## 33MW Bangui Bay Wind Farm



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# Project Highlights

- First on-grid wind farm in Southeast Asia
- Local bank financing paved way for future projects
- Led to formation of Alternergy

### **Overview**

On the northernmost shore of Luzon, the largest and most populous island in the Philippines, lies the foreshore of Bangui Bay, a beautiful, windy sweep where the sand meets the water. Once considered an outpost, Bangui Bay became the site of a 33MW wind farm – the first in the Philippines and all of Southeast Asia.

Bangui Bay's success had a number of ripple effects: Developed by NorthWind Power Development Corporation, four of the company's partners went on to serve as the founding members of Alternergy, and subsequently developed a number of other pioneering projects in the Philippines. Bangui Bay also created the grid stability that Ilocos Norte was sorely needing given its end-of-line geographic location.

Following the success of Bangui Bay, other wind farms came to life in the immediate vicinity: Today, 103 windmills spin along the same coastline, and the Philippines has the largest wind power capacity in Southeast Asia.

### **A Tourist Attraction**

Phases 1 and 2 of the Bangui Bay wind farm are located on a 9km stretch of shoreline, where 20 turbines from Vestas of Denmark are arranged in a perfect arc. The combination of Bangui Bay's aesthetic beauty and its first-of-a-kind status has driven tourism development in the area, with the dual benefit of raising awareness for renewable energy in the country.

### **Supply to llocos Norte**

The wind power produced at Bangui Bay was bought by the Ilocos Norte Electric Cooperative (INEC), which covers 23 municipalities and Laoag City. The power generated at Bangui Bay makes up 40 percent of INEC's total requirement. INEC is located at the end of the Luzon grid, meaning voltage fluctuations can be more common, so embedded power generation



is needed to counteract the effects of being on the far end of the national transmission grid. As part of the project, a 57 km, 69kV line was financed and constructed by NorthWind to tap into the Laoag substation.

INEC purchases the electricity created through a 20-year Energy Sales Agreement (ESA) at a discount to the typical rate, and those savings are passed on to consumers.

### **Financing a 'First'**

Bangui Bay was financed through loans from ABN Amro and Nordea. ABN Amro served as the lead bank, with interest subsidized by DANIDA (Danish International Development Agency). DANIDA offered an interestfree loan for the project. PhilEXIM (The Philippine Export-Import Credit Agency) stepped in to guarantee 85 percent of the loan.

The World Bank, through its Prototype Carbon Fund (PCF), purchased from NorthWind carbon credits of the Bangui Bay project. NorthWind's emission reduction transaction was the first carbon credit sale from ASEAN countries.