WHY Marubeni

FACT SHEET 4

Morupule B Coal Power Station (Units 5 & 6)

Botswana

Projected Air Quality Fails Government Standards

1. Background and Marubeni Connection

With a 50% stake in the power purchase agreement (PPA), Marubeni is a key player in the Morupule B Coal-fired Power Station (Units 5&6) project,[1)] which has a planned capacity of 300 megawatts (two units of 150 MW) in Palapye, Botswana. This plan is for expansion of existing Units 1–4 and slated to begin operation in May 2020.

Project implementation is by Palapye Power Generation Pty. Limited, established by Marubeni Corporation (Japanese) and Posco Energy (South Korean) as a joint venture with 50% ownership each in March 2016. It was given charge of construction, management and repair. This project is the first IPP in Botswana.[2)]

The Japan Bank for International Cooperation (JBIC) and the Export-Import Bank of Korea (KEXIM) are considering funding 600 million USD (80% of the total investment) with other private banks through project financing.[3)] Nippon Export and Investment Insurance (NEXI) will cover the private banks' insurance.

Marubeni and Posco Energy will recover their investment by selling electricity to the Botswana Power Corporation (BPC) through a 30-year PPA.

2. ESG Concerns

Environmental pollution

① Concentrations of SO_2 emissions from existing units (Unit 1–4) used for the Environmental and Social Impact Assessment (ESIA) air quality simulation for the proposed new units (Units 5&6), were much lower than measured values. The ESIA used a number calculated on the assumption that Units 1-4 emit lower value (500 mg/m^3) instead of higher actual values (1,000 mg/m^3) reported by the World Bank.. An assumption was made that Units 1–4 could be upgraded to meet SO_2 emission standards. That assumption is highly questionable and has not been verified.

② Pollution measurements: The ESIA failed to monitor NO_2 concentrations at certain monitoring stations, and sampling was not done during times when pollutant concentrations were high. The sampling time and measurement period were insufficient.

③ Air quality simulations under a hypothetical situation with Units 1–6 in operation indicated high amounts of maximum hourly concentrations of SO_2. They exceeded the baseline of Botswana government air quality standards, raising concerns about health impacts on local residents who have farms towork in the vicinity.

④ High PM10 values exceeding the baseline of Botswana government air quality standards were repeatedly measured at air monitoring stations for existing units.

Problems with power purchase agreement [4)]

The final agreement on the PPA between BPC and IPP owners (Marubeni and Posco) was not reached by the deadline to conclude negotiations. Media reported that Botswana had numerous concerns, including a possible future surplus of energy, and bankruptcy risk for BPC unless a government-backed guarantee is offered.

Environmental and social concerns: "Associated facilities"

A Morupule open pit coal mine is planned to supply coal for Units 5&6, but some local farmers have refused to sell their land. This coal mine expansion plan can be considered as "associated facilities" under the JBIC Guidelines for Confirmation of Environmental and Social Considerations. JBIC is required to ensure the necessary consultation occurs and community agreement is obtained, but has not yet done so.

1) Botswana: Morupule B Power Project, ESIA Executive Summary, African Development Bank, https://www.afdb.org/fileadmin/uploads/afdb/Documents/Environmental-and-Social-Assessments/ESIA%20Ex%20Summary%20Morupule%20B%20Final-22%20june09.pdf

2) Marubeni: Background Information Document Morupule B Phase II Units 5 & 6, a 300 MW Brownfield Coal-Fired Power Plant as an Independent Power Producer (IPP) http://www.ecosurv.com/sites/default/files/BID%20Project%20Description.pdf

3) Projects for Which JBIC Has Already Acquired Environmental Impact Assessment (EIA), (JBIC) Project Site: Republic of Botswana Palapye https://www.jbic.go.jp/en/business-areas/environment/projects/page.html?ID=49320&lang=en

4) Botswana power plant expansion plan stalls over terms, Reuters, January 29, 2018, https://af.reuters.com/article/africaTech/idAFL8N1PO3IY

Authors: Botswana Climate Change Network (BCCN), Japan Center for a Sustainable Environment and Society (JACSES), Kiko Network

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Project overview

	Units 1–4	Units 5&6	Units 7&8 (announced plan)
Capacity	150 MW×4	150 MW×2	150 MW×2
Technology	Subcritical	Subcritical	Unknown
Fuel	Bituminous	Bituminous (plan is to bring from Morupule open pit coal mine)	Bituminous
Implementation		Palapye Power Generation Pty. Limited	Korea Electric Power Corporation (KEPCO), Daewoo (both S. Korean)
Operator	Botswana Power Corporation (BPC)		
Schedule	Construction completed 2013 (Units 1 & 2), 2014 (Units 3 & 4). Delivery complete May 2014. Agreement to to sell to CNEEC 2016.	Operation to begin May 2020 (delays may occur)	Operation to begin 2020
Location	Near Palapye, Central District, Botswana.		
Cost		$800 million USD	