

**Botswana**  
**Renewable Energy Support and Access (RESA) Project (P181221) Preparation and**  
**Renewable Energy Scale Up Support Project (P178822) Supervision Missions**

**October 12 – 20, 2023**  
**Aide Memoire**

## I. INTRODUCTION

The World Bank (WB) conducted an energy sector mission to Botswana from October 12 to 20, 2023 to advance the preparation of the Botswana Renewable Energy Support and Access Project (RESA, P181221) and supervision of Botswana Renewable Energy Scale Up Support Project (RETF Grant, P178822). The Mission<sup>1</sup> extends its appreciation for the hospitality, courtesies rendered, and time made available by the Government of Botswana (GoB) during the Mission, particularly officials from the Ministry of Finance (MoF), the Ministry of Minerals and Energy (MME), Projects and Energy Development Unit (PEDU), the Botswana Power Corporation (BPC), Botswana Energy Regulatory Agency (BERA) and the National Development Bank of Botswana (NDB).

The objectives of the Mission were to (i) proceed with project preparation for the GCF-IBRD financed RESA project (P181221), covering the following aspects: procurement, financial management, environmental and social, financing, technical, economic and financial assessments; and (ii) follow up on the implementation of the activities to be financed under the Botswana Renewable Energy Scale Up project (P178822) funded through the Energy Sector Management Assistance Program (ESMAP) grant. This includes coordination with the feasibility study financed under the Southern African Power Pool Program for Accelerating Regional Energy Transformational Projects. The Mission also followed up on WB executed technical assistance activities and advanced the carbon tax activities following the submission of the government's proposal to the Partnership for Market Implementation. A list of persons met is provided in [Annex 1](#).

## II. RESA PROJECT DATA AND MILESTONES

**Table 1: Key Project Data**

<b>Government Request</b>  <i>April 12, 2023</i>	<b>Financing</b>  <i>Green Climate Fund (GCF): US\$34 million</i> <i>IBRD: US\$88 million</i>	<b>Proposed Implementation Period</b>  <i>2025-2030</i>
<b>Proposed Project Development Objective</b>		
Support grid integration of renewable energy and improve access to electricity in rural areas of Botswana		
<b>Proposed Components &amp; Sub-components</b>		

<sup>1</sup> The World Bank Mission comprised Nadia Taobane (Senior Energy Specialist), Zijun Li (Energy Specialist); Patrick Kabuya (Senior Financial Management Specialist), George Daniel (Senior Procurement Specialist), Juanita Whitfield (Environmental Specialist), Aimonchok Tashieva (Senior Social Development Specialist), Nicolina Lindblad (Energy Specialist), Loungo Tibone (Operations Officer), Themba Modise (Energy Advisor), Soren Krohn (Senior Wind Expert), Abderrahim Jamrani (Senior Renewable Energy Expert), Sandra Mazvita Kuwaza (Finance Analyst), Ifunanya Genevieve Nwandu (Off-grid Consultant), Inka Schomer (Socio-Economic Consultant) and Anna-Mary Esterhuizen (Program Assistant)

Component 1: Grid upgrades to enable renewable energy integration (US\$100 m)

Subcomponent C1.1: Improving grid stability through (i) battery storage energy systems referred to as BESS and (ii) Static Synchronous Compensator referred to as STATCOM

Subcomponent C 1.2: Strengthening power system control and dispatch (upgrade of the Supervisory Control and Data Acquisition referred to as SCADA)

Component 2: Rural electrification (US\$18m) Expanding domestic electricity connections in rural areas (through grid expansion in the rural villages of Borolong)

Component 3: Technical assistance (US\$4m) including technical studies and capacity building to empower key stakeholders on development of sustainable and bankable renewable energy projects as well as project management

**Table 2: Current Milestones**

<b>Preparation</b>	<b>Appraisal</b>	<b>Negotiations</b>	<b>Board</b>	<b>Signing</b>	<b>Effectiveness</b>	<b>1<sup>st</sup> disbursement</b>
<i>February 2024</i>	<i>April 2024</i>	<i>May 2024</i>	<i>July 2024</i>	<i>October 2024</i>	<i>January 2025</i>	<i>March 2025</i>

**III. RESA PROJECT PREPARATION RPOGRESS**

The Mission advanced the discussion on scope and design of the project including the following aspects below.

**Government Preparation.** The Mission discussed the preparation status of individual components under the project and their contributions to i) the improvement of grid reliability, ii) universal access to electricity, ii) enable integration of variable renewable energy (VRE) including 335 MW PV solar by 2025. The mission reviewed the targeted timeline of the project and associated timelines of RE and BESS activities. The Mission followed up on the procurement status of feasibility studies for individual subcomponents and discussed the environmental and social impact assessments (ESIAs) to be carried-out by BPC for the subcomponents deployed by the utility. The Mission identified misalignments in the project timelines of the initial subcomponent 2.1 (Kgatlang villages) and the initial subcomponent 2.2 (off-grid solar) respectively and the World Bank project appraisal schedule. This is due to advanced procurement status of the two activities. It is therefore agreed to reallocate the funds from Kgatlang rural electrification and off-grid solar to finance the Borolong transmission line (with extended scope) and associated substations. BPC agreed to prepare a cost breakdown for individual subcomponents including BESS, STATCOM, SCADA and the electrification of Borolong villages. Timely completion of the following documents by March 2024 will be key to meet the agreed project preparation timeline and the World Bank Board approval date planned for July 11, 2024: (i) technical analysis for BESS (feasibility study), STATCOM (technical specifications), SCADA (technical specifications) and Borolong line and substations (preliminary design) as well as (ii) E&S instruments (Environmental and Social Management Framework (ESMF) and Stakeholders Engagement Plan (SEP) for the project). In addition, it was agreed that BPC will submit urgently a request to MoF for additional funding to finance the studies needed by BPC (consultancy on STATCOM, SCADA, ESMF and SEP) that are not already covered in their budget or through the RETF Grant. BPC is also expected to confirm the location for the second 25MW BESS location upon completion of the feasibility study by November 2023.

**Implementation arrangements.** The mission discussed the modalities for channeling WB financing from MoF to BPC for component 1 and 2. The mission also started the discussion on component 3 of the RESA project, including the recipient of the GCF grant (expected to be BPC and/or MME through PEDU) and the scope of technical assistance activities which are expected to be finalized by November 30, 2023. In addition, the mission met with Department of Energy of MME (DoE), NDB, BERA and the Solar Industry Association to explore ways to support the Off-Grid Solar Fund with technical assistance. Following the discussions, two key areas of support have been identified: 1) Strengthen and

operationalize the fund by refining eligibility criteria, optimizing grants administration and data management; and 2) Assist in developing the broader ecosystem that supports the fund and the overall off-grid solar market. As next steps, the World Bank will propose a framework building on the specific areas for support.

**Financial management (FM) arrangements.** The Mission confirmed that MoF and BPC will fulfill the FM responsibilities of the planned project. MoF will be responsible for the disbursement of funds from the WB, while BPC and MME through PEDU (if decided to be the recipient of the GCF grant under component 3) will be responsible for the other FM arrangements. The mission team engaged with BPC officials and initiated the institutions' FM assessment with the objective of finalizing the assessment and agreeing on FM arrangements by 30 November 2023. FM arrangements in MoF will be similar to those in the Botswana Renewable Energy Scale-up Project (RETF Grant).

**Environmental and Social (E&S).** The Mission met with BPC and DoE to confirm the preparation of E&S instruments for activities supported under the RESA project and status of land approval for new construction sub-projects. For BESS Construction under Sub-component 1.1, BPC will update the terms of reference (ToR) for BESS ESIA/ESMP (Environmental and Social Management Plan) with information on the confirmed BESS locations and will start the procurement process for E&S consultants. An ESMF will be prepared for sub-components of which the locations of the interventions are not yet known. The mission also stressed that the draft SEP needs to be prepared for the project. Engineering Consultants with an E&S team will be procured to develop the ESIA for the 66kv Borolong transmission line and substations. The mission agreed with BPC that the Bank's E&S team will conduct a site visit with the consultants on the week of November 20<sup>th</sup>, 2023. The purpose of the site visits will also include determining the extent of any land acquisition and/or land easement impacts under proposed transmission line. If the exact alignment of the transmission line is confirmed at any point before appraisal, then preparation of site-specific Resettlement Action Plans (RAPs) will be required as applicable. The timeline for preparation of such RAPs will be reflected in the Environmental and Social Commitment Plan (part of Loan Agreement) in due course (i.e. can be prepared after project approval/effectiveness, but before commencement of works).

**Economic and Financial Analysis** The Mission arranged a meeting with BPC generation and transmission teams. The methodology and key assumptions and parameters in the economic and financial analysis, based on the Bank's guidelines, were presented and discussed. Follow up sessions will be planned in November 2023 with the purpose to gather inputs and present initial results of the analysis from baseline and project scenarios during project preparation.

**Procurement.** The Mission discussed an overview of the WB procurement requirements. The project will follow the WB Procurement Regulations for IPF Borrowers. It was agreed that BPC will start by November 30, 2023 the application process to the Public Procurement Regulatory Authority (PPRA) for exemption/waiver from the Public Procurement Act in order to follow WB Procurement Regulations. The Bank team will initiate procurement capacity and risk assessment of the BPC and conduct a workshop with BPC on the development of the Project Procurement Strategy for Development (PPSD). MME has obtained exemption from PPRA in order to follow WB Procurement Regulations for the RETF Grant.

**Socio-Economic and Gender workshop.** A workshop took place with representatives from the public and private sector on the deployment of renewable energy and the opportunity to help diversify the country's skill base, boost its industrial development and support societies' broad development priorities. As a next step, the WB will be summarizing the key insights from this workshop to inform the design of the proposed technical assistance under WB funded activities.

#### **IV. IMPLEMENTATION OF \$3.5 MILLION ESMAP RETF GRANT**

The signing of grant agreement was completed in October 2023 (instead of July 2023) and has become effective. The team held sessions with PEDU team to review the status of procurement of consultants

for activities supported under the RETF Grant<sup>2</sup> and to discuss measures to mitigate the impact of the three-month delay on the activities planned. The mission highlighted the urgency to procure the consultants supporting the development of BESS (in particular the E&S consultant and the procurement advisor) in order not to further delay the procurement of BESS. It is also noted that the delay in procuring the activities financed under the RETF Grant as well as the delay in completing the feasibility study (FS) of solar, wind and BESS will impact the timeline of the solar and wind projects planned by the country. An updated timeline has been therefore discussed and agreed with PEDU and BPC and is incorporated in the RETF Grant project operations manual (POM) to be finalized by PEDU. The draft ESIA for BESS is expected to be available by May 2, 2024.

**Disbursement aspect:** A session was organized around the simplified and automated Service Delivery Model as well as the Disbursement methods available to Recipient/PEDU. Training and support were delivered to PEDU to (i) improve the quality and efficiency of project disbursement by focusing on providing a foundation to Disbursement related aspects (from effectiveness to closure); (ii) review and address common portfolio disbursement issues and agree on steps to resolve the bottlenecks impacting disbursements; and (iii) provide hands on support through one-on-one interactions with project implementation unit's staff for better implementation performance.

The mission reviewed and addressed the disbursement challenges and also agreed on steps for resolving implementation issues hampering disbursements – Authorized Signatories, Designated Account Opening at Bank of Botswana, and Client Connection access. MoF will sign and submit the Authorized Signatory Letter (ASL) by October 31, 2023. The team stands ready to provide additional support or training on an as-needed basis.

**Financial Management:** The mission confirmed the existence of adequate FM arrangements for the project and facilitated a refresher FM and disbursement training for the project team. The Mission clarified the allocation of FM and disbursement responsibilities between MoF and PEDU. MoF's designated Finance Officer will be responsible for the disbursement of funds flow from WB, while the PEDU Finance Manager will fulfill all the other FM arrangements. The mission agreed on actions to accelerate the implementation of the project and strengthen FM arrangements further.

**Procurement:** The mission reviewed the status of the planned procurement financed under the RETF Grant adjusted to take into account the delay on the signing of this grant. The mission highlighted the setting-up of the evaluation committee during the expression of interest (EoI) stage and the inclusion of the evaluation process in the POM as a measure to minimize the procurement timeline. The Mission also offered to organize a training on the evaluation of the EoIs and the preparation of the requests for proposals (RFPs).

## V. CARBON TAX

The mission conducted a follow up meeting to discuss the timeline for implementation of the proposed activities, and measures for ensuring coordination and alignment of technical inputs from relevant stakeholders. It was confirmed that Ms. Boineelo Peter will be the focal point from MoF for this work program going forward. The WB team provided background information on Botswana's request to the WB for assessments related to the design of the carbon tax. A formal kick-off meeting with representatives from other relevant ministries or departments (such as energy, environment, transport, and industry) in the coming weeks was proposed. The WB team stands ready to provide additional clarification or information, as needed.

## VI. NEXT STEPS AND AGREED ACTIONS

The agreed next steps and actions are listed in Table 3. Meanwhile, the mission has agreed on the next mission dates, targeting February 2023.

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<sup>2</sup> Resource measurement, ESIA and site studies for 100MW wind and 100MW solar PV in Letlhakane as well as 50MW BESS, transaction advisory for solar and wind IPP bidding, and advisor for 50MW BESS EPC procurement.

**Table 3: Agreed Actions**

	<b>Actions</b>	<b>Responsible</b>	<b>Due Date</b>
	<b>RETF grant (P178822)</b>		
1	Procure consultants for resource measurement, ESIA and site studies for the solar PV, wind, and BESS projects, transaction advisors for solar and wind IPP bidding, and advisor for 50MW BESS EPC procurement	PEDU	March 1, 2024
2	Submit annual work plan to WB and six-month disbursement plan	PEDU	November 27, 2023
3	Sign and submit ASL	MoF	Completed
4	Create project-specific codes in the GABS System for the RETF Grant project	PEDU/MoF	November 27, 2023
5	Submit POM to WB	PEDU	November 27, 2023
6	Re-disclosure of final ESCP	PEDU	November 27, 2023
7	Open project-designated account for the RETF Grant	MoF	November 27, 2023
8	Submit first withdrawal request	MoF	November 30, 2023
	<b>RESA project (P181221)</b>		
9	Propose activities under component 3	BPC/MME	November 27, 2023
10	Share draft RfP of engineering consultant for Borolong network	BPC	November 22, 2023
11	Share draft ToR of E&S consultants for project ESMF/SEP (including Borolong 66KV line and BESS)	BPC	Completed
12	Share updated RfP of procurement consultants for STATCOM	BPC	Completed
13	Draft ToR of consultant for preparation of bidding documents for the upgrade of SCADA to include the RE module and implementation of mini-distribution control centers	BPC	November 20, 2023
14	Submit to MoF funding request for studies needed (STATCOM and SCADA consultants)	BPC	November 24, 2023
15	Conduct FM assessment of BPC and agree on FM arrangements	BPC & WB	November 30, 2023
16	Conduct Procurement Assessment and workshop on PPSD	BPC & WB	November 30, 2023
17	Apply to PPRA for exemption/waiver from the Public Procurement Act in order to follow WB Procurement Regulations	BPC	November 30, 2023
18	Share energy access data on rural electrification program	BPC/MME	November 30, 2023
19	Organize site visit of the indicative line route	WB & BPC	Date to be confirmed
20	Proposal on offgrid solar TA	WB	November 30, 2023
21	Share summary of key insights from socio-economic and gender workshop	WB	November 30, 2023

**Table 4: Status of Agreements from the previous AM**

	<b>Actions</b>	<b>Responsible</b>	<b>Due Date</b>	<b>Status</b>
1	Technical briefs for the BESS, STATCOM, SCADA and the electrification of each of Borolong and Kgatleng villages (including description, status, cost estimates, timelines, status of the required and status of associated studies as applicable)	BPC	July 31, 2023 (the BESS brief will be finalized in September upon completion of the on-going feasibility study)	Provided and being Updated (BESS brief will only be able to be updated in December 2023 upon completion of the technical part of the FS in November 2023).
2	Confirmation on 50MW BESS location	BPC	By September 1 <sup>st</sup> , 2023 upon completion of the feasibility study	Two locations Phikwe and Jweneng are proposed by GoB. Pending verification by grid impact study by Tractebel consultants. BESS location is expected to be confirmed by December 2023.
3	Energy access data on rural electrification program	BPC	August 31, 2023	Pending
4	Follow-up discussion on complementarity of demand-side energy access MTF survey and National Energy Use Survey		August 31, 2023	Completed
5	Signing of RETF Grant agreement for \$3.5 ml	MoF WB	Signed by the WB and to be counter-signed by MoF	Completed
6	BPC to obtain exemption/waiver from PPRA in order to follow WB Procurement Regulations	BPC	October 31, 2023	In progress
7	Designation of finance officer (MoF budget and finance), creating project specific code in GABS system, opening project-designated account for the RETF Grant	PEDU MoF	June 30, 2023	In progress
8	Re-disclosure of final ESCP after signing of Grant Agreement (GA)	WB, Mo F	Following the signing of Grant Agreement package	Pending
9	Finalize and submit the ToR for the ESIA for Bank review and clearance	PEDU, W B	No later than 30 days following the signing of the GA package	Completed

10	Procurement of consultants for resource measurement, ESIA and site studies for the solar PV, wind, and BESS projects, transaction advisors for solar and wind IPP bidding, and advisor for 50MW BESS EPC procurement	PEDU BPC	By October 2023	Delayed. Request for Expressions of Interest expected to close on November 10, 2023
11	A draft action plan to rectify the issues associated with the lime injection system to address the SO <sub>x</sub> emissions	BPC	Submitted	Completed
12.	Follow up discussions to discuss the timeline for implementation of the proposed activities, and measures for ensuring coordination and alignment of technical inputs from relevant stakeholders	WB/M oF	September 2023	Completed

**Annex 1**  
**List of officials met and composition of WB team**

Name	Institution/Title
Mr. Nchena Mothebe	Deputy Permanent Secretary, MME
Ms. Boineelo M. Peter	Deputy Secretary, Development Programmes, MoF
Mr. Vincent Bagopi	Project Director, PEDU, MME
Mr. Midas M. Sekgabo	Director, Department of Energy, MME
Mr. Bojosi Gaothuse	General Manager, Transmission and Distribution, BPC
Mr. Steven Kebakile	Chief Economist, MoF
Ms. Thato Koogotsitse	Chief Economist, MoF
Mr. Mpho Rapalai	Finance Manager, MME
Mr. Manale Gaititse	Chief Economist, MME
Ms. Maduo Tshoswane	Governance Oversight Buyer, MME
Mr. Gaabetlwe Motladi	Principal Energy Engineer, PEDU, MME
Mr. James J. Molenga	Principal Energy Engineer, Department of Energy, MME
Mr. Bukkie G. Dijeng	Principal Economist, MME
Mr. Simasiku T Mukwaso	Principal Energy Engineer, DoE, MME
Mr. Edward Rugoyi	General Manager Generation, BPC
Ms. Onkemetse Mtonga	Finance Manager, Projects. BPC
Mr. Pego Mosalakatane	Manager, Network Planning and Development, BPC
Mr. Tebogo Thakadu	Manager, Technical Services, BPC
Mr. Kenneth Syanjibu	Manager, Solar Power Project, BPC
Ms. Gosego Phele	Manager, Strategy, BERA
Mr. Bosa Gaofiwe	Manager, Treasury, National Development Bank of Botswana
Mr. Kabo Magama	Manager, Special Projects, Generation, BPC
Mr. Jenamiso Moalosi	Senior Engineer, Power Systems Planning, BPC
Ms. Mukani Thapelo	Senior Energy Engineer, DoE, MME
Mr. Tumisang Ruda	Senior Energy Engineer, DoE, MME
Mr. Bothata Makuruetsa	Engineer, Power Systems Planning, BPC
Mr. Oboile Tirelo	Engineer, Computer Applications, BPC
Mr. Segomotso Mosi	Wayleave Officer, BPC
Mr. Stephen Mopalo	Environmental Officer, BPC
Mr. Atang Masilomangwe	Energy Engineer, DoE, MME
Mr. Jimmy Gabatshwane	DoE, MME
Maikano Kefalotse	DoE, MME
Jacqeline Merapelo Blantwa	DoE, MME
Ougile J Setlhane	DoE, MME