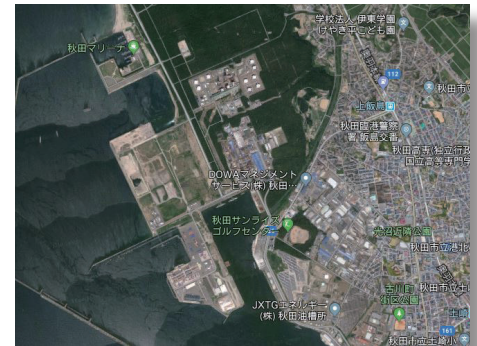


Akita Port Coal Power Station (Units 1 & 2) Japan



Marubeni Investing in Large Coal Power Plants in Japan



1. Background and Marubeni Connection

This proposed project to construct two Akita Port (tentative name) coal-fired power plants is financially supported by Marubeni and Kansai Energy Solution Co. (KENES, a subsidiary of Kansai Electric Power or KEPCO). The ownership of these companies has not yet been made public. They plan to build two units of 650-megawatt coal-fired power plants in Akita port and transmit electricity to the central Tokyo area. Originally a paper manufacturing company was planning a factory on the site but canceled its plans in 2000. Akita Prefecture welcomed a proposal for a coal-fired plant and revised the port plan to allow power plant construction. Marubeni is also planning to build

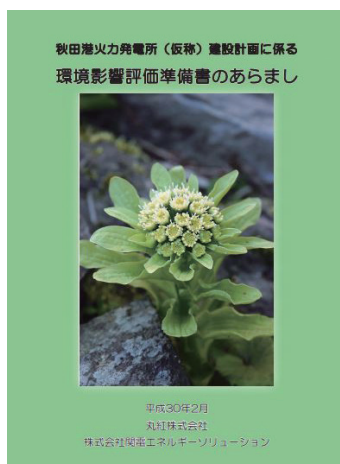
offshore wind power with KEPCO and other operators in the Akita port.

2. ESG Concerns

CO₂ emissions

This project is expected to be a major CO₂ emitter, with annual emissions estimated at over 8.66 million tons (at 0.760 kg-CO₂/kWh). A Japanese utilities group has set its own carbon intensity target of 0.37 kg-CO₂/kWh by 2030, but neither Marubeni nor KEPCO have announced any plans for shutting down existing power plants and it is unclear how they intend to reduce their emissions as power business operators.

The project's EIA document states that the location has "high potential for CCS" (carbon capture and storage) although there is some uncertainty about geological strata off the coast of Akita. There is currently no realistic plan to adopt CCS for this plant. Proponents say they will conduct the necessary studies based government input and the state of technical development. At this point, however, there is still a high level of technical uncertainty involved in CCS, which leaves major concerns about this project's CO₂ emissions if CCS fails.



Air pollution

Many nursery schools, preschools, elementary- and junior high-schools, medical centers, and welfare institutions are located in the area of the project site. Potential environmental impacts of the proposed power plant on these public facilities require careful consideration. The risk of exposure to PM2.5, which has significant health impacts, will increase once the project is built, but the environmental assessment does not assess those impacts. The EIA also includes no information on projected annual emissions of mercury and other heavy metals.



Coal ash

This project once built is projected to discharge 622,000 tons of coal ash per year, and the proposal is to use all of it as raw material for cement production. However, there are questions about whether there will be sufficient demand for coal ash after these plants start operation in 2024. Toxic substances such as mercury are also a health concern if coal ash is to be used to make cement.



1) Environmental impact assessment documents posted by Marubeni February 5, 2018 (in Japanese, available online for limited period) <https://www.marubeni.com/jp/news/2018/info/00001.html>

Author: Kiko Network

Published June 2018

Project Overview

	Unit 1	Unit 2
Capacity	650 MW	650 MW
Technology	Ultra-supercritical (USC) (planned energy efficiency 43%, with higher heating value basis)	
Fuel	Coal (higher heating value 26,033 kJ/kg, sulfur content 1.1%, nitrogen content 1.8%, ashes 20.1%, water 10.72%) planned annual coal usage 4.2 million tons	
Implementation	Marubeni, KENES (Kansai Energy Solution Co.)	
Operator	Kansai Electric Power, Marubeni	
Schedule	Assessment Construction to begin August 2019 Operation to begin March 2024	Assessment Construction to begin August 2019 Operation to begin June 2024
Location	Iijimafurumichi-Shimokawabata, Akita City, Akita Pref.	
Cost	Over 300 billion JPY	