

Thabametsi Coal Power Station

South Africa



Low Efficiency, High Impact, Severe Pollution

1. Background and Marubeni Connection

The Thabametsi power station project is one of the first coal baseload Independent Power Producers (IPPs) to be designated a preferred bidder under South Africa's Coal Baseload IPP Procurement Programme (CBIPPP).

The project's environmental authorization is for a 1,200-megawatt¹ coal power station to be built in two phases. In November 2015, Marubeni Corporation submitted a joint bid to build the first phase, a 630 megawatt (two units, 315 MW each) power station, with Korea Electric Power Co Ltd. (KEPCO).

Marubeni holds a 24.5% share of the consortium. Banks and corporations lined up as sponsors to finance this project include the Development Bank of Southern Africa (DBSA), Standard Bank, Nedbank, ABSA, Rand Merchant Bank, and South Africa's Public Investment Corporation (PIC) and Industrial Development Corporation.

Construction costs are an estimated 2.14 billion USD.

Electricity from this power station will be purchased by Eskom, the South African public electricity utility, under a 30-year power purchase agreement (PPA).

2. ESG Concerns

Legal action on a climate change impact assessment: Significant climate impact

Earthlife Africa (ELA), an environmental NGO, with the Centre for Environmental Rights (CER) acting as its attorneys, launched an appeal of the Department of Environmental Affairs' environmental authorization for the Thabametsi project in 2015. In 2016, the Minister of Environmental Affairs confirmed that a climate change impact assessment is necessary² and ordered Thabametsi



Photo credit: Greenpeace Africa, Shayne Robinson, Lephalale, 25 May 2018

to conduct one for the project, but the environmental authorization remained. ELA took this decision on review to the High Court, arguing that the climate impacts of the project needed to be comprehensively assessed before a decision could be made to allow the project to go ahead.³ ELA won this court case in 2017. The North Gauteng High Court ordered the Minister to reconsider the environmental authorization for the power station after having fully considered a climate impact assessment for the project and public comment thereon. A climate impact assessment document became available in July 2017. It revealed that the plant's greenhouse gas emission intensity would (once operational) be among the worst in the country (and in the world) – worse than many existing coal plants in South Africa and only slightly better than South Africa's oldest coal-fired power stations. Despite this, the said Minister upheld the environmental authorization for the Thabametsi⁴ plant in January 2018, stating that the environmental and climate harms it caused could be outweighed by South Africa's "need for additional electricity." In March 2018, ELA Johannesburg and another NGO, groundWork, again, with CER as attorneys, approached the High Court for an order to set aside the Minister's decision to uphold the environmental authorization of the Thabametsi project.

Low efficiency plant violates the OECD's "Sector Understanding"

The generation efficiency of subcritical (Sub-C) coal-

fired power plants is lower than other new (and under construction) coal-fired power plants in South Africa. Although this project is not categorized by the OECD's Export Credit Division, Sub-C is banned under the OECD's Sector Understanding on Export Credits for Coal-Fired Electricity Generation, which was agreed in November 2015.

Air Pollution

There are two other huge coal-fired power plants (Matimba and Medupi) close to Thabametsi's proposed project site. Medupi is under construction, but some units are operational, and Matimba is in operation. Thus the local concentration of sulphur dioxide (SO₂) emissions is likely to regularly exceed ambient air quality standards once all three plants are in operation. Ambient air quality standards are currently already being exceeded in certain parts of the Waterberg region. Thabametsi's environmental impact assessment and atmospheric impact report are inadequate for failing to assess the cumulative impacts of all three plants.

Environmental issues: Water supply and water pollution⁵⁾

The Thabametsi power station could significantly affect the local environment due to coal ash disposal and the construction of related infrastructure. The proposed site is in a water-scarce area, so the project poses enormous risks to water availability. Thabametsi may not have sufficient water to operate for its full anticipated lifespan. Local communities could be exposed to the risk of water shortage. There are also potential risks to water resources (quality) from the large expected coal ash dump. The proposed monitoring programme for the Thabametsi site does not adequately include coal ash-related pollutants in water at surrounding wells. Groundwater monitoring is insufficient.

Excess electricity

Power generation capacity in South Africa has been increasing and already exceeds the country's demand (27 GW maximum demand).⁶⁾ Maximum power generation capacity is already 46 GW and is expected to increase to 55 GW in 2022.

Problems with economic efficiency under the PPA

Eskom, a South African public electricity utility, is set to purchase the electricity from the Thabametsi power station under the PPA, but this agreement is likely to be a losing contract for Eskom, and more importantly, electricity consumers in South Africa, who would ultimately end up being the ones paying for operating losses.

1) KEPCO Wins \$35B Power Plant Construction, Operation Deal in South Africa, *BusinessKorea*, October 12, 2016, <http://www.businesskorea.co.kr/news/articleView.html?idxno=16168>

2) Despite green light, "dirty" Thabametsi faces more legal challenges, *fin24*, February 7, 2018, <https://www.fin24.com/Companies/Industrial/despite-green-light-dirty-thabametsi-faces-more-legal-challenges-20180207-2>

3) Earthlife wins SA's first climate change court case, *fin24*, March 9, 2017, <https://www.fin24.com/Economy/earthlife-wins-sas-first-climate-change-court-case-20170309>

4) Thabametsi coal plant given go ahead despite staggering climate impacts, *Southern African NGO Network*, February 6, 2018, <http://www.ngopulse.org/press-release/thabametsi-coal-plant-given-go-ahead-despite-staggering-climate-impacts>

5) Potential Risks to Water Resources from the Proposed Thabametsi Power Plant, *E. Hansen, Downstream Strategies*, March 2, 2018, <https://cer.org.za/wp-content/uploads/2018/03/Annexure-C-E-Hansen-Thabametsi-Report-FINAL-3-2-2018.pdf>

6) RECP, Electricity Sector <https://www.africa-eu-renewables.org/market-information/south-africa/energy-sector/>

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Project Overview

Capacity	630 megawatts (315MW × 2 units)
Technology	Subcritical
Fuel	Coal (supplied by South African mining company Exxaro from its Grootegeluk and new Thabametsi mines)
Implementation	Thabametsi Power Company (owned by Marubeni Corporation and KEPCO each with a 24.5% stake and other 51% is owned by local business owners.)
Operator	--
Schedule	Still on Hold as of June 2018. (The project is required to commence commercial operation in December 2021.)
Location	Limpopo Province, South Africa
Cost	2.14 billion USD