

Project Summary for Public Disclosure
(after approval of NDB financing)

Project Name	Putian Pinghai Bay Offshore Wind Power Project
Country	The People's Republic of China
Type	Sovereign
Area of Operation	Clean Energy & Energy Efficiency
Financing Approval Date	22 November 2016
Total Project Cost	RMB 4.63 Billion
Initial Limit of NDB Financing	RMB 2.00 Billion
Current Limit of NDB Financing	RMB 1.97 Billion
Borrower	The People's Republic of China
Project Entities	People's Government of Fujian Province Fujian Investment and Development Group Co., Ltd
Project Context	<p>In China, the policy environment is very favorable for renewable energy development. The country aims to be the global leader to tackle climate change and explore green technologies. In 2016, China had the largest capacity in the world for installed wind energy, with around 145 GW, a figure higher than the aggregate capacity of the EU. Offshore wind sites are explored for their capacity to provide vast wind source at sea, without the constraint of lands onshore. Due to the large scale and intensity in cost and technical aspects, offshore wind projects are most likely to succeed with the government's engagement. Fujian, a province on the southeast coast of China, is one of the more developed provinces that has the geographic advantage and the fiscal capacity to support offshore wind energy projects. Fujian's energy capacity in 2016 was falling short of the province's demand, with an estimated power deficit in the coming years. In this context, Putian Pinghai Bay Offshore Wind Power Project is designed to help Fujian province cope with the power challenge and to support the development of wind power energy in China. The project is in alignment with New Development Bank's General Strategy focusing on promoting renewable energy development.</p>
Project Description	<p>The objective of the project is to increase offshore wind power capacity in Putian Pinghai Bay to provide adequate electricity supply to Fujian province and to catalyze offshore wind energy development with technological advances. The NDB supports the project through providing financing to the cost of equipment and</p>

	<p>civil works. The project is the second phase of a three-phase project. In phase 1, 10 turbines were constructed with a total power capacity of 50 MW. In phase 2, 41 turbines were added with a capacity of 246 MW. In phase 3, 44 turbines with a capacity of 308 MW were constructed.</p>
Project Objective	<p>The Project outcome is increased offshore wind power-based electricity generation. Specifically, it will generate 873 million kWh of electricity in the first year of with full capacity installed and avoid an average of 869,900 tons of carbon dioxide emissions annually. At completion, the annual electricity output of the Project reached 1,043 million kWh in 2022. Based on the results of the initial years of operations and planned turbine degradation, the annual effective generation for the first 20 years of operation can be estimated at 4,160 hours yearly on average. This would lead to an annual emission avoidance of 1,020,380 tons.</p> <p>Project outputs are construction and commissioning an offshore wind power plant with cumulative installed capacity of 250 MW, assuming 50 units of similar 5 MW wind turbines as used in Phase 1. At completion, the Project commissioned 246 MW capacity with 41 units of Siemens Gamesa-licensed 6 MW wind turbines, achieving almost 100% of the planned output. The minor difference from the original target was a result of efficiency gain achieved from technology advancements that increased the size and capacity of a single turbine.</p>
Implementation Arrangements	<p>The project was implemented from 2017 to 2021, and full capacity was connected to the grid on December 21, 2021. The suppliers for the Project were selected through competitive bidding process, open to all NDB member countries. Procurement proceeded in accordance with the national framework and NDB's Procurement Policy.</p>
Environmental and Social Information	<p>The project contributes to a lower carbon environment. It aligns with NDB's focus to support projects that aim at developing renewable energy sources. Increased share of offshore wind power in China's energy mix will help build a greener environment, with reduced carbon emissions. Based on initial operation performance, the Project is projected to generate 19.5% more clean electricity than appraisal estimate during its economic life. It is expected to yield considerable environmental benefits through reduction of CO₂ emissions and air pollutants (e.g., nitrogen oxides and sulphur dioxide), thereby having a long-term positive impact on environmental sustainability and mitigating climate change.</p>

	Moreover, the Project has generated substantial social-economic benefits by nurturing a well-established turbine manufacturing base that could be an invaluable asset to support sector development. The project is assigned as a category “B” project. Strict compliance with NDB’s policy and China’s country system of safeguards is ensured. The implementing company adjusted its work schedules to minimize the impact on the underwater ecosystem from construction noise. Comprehensive assessments have been conducted with the objective to protect the marine ecological environment throughout the implementation of the project.		
Financing	The total cost of the project at completion is estimated to be RMB 4.63 billion. The NDB supports the project through a long-term loan of about RMB 1.97 billion. The Loan is repayable in 30 semi-annual equal principal installments, over a period of 15 years starting from 2021.		
	Source of Fund		Amount (RMB billion)
	NDB		1.97
	Domestic banks and other borrowings		0.98
	Equity contribution		1.68
Contacts	NDB	Borrower	Project Entity
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