. LAC countries like El Salvador, Brazil, and Peru, have started early on by introducing private investments in grids starting with distribution and then moving to transmission. This has helped them advance the transmission plans.

Asset recycling to raise private capital in India. India has a lot of private investments and they have been moving quite fast. They have private sector involvement in transmission and have now started thinking of how they can recycle transmission assets. The concept of recycling the existing transmission assets is a way to raise private capital by bringing the private sector to work with those assets so that the utilities can use the raised capital for new projects.

In Africa, there are very few cases despite the urgent need to develop new infrastructure.

Showcase 2 - The Mozambique Transmission Company (MOTRACO)

Founded in 1998, the 25-year-old joint venture was established among the state-owned electricity utilities from Mozambique (Electricidade de Moçambique, EDM), South Africa (Eskom), and Eswatini (Eswatini Electricity Company, EEC) to design, build, finance, operate, and maintain a 400kV network across the three countries. The network which spans over more than 600km transmits power primarily to Moal – a privately owned aluminum smelter project in Mozambique – including the utilities EDM and EEC.

“We are an effective and living model of regional cooperation and partnerships between public and private sectors for economic development.”

MOTRACO has encountered various challenges over the years and has successfully implemented appropriate measures to overcome them.

3 www.motraco.co.mz
V) Financing Transmission Infrastructure

**Historical interest focused mainly on clean energy but transmission will follow:** DFC, Power Africa, and IFC among the DPs have always had a big focus on Africa’s clean energy, with an interest to expand to transmission projects.

**Funding the development of transmission projects:** Despite the announced interest from DPs, there is a clear lack of enough funds for the development of transmission projects. This is key to actively involve and support the private sector at the very early stages, encourage governments to cater to different risk appetites and support private sector involvement.

**IFC has the required instruments** and is willing to join forces with other DPs to actively engage in funding early-stage development activities.

**DFC has welcomed discussions on funding development for transmission project(s)** to support getting them ready for financing. So far, DFC provides several financing products including equity and debt facilities, political risk insurance, grants, and technical assistance programs for private sector-led projects. DFC provides grant funding to develop RE generation projects but hasn’t yet availed grants to develop transmission projects.

**Private Sector Participation in transmission requires governments’ buy-in on the PSP model.** Concessions, securitization, merchant transmission lines, and industrial demand-driven models are applicable in different countries and the Independent Power Transmission (IPT) model is the most suitable to Africa according to studies.

VI) Enabling Environment and Regulatory Aspects

**The enabling environment for PSP in transmission is ranked top on the list of challenges,** especially for cross-border projects. This is because it involves commitment and accountability from multiple authorities and requires massive coordination among them.
“the transmission network has been financed by the government using grant funding from development partners or concessional loans, because of continuing expenditure needs, the government through the amendment of the Electricity Act 2022 decided to open up the transmission segment.”, Ziria T. Waako, ERA.

“IPP modeling in generation can be replicated into IPT in transmission. Uganda so far has established this confidence likely because of the robust regulatory environment, but also because of the political will.”, Ziria T. Waako, ERA.

**RE IPP can be replicated in transmission** as long as:

- Introducing IPTs is driven by the need of the country to expand on transmission through private investments as it grants access to additional capital that may not be readily available through traditional sources such as public borrowing. Also, this allows governments to fund transmission projects without straining their own financial resources.
- The enabling environment gives the investors confidence in engaging transmission projects. Based on their successful experience in RE generation, investors have gained the necessary knowledge and assurance to explore new business opportunities.
- A robust regulatory framework is in place.

**Resettlement and compensation** are key considerations that should be cautiously looked at for transmission projects. The relevant framework should ensure that the wayleave cost does not increase the overall cost of the project, but also ensure that the wayleave is acquired in a timely manner.

**Tariffs should be cost-reflective.** The role of the regulator is to ensure that consumers do not bear unnecessary additional costs resulting from private investments, and cost reduction resulting from efficient operations by the private sector is passed to the end-consumer tariffs.

**Showcase (3): Uganda is a great example to show how the government has endorsed PSP in transmission in a concrete manner**

**Genesis of enablers:**

- Amended the Electricity Act
- Developed draft regulations for PSP in transmission
- Included projects in the grid development plan
- Tendered IPT to encourage competition
- Proper risk allocation through adequate demand forecast, design, construction, right of way, operation and maintenance, payment mechanism
- Framework is to be initially based on tariff neutrality/costs versus benefits
- Developed standardized agreements; transmission service agreement, implementation agreement, interconnection agreement
- Developed a cost–benefit model to guide decision-making
- Developed an investment guide with detailed procedures for investors
- Undertaking a pilot project
- Developing an incentive framework around payment risk, transaction advisory, feasibility study and premium payment.

VII) Payment mechanisms and credit enhancement tools

Introducing PSP models becomes challenging when utilities are not financially sustainable due to low revenue, which can be caused by poor collections or non-cost reflective tariffs.

In Uganda, the regulator is supporting a suitable payment mechanism based on tariff neutrality and cost-benefit analysis. They have developed a cost-benefit model to assist in decision-making regarding Independent Power Transmission (IPTs).

Motraco successfully managed its debt and ensured timely payments, which allowed them to fulfill the financial obligations promptly.

Box 3:
Key highlights from WS1 on Payment Mechanisms

Availability payments are considered the best practice for remuneration of transmission lines with variations in terms …., mostly incorporating the investment and operations and maintenance, with a fixed