Unlocking the Philippine Offshore Wind Potential

Paula Valencia, Senior Associate
RMI’s strategy and theory of change is designed around achieving four primary outcomes of shifting away from fossil fuel, clean electricity generation, electrified transport with focus on equity.
The Philippines needs more affordable electricity

Target of 35% RE by 2030, and 50% by 2040

In 2022, the EPIRA was also updated to allow 100% foreign ownership of renewable energy projects.

Red and yellow alerts in Luzon, Visayas, and Mindanao since 2020, usually during the months of March, April and May.

The coal moratorium on new projects was signed to address the grid’s inflexibility.

Projects that were able to secure permits before the moratorium are now having issues in securing financing.

Source: BacMan Geothermal, Business Mirror, NGCP, CEED
• Looked into the areas in the Philippines with awarded wind energy service contracts
  o North Luzon (Ilocos Norte, Cagayan)
  o Manila Bay
  o North Mindoro
  o South Mindoro
  o Guimaras
  o Camarines Norte
  o Tayabas Bay

• Shortlisted areas based on:
  o Wind speed
  o Bathymetry
  o Availability of ports
  o Availability of interconnection points
Site A: Manila Bay

- High wind speeds of more than 7 m/s
- Mix of shallow and deep bathymetry
- Proximity to the highest load center in the country
- Major ports in Subic, Mariveles and Batangas can be utilized for staging and assembly
- Manila Port is not recommended as it is already very busy
- Notable concerns: marine traffic, proximity to Manila and Bulacan* airport, unexploded ordnance near Corregidor from World War II
Site B: Tayabas Bay

• High wind speeds of more than 7 m/s
• Mix of shallow and deep bathymetry
• Can access the Luzon transmission backbone
• Major port in Batangas for primary staging and assembly, and secondary ports in Lucena and Legazpi for storage
• Notable concerns: marine traffic
Site C: Guimaras

• High wind speeds of more than 7 m/s
• Mix of shallow and deep bathymetry
• Can utilize ports in Iloilo, Bacolod, Cebu, Ormoc, Dumaguete, and Siquijor
• With higher development potential for economies of scale
• Notable concerns: marine traffic, proximity to Iloilo and Bacolod airports, environmental and social impact
Recommendations

Manila Bay and Tayabas Bay for near-term development with fixed bottom turbines and less than 300MW installations. Potentially higher capacity in the future for floating offshore wind.

The surrounding waters of Guimaras for near-term development but will require more infrastructure development in ports and grid to utilize economies of scale. Submarine cables must be required to avoid environmentally protected areas.

North Luzon, Northern Mindoro, and Southern Mindoro all have higher potential but will be mostly floating offshore wind due to deep waters. More upgrades on ports and grid are also needed.

Source: Acciona, Seatools, BW-Ideol
Thank you

Philippine Market Movers: An analysis of three high potential areas to accelerate the offshore wind market in the Philippines

Nathaniel Buescher, Justin Locke, Paula Valencia (pvalencia@rmi.org)