BRIEFING REPORT

State of the Offshore Wind Market in the Philippines

Philippines Offshore Renewables Accelerator (PHORA)

September 2024

INTRODUCTION

About the report

This report is developed as part of the Philippines Offshore Renewables Accelerator (PHORA). PHORA is a public-private collaboration initiative, established in 2022, and formerly known as the Philippine Offshore Wind Joint Industry Program (POWJIP), aiming to accelerate offshore wind development in the Philippines by conducting impactful research that can help resolve market barriers. This report provides an update on the offshore wind market in the Philippines, highlighting recent policy developments and ongoing initiatives aimed at advancing development.

With the Philippines' offshore wind sector experiencing significant momentum, driven by initiatives such as the World Bank's Offshore Wind Roadmap and the subsequent applications for and awards of Offshore Wind Energy Service Contracts, this report aims to empower decision-making among stakeholders seeking entry into the market. By providing updates on recent policy developments, active research efforts, and technical assistance initiatives, the report seeks to offer insights for new market entrants and wider industry players alike.

This report was written in September 2024. All information, data, and analysis presented reflect the status and circumstances as of that date. Any changes or developments that may have occurred after September 2024 are not reflected in this document and may affect the relevance or accuracy of the information provided.

Acknowledgments

The Carbon Trust wrote this report based on an impartial analysis of primary and secondary sources.

The Carbon Trust would like to thank everyone that has contributed their time and expertise during the preparation and completion of this report. Special thanks go to the Department of Energy Philippines, the co-chairs of PHORA.

For the avoidance of doubt, this report expresses independent views of the authors.

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The Carbon Trust's mission is to accelerate the move to a decarbonised future.

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Abbreviations

ADB	Asian Development Bank
CfD	Contract for Difference
CREZ	Competitive Renewable Energy Zones
COA	Certificate of Authority
COCOC	Certificate of Confirmation of Commerciality
DENR	Department of Environment and Natural Resources
DOE	Department of Energy
DREAM	Developers for Renewable Energy for Advancement
EO 21	Executive Order No. 21
ERC	Energy Regulatory Commission
ETP	Energy Transition Partnership
EPNS	Energy Projects of National Significance
EVOSS	Energy Virtual One Stop Shop
FID	Final investment decision
FiT	Feed in Tariff
FTE	Full time equivalent
GCA	Grid Connection Agreement
GEAP	Green Energy Auction Program
GEAR	Green Energy Auction Reserve
GWEC	Global Wind Energy Council
IRENA	International Renewable Energy Agency
MSP	Marine Spatial Planning
NGCP	National Grid Corporation of the Philippines
OCSP	Open and competitive selection process
OPAF	Policy and Administrative Framework
OWESCs	Offshore Wind Energy Service Contracts
PEP	Philippine Energy Plan 2023-2050
PHORA	Philippines Offshore Renewables Accelerator
POWD	Philippine Offshore Wind Databank
POWER	Pilipinas Offshore Wind Energy Resource

PPA	Power Purchase Agreement
RE	Renewable Energy
Roadmap	World Bank's Offshore Wind Roadmap for the Philippines
SIS	System Impact Studies
TA	Technical assistance
TransCo	National Transmission Corporation
USAID	United States Agency for International Development
WEDAP	Wind Energy Developers Association of the Philippines

1. Introduction

The offshore wind (OSW) market in the Philippines has witnessed significant momentum in recent years, spurred by key developments such as the release of the World Bank's Offshore Wind Roadmap[1] (hereafter, '**the Roadmap**'). The Roadmap highlighted the scale of the opportunity: up to 40 GW of offshore wind envisaged by 2040, resulting in USD 14.4 billion of local gross value, 205 thousand full-time equivalent (FTE) years of local employment and 480 million tonnes of abated carbon dioxide.

The Roadmap served as a catalyst for both the public and private sectors, resulting in numerous OSW developers becoming active in the market, as shown by a surge in the number of applications for and awards of Offshore Wind Energy Service Contracts (OWESCs). Additionally, there has been a notable increase in technical assistance (TA) efforts from donor agencies to ensure that the public sector is ready to support this growing private sector interest.

Examples of market development since the publication of the Roadmap include:

- On June 4, 2024, the Department of Energy (DOE) issued the Department Circular No. DC2024-06-0018[2], titled "Revised Omnibus Guidelines Governing the Award and Administration of Renewable Energy Contracts and the Registration of Renewable Energy Developers." The Circular aims to optimise the incentives available to renewable energy (RE) developers under the RE Act, streamline the processes and requirements for awarding and implementing RE projects, and introduce specific guidelines for various RE technologies, including offshore wind.
- As of August 2024, a total of 92 OWESCs have been awarded, **representing 66 GW of potential OSW capacity**. As a point of comparison, by March 2022, before the publication of the Roadmap, the DOE had awarded 30 OWESCs representing 26 GW.[3]
- The Department of Energy (DOE) issued Department Circular No. DC2022-110034, amending Section 19 of the Implementing Rules and Regulations of Republic Act No. 9513.[4] This circular permits **foreign ownership of up to 100%** for the exploration, development, and utilization of solar, wind, hydro, and ocean or tidal energy.
- In April 2023, the Office of the President issued Executive Order No. 21 (EO 21)[5], which mandates the establishment of the **Policy and Administrative Framework (OPAF)** for efficient and optimal OSW development. The DOE issued the OPAF through Department Circular No.

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[1] World Bank (2022). Offshore Wind Roadmap for the Philippines. https://documents1.worldbank.org/curated/en/099225004192234223/pdf/P1750040b777da0c30935a0e2aa346f4e26.pdf

[2] DOE Philippines (2024). Revised Omnibus RE Guidelines. dc2024-06-0018.pdf (doe.gov.ph)

[3] DOE Philippines (2024), *Wind Energy Management Group's Playbook*

[4] DOE Philippines (2022). Implementing Rules and Regulations of Republic Act No. 9513. https://www.doe.gov.ph/sites/default/files/pdf/issuances/dc2022-11-0034.pdf

[5] DOE Philippines (2023). Executive Order No. 21. https://www.doe.gov.ph/sites/default/files/pdf/issuances/20240419-EO-21-FRM.pdf

DC2023-06-0020 in June 2023.[6] The OPAF provides comprehensive guidance on permit evaluation, integration of permits into the Energy Virtual One Stop Shop (EVOSS) System, establishment of the Philippine Offshore Wind Databank (POWD), safety protocols, marine spatial planning and prohibited acts and penalties.

- The DOE released the **Implementing Guidelines of EO 21** in May 2023, through Department Circular No. DC2023-05-0013.[7] These guidelines detail various aspects, including development activities, deadlines for permit submissions, fee rationalization and the implementation of a Whole-of-Government Approach.
- In September 2022, the DOE updated the **Renewable Portfolio Standards (RPS) for retailers to a 2.52% increase annually** from 2023 onwards in order to meet the aspirational target of 50% renewable energy share in the country's power generation mix by 2040.[8]

While significant progress has made since the release of the Roadmap, achieving the nation's ambitious OSW targets requires continued effort and strategic intervention. This briefing report aims to build on the market context outlined in the Roadmap and provide stakeholders with an update on the current market status in terms of recent policy developments, active research efforts and technical assistance initiatives. In addition, by delineating the role of various stakeholders working to progress the OSW sector, it aims to provide insights for new market entrants by outlining anticipated developments in the short term and its implications on the industry. As stakeholders navigate this evolving landscape, the role of public-private sector collaboration becomes increasingly crucial to overcome market barriers and ensure alignment with national goals and industry interests.

[6] DOE Philippines (2023). Policy and Administrative Framework for the efficient and optimal development of the country's offshore wind resources. *https://www.doe.gov.ph/sites/default/files/pdf/issuances/dc2023-06-0020.pdf*

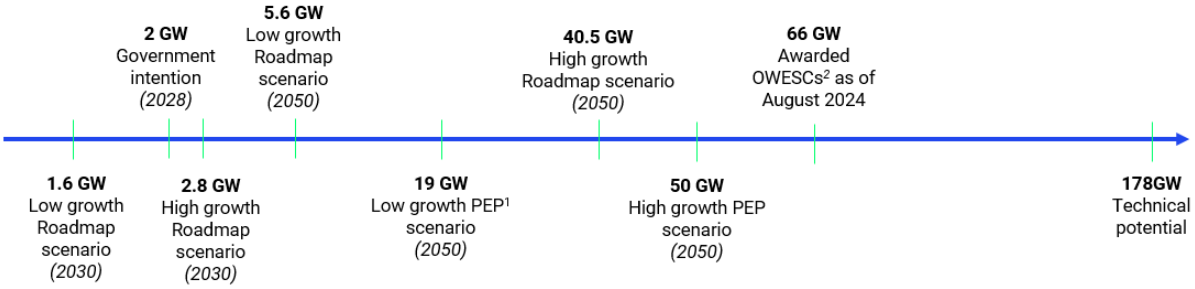
[7] DOE Philippines (2023). Implementing Guidelines of Executive Order No. 21. *https://www.doe.gov.ph/sites/default/files/pdf/issuances/dc2023-05-0013.pdf*

[8] DOE Philippines (2022). Prescribing the adjusted annual percentage increment to be imposed on all mandated participants of the Renewable Portfolio Standards for on-grid areas. *https://www.doe.gov.ph/sites/default/files/pdf/issuances/dc2022-09-0030.pdf*

2. Overview of the offshore wind market in the Philippines

2.1. Expected growth of offshore wind

The expected growth of OSW in the Philippines is influenced by various factors, including estimates of the sector's technical potential, government targets, and projections from national energy scenario planning. The range of targets and projections is presented in the figure below; however, it is important to note that this does not depict a like-for-like comparison due to differing methodologies and assumptions.



[1] *Philippine Energy Plan,* [2] *Offshore Wind Energy Service Contract*

Figure 1: Comparison of current targets and projections for OSW installed capacity

Technical potential and Roadmap scenarios

In 2022, the World Bank estimated the technical potential for offshore wind in the Philippines to be 178 GW, reflecting the inherent wind resource and depth considerations. Of this capacity, approximately 160 GW is attributed to floating offshore wind projects rather than fixed-bottom installations.

The World Bank Roadmap also indicates installed capacity between 1.6 GW to 2.8 GW by 2030, and 5.6 GW to 40.5 GW by 2050 under low and high growth scenarios, respectively. These scenarios consider various factors beyond just wind resource and depth; they also consider the level of momentum expected around policy development, infrastructure improvements and supply chain considerations among other factors.

Government intention

The Department of Energy (DOE) intends to achieve 2GW[9] of OSW capacity between 2028 and 2030. To expedite the permitting and transactional processes necessary for the construction of OSW projects, the DOE is working closely with relevant government agencies and the private sector under the framework of Executive Order No. 21[10], as well as the Green Lane[11], and Energy Projects of National Significance

[9] Based on consultation with the DOE, reflecting the initial target for GEA 5 covering OSW Projects.

[10] Executive Order No. 21, s. 2023 | Department of Energy Philippines (doe.gov.ph)

[11] Executive Order No. 18, Constituting Green Lanes for Strategic Investments. Accessible through link: EO 18 Briefer and Updates as of December 2023.pdf (bsp.gov.ph)

(EPNS)[12] initiatives. This coordinated effort is designed to ensure that the OSW frontrunners will achieve operational status based on the 2028 to 2030 timeframe.

Philippine Energy Plan (PEP) 2023-2050 projections

The Philippine Energy Plan (PEP) 2023-2050 projects significant growth in OSW capacity. Operational capacity is expected to reach 19 GW and 50 GW by 2050 under low and high OSW scenarios, respectively. These projections are based on estimations derived from the OWESCs awarded by the DOE.

Awarded contracts

As of August 2024, the DOE has awarded a total of 92 OWESCs representing 66 GW of potential OSW capacity. These contracts grant developers the right to carry out pre-development activities in an allocated seabed area. Not all projects are anticipated to advance simultaneously, as developers may relinquish rights voluntarily or due to force majeure events. Therefore, while these contracts provide insight into the sector's potential growth, they should not be interpreted as definitive indicators of actual OSW deployment.

Figure 2 provides a breakdown of the number and capacity of OWESCs awarded between the period of 2019 to September 2023, where a total capacity of 61.6 GW was awarded. Of this, approximately 43.2 GW was allocated to projects in Luzon, 18.4 GW in Visayas, and 100 MW in Mindanao.[13]

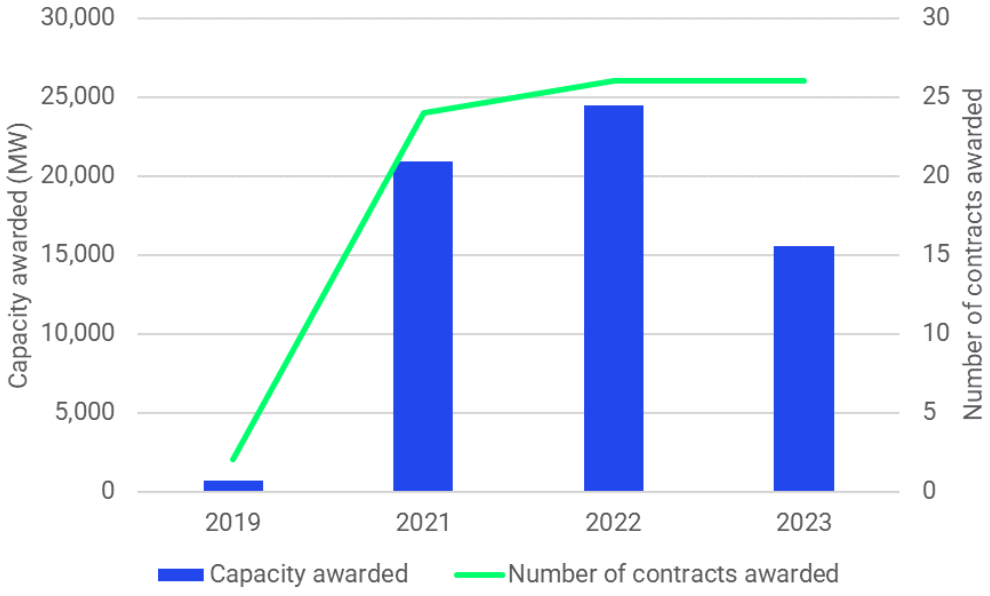


Figure 2: Breakdown of OWESCs by year

[12] DOE Department Order No. DO2024-04-0003, Prescribing the Frameworks and Guidelines for the Processing of Applications for Certificate of Energy Projects of National Significance (CEPNS). Accessible through link: DEPARTMENT ORDER NO. DO2024-04-0003 | Department of Energy Philippines (doe.gov.ph)

[13] Data provided by the DOE Philippines

The target commercial operations date for the awarded OWESCs is provided in Figure 3 for the period between 2019 and September 2023.

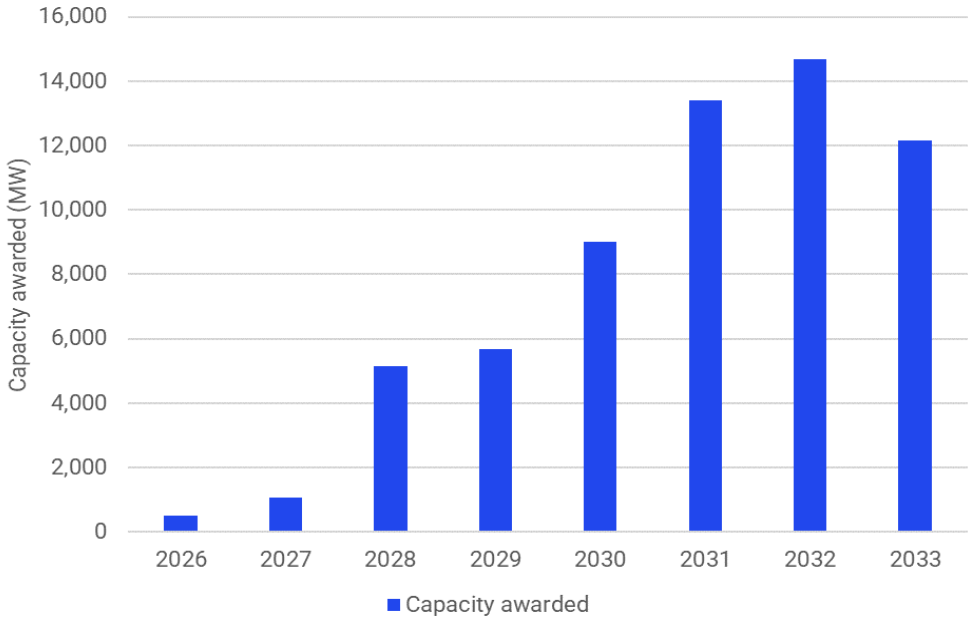


Figure 3: Target commercial operation date by capacity awarded

Based on the target commercial operation date, a maximum of 20.3 GW of capacity would be installed by 2030. As indicated in the Roadmap, the total installed capacity will depend on several factors, including the outputs of marine spatial planning studies and the constraints analysis, the speed and effectiveness of the permitting and consenting processes, port infrastructure expansion and upgrades, grid interconnection upgrades as well as access to a robust supply chain. All of these factors will determine where wind farms can be constructed and whether offshore wind projects can complete their pre-development activities within the expected 5- to 7-year period.

2.2. Overview of the Current Offshore Wind Development Cycle

An overview of the OSW development cycle in the Philippines is provided in Figure 4 below based on a consolidation of current government documentation and circulars identified in Section 1. It is expected that the Philippines will follow a 2-stage competition model based on the processes noted in the revised Omnibus Guidelines on the offshore wind energy service contract.[14]

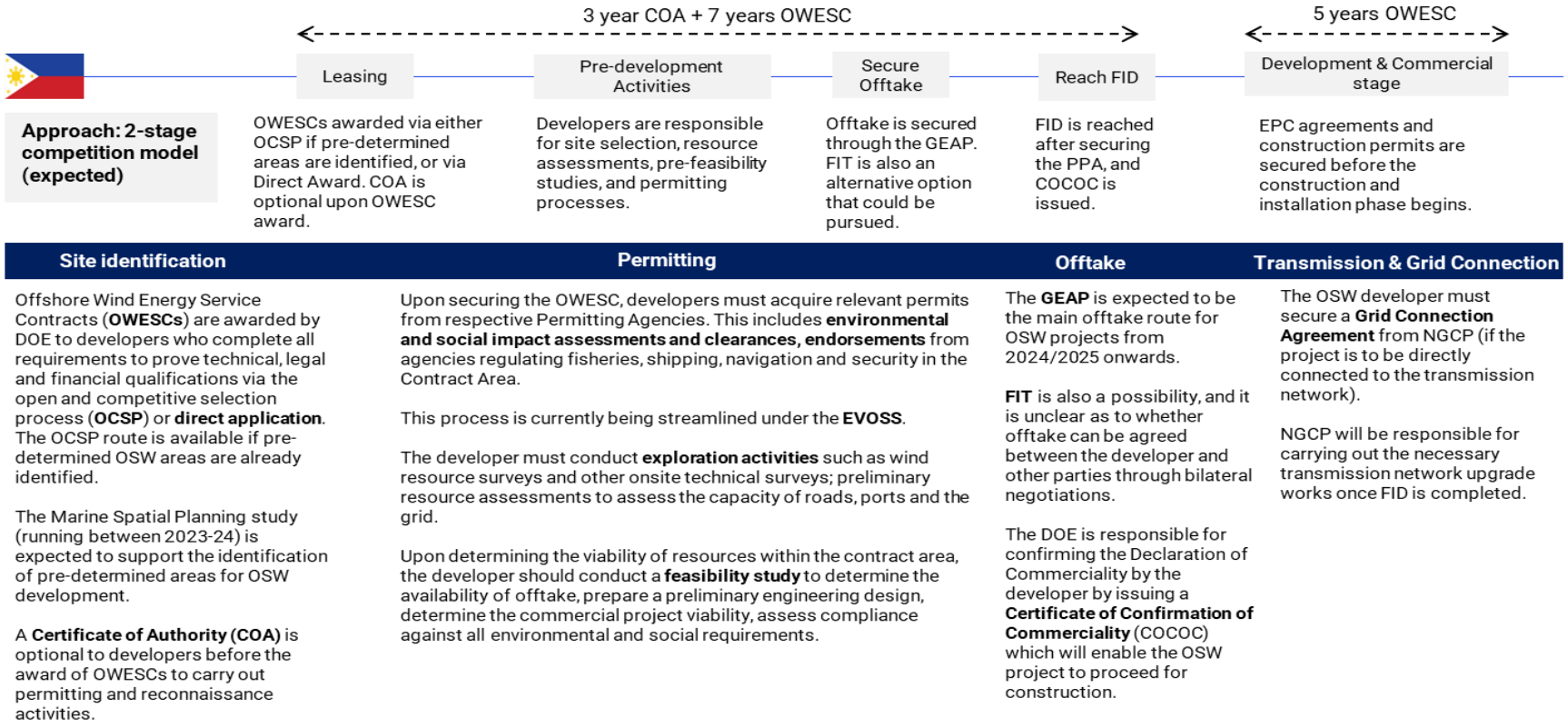


Figure 4: Overview of the Philippines Offshore Wind Development Cycle

[14] DOE Philippines (2024). Revised Omnibus Guidelines governing the award and administration of Renewable Energy Contracts and the Registration of Renewable Energy Developers – Annex I Template Offshore Wind Energy Service Contract. *dc2024-06-0018.pdf (doe.gov.ph)*

The overall development timeline for OSW projects in the Philippines is expected to span 12 to 15 years, in alignment with most international markets. Developers in the Philippines have a window of 7 years, extendable to 10 years, to reach the final investment decision (FID).

The following sections provide more detail on the current development processes based on policy decisions and communications by the Philippines Government. Section 3 sheds light on the ongoing technical assistance efforts that may inform or influence these development processes in the coming years.

2.2.1. Site identification and seabed allocation

Currently, the right to carry out pre-development activities in an allocated area of seabed is granted through the DOE's OWESCs, awarded on a first-come, first-served basis. This is an open-door leasing process, meaning that offshore wind developers can select an area based on their own assessment of available seabed. This model has been applied to other emerging offshore wind markets (for example, early-stage offshore wind projects in the UK), though to lesser extents.

The OWESC process has resulted in significant portions of the seabed being reserved for offshore wind development rights. However, construction and operational considerations (e.g., buffer zones, cable corridors) will require modifications to the designated areas indicated in the OWESCs if all projects advance, ensuring the integration of appropriate spatial requirements.

The Revised Omnibus Guidelines[15] indicates a shift towards the Open and Competitive Selection Process (OCSP) to allocate exclusive seabed rights. Under the OCSP, bids are competitively evaluated in terms of suitability for a pre-determined area based on the developer's work program, and technical and financial qualifications. At present, the OCSP Round 4 has been applied to hydropower, geothermal, and onshore wind project, but has yet to be extended to the OSW sector.

A technical assistance (TA) project, initiated through the Philippines Offshore Renewables Accelerator (PHORA) and funded by the Energy Transition Partnership (ETP), is supporting the Philippines Government to develop a Marine Spatial Planning (MSP) approach for identifying OSW development areas, which could support the validation of the current OWESCs awarded as well as a future OCSP. The anticipated outputs of the TA are a constraints mapping of social, environmental and technical factors impacted by OSW development, and a MSP tool that recommends suitable OSW development zones. The OPAF issued in June 2023 notes that the final MSP will (i) identify high development areas for OSW projects, (ii) reduce uncertainties and shorten development timelines of OSW by mapping the needed spatial data in project planning and development, (iii) identify and resolve possible overlaps of protected areas and other no-build zones with OWESCs awarded prior to the issuance of the MSP, and (iv) engage and upskill relevant government agencies and stakeholders.

The impact of the MSP process on awarded OWESCs is currently unclear, but the scale of OWESC awards makes it likely that some projects will be affected, necessitating careful consideration and potential

[15] Revised Omnibus Guidelines Governing the Award and Administration of Renewable Energy Contracts and the Registration of Renewable Energy Developers" – the guidelines oversee the application for and award and administration of RE contracts, and extends its application to OWESCs which are issued and awarded by the DOE for the exploration, development, and/or utilisation of wind energy in offshore areas.

redistribution of development rights. It is expected that the Department of Energy will clarify the impact of the MSP process on awarded OWESCs once the results are available.

2.2.2. Permitting

In April 2023, President Marcos Jr issued 'Executive Order no. 21: Directing the establishment of the policy and administrative framework for offshore wind development.'[16] The Order aimed to streamline and rationalise the permitting processes for OSW through the Energy Virtual One-Stop Shop (EVOSS). The EVOSS System aims to integrate the licenses, fees, and permitting process of all power generation, transmission and distribution projects. At the time of writing, it currently includes 48 permitting processes for 8 agencies and 2 local government units.[17] There are plans to incorporate an additional 73 permitting processes across 12 government agencies within EVOSS by the end of 2024. [18]

2.2.3. Securing offtake arrangements

There is currently no specific offtake arrangement for offshore wind in the Philippines, but the Green Energy Auction Program (GEAP) is the key offtake route for other renewable energy technologies in the country. This is a competitive auction mechanism that provides a 20-year power supply delivery period that can be extended and is based on the Green Energy Tariff identified in each round. The auction will involve the sale of the actual energy generated by the winning bidder. As a result, the auction outcome will consist of a series of prices, each corresponding to the winning bidder's generated energy. While the GEAP does not currently include OSW, the technology is expected to be incorporated into the GEAP by 2025. As of 15th October 2024, the DOE issued Certificates of Confirmation of Commerciality (CoCoC) for three OSW projects with a combined target capacity of 1,650MW, and these will be part of the first Green Energy Auction for offshore wind in the Philippines.[19]

2.2.4. Transmission and Grid Connection

The Philippines transmission network is owned by the National Transmission Corporation (TransCo), and operated, maintained and expanded by the National Grid Corporation of the Philippines (NGCP) under a 50-year concession agreement. During the pre-feasibility stage, the DOE endorses projects for System Impact Studies (SIS), which are conducted by NGCP and assess the network capacity to accommodate a new generating facility and identifies associated costs. During the development and commercial stage, and after a SIS has been conducted, developers are responsible for securing a Grid Connection Agreement (GCA) if the project is to be directly connected to the grid. The GCA is a contractual agreement between NGCP and the developer, that includes the technical and operational requirements of grid connection.

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[16] Executive Order No. 21, s. 2023 | Department of Energy Philippines (doe.gov.ph)

[17] Permitting processes refer to the comprehensive procedure of obtaining permits or certificates in order to put up a power generation, transmission or distribution project, including the following phases: acquisition of an operating contract or service contract, pre-development and construction of a power plant, renewal of existing power plant permits including the date of commercial operations, as well as required documents and fees from all government agencies involved in such a procedure. Source: Department Circular 2019-05-0007 Energy Virtual One-Stop Shop Act

[18] EVOSS

[19] POWER Philippines News, October 2024

NGCP is required to complete necessary upgrades in tandem with OSW project timelines, and the DOE is responsible for coordinating this timeline for developing transmission facilities with TransCo, the Energy Regulatory Commission (ERC) and OSW developers.[20] However, a clear roadmap for grid upgrades is currently lacking, and is necessary to ensure developers are able to build OSW projects with the certainty that they will be able to access transmission grid infrastructure and connect to main grids.

[20] Department Circular 2023-05-0013 Implementing Guidelines of Executive Order No. 21

3. Key developments, challenges and opportunities for market growth

The Carbon Trust has identified six policy areas that are essential to designing an effective offshore wind market.[21] **This section highlights key developments, challenges and opportunities across those pillars and how it has impacted the Philippines market to date, and also notes the significant progress made in the OSW sector compared to the recommendations of the Roadmap.** In assessing progress[22] against the recommendations set forth in the Roadmap, particular focus is placed on 26 recommendations associated with the six policy pillars identified below.

3.1. Policy & frameworks

3.1.1. Key developments

The Philippines is moving quickly to establish sufficient regulatory conditions to promote OSW development, bolstering confidence in the sector's sustainable growth. Efforts are also ongoing to finalise OSW targets under the PEP (2023-2050), which will provide industry players and investors with greater clarity on the direction of OSW. Key technical assistance (TA) initiatives currently in place include:

- The Asian Development Bank's (ADB) TA for the DOE and the Energy Regulatory Commission (ERC) on a **regulatory framework for OSW**, including guidance for target-setting based on the current policies in place.

[21] Designing an effective offshore wind market: Six policy pillars for success | The Carbon Trust

[22] Progress against the Roadmap is assessed using on the following colour rating scheme:

	The recommendations in the Roadmap are **to be addressed** at a later date.
	The recommendations in the Roadmap are **in progress** of being addressed.
	The recommendations in the Roadmap have been sufficiently **addressed**.

- PHORA's TA for the DOE involves advising on **technology-specific target setting** for OSW installation and **assessing existing tender policies** to provide recommendations on how these can support cost reduction.

- The DOE has issued a Circular allowing for **100% foreign ownership for the exploration, development and utilisation of renewable energy projects**.[23] However, a separate legal requirement for seabed leases managed by the Department of Environment and Natural Resources (DENR) has nationality limitations for ownership, which is posing an ongoing challenge and is currently being addressed by both organisations.

3.1.2. Progress against the Roadmap

Main Roadmap recommendations	Status	Progress
Low growth scenario: *i.* Set OSW installed capacity targets for 2030 and 2040	In progress	The DOE is expected to use the findings of the TA projects described above to set a vision for offshore wind to 2050 as part of a decarbonized energy mix for the Philippines and finalise targets under the PEP (2023-2050).
High growth scenario: *i.* Publish a vision for OSW to 2050 as part of a decarbonized energy mix for the Philippines;		
ii. Seek that Congress change the Constitution to relax requirement for 60% local ownership of each OSW project	In progress	While DOE has lifted foreign ownership restrictions for OSW, the local ownership requirement still exists under DENR's mandate for access to protected resources which is not covered by DOE's amendment. Further discussions between DENR and DOE, with the guidance of Department of Justice, are underway to reconcile and harmonize the policies.

3.1.3. Challenges and opportunities

In terms of short-term opportunities, we note the **importance of the DOE setting a long-term target, beyond 2028,** based on the outcomes of the current studies noted above. A target grounded in the expected policy developments as well as consideration of the limitations of OSW development due to technical, environmental, infrastructure and social considerations will be an important signal to the supply chain to commit their components and services to the Philippines and instil confidence in the financing sector to support project development.

3.2. Site development

3.2.1. Key developments

[23] Department Circular No. DC2022-110034 amending Section 19 of the Implementing Rules and Regulations of Republic Act No. 9513.

With 92 OWESCs awarded as of August 2024, a significant amount of pre-development activity is expected. However, uncertainty surrounding the MSP outcomes has left many developers cautious, taking a wait-and-see approach.

Ongoing activities to clarify current site development process include:

Clarifying the extension of the pre-development stage of an OWESC beyond the 5-year timeline

On June 25, 2024, the DOE Department Circular No. DC2024-06-0018, tiled "Revised Omnibus Guidelines Governing the Award and Administration of Renewable Energy Contracts and the Registration of Renewable Energy Developers," provides specific guidelines for OSW. These include the Certificate of Authority (CoA) for RE developers, allowing the procurement of permits and conduct of reconnaissance activities for up to three years for OSW projects. The extension of the pre-development stage, previously set at five years, by another two years has enhanced flexibility for developers, particularly given the nascent market in the Philippines. This adjustment intends to mitigate risks associated with project timelines, offering developers more time to navigate market complexities.

Extending EVOSS coverage to streamline OSW permitting processes

On 19 April 2023, the Office of the President issued the Executive Order No. 21 (EO 21) to establish a policy and administrative framework for offshore wind development. EO 21 mandates the formulation and issuance of the Policy and Administrative Framework (OPAF) for OSW development, submission of permits and requirements by Permitting Agencies, integration of permits into the EVOSS System, compliance with EVOSS timeframes, fee rationalization, timely delivery of transmission facilities, agency support, and formulation of implementing guidelines. This streamlined approach to permitting will be a significant step forward, as it will reduce barriers and timelines for acquiring permits, and facilitate smoother interactions between developers and permitting agencies, thereby accelerating OSW development.

Initiating studies on Permitting and Consenting, and Marine Spatial Planning

The Energy Transition Partnership (ETP) commissioned NIRAS to implement a Permitting and Consenting study for OSW projects in accordance with EO No. 21. This project, which began on July 21, 2023, aims to:

- Identify and clarify permit requirements and processes.
- Engage national, regional, and local government stakeholders.
- Utilise international best practices to update regulations.
- Provide training for agencies involved in the permitting process.
- Integrate permits into the EVOSS.

The government has also initiated a Green Lane and EPNS programmes to expedite the permitting processes for OSW projects in parallel to the Permitting and Consenting study under EO No. 21 to minimise delays in OSW pre-development activities.

The DENR, in coordination with DOE, issued the Administrative Order No. 2024-02 on 18 June 2024, which outlines the interim guidelines for obtaining an Environmental Compliance Certificate (ECC) under the Philippine Environmental Impact Statement System (PEISS) for OSW projects during the Pre-Development Stage. Additionally, the DENR is currently drafting an enhanced ECC guidelines for OSW projects, which will cover issuance of ECCs during the Development Stage of OSW projects.

The DOE and DENR, in consultation with the Department of Justice (DOJ), entered into a Memorandum of Agreement (MOA) on 04 October 2024. The MOA will ensure that the foreshore lands and onshore areas may be used and/or accessed by foreign owned RE developers for OSW projects.

Examples of projects currently under development include:

- **Copenhagen Infrastructure Partners' (CIP) planned USD 1.92 billion investment in a 650MW OSW project** is currently in the pre-development phase with site investigations underway. Discussions with the National Grid Corporation are ongoing to secure grid connection points. CIP has also applied for additional projects, targeting 1,000MW off the coast of Camarines Norte and Camarines Sur, and 350MW in Pangasinan and La Union.
- **The Blue Circle and CleanTech Global Renewables** are collaborating on a commercial-scale OSW project in Bulalacao, Oriental Mindoro, boasting a capacity of 1.2GW, making it the largest project in the Philippines to date.
- **Iberdrola, Stream Invest Holding and Triconti ECC Renewables** have agreed to enter five OSW projects in early development stages.
- **BlueFloat Energy** has secured wind energy service contracts for four sites, totalling approximately 7.6GW in capacity.
- **Triconti Windkraft Group' has partnered with Sea Wind Holding AG** for the development of two wind facilities across Cavite, Bataan, and Negros Occidental, with a combined capacity of 1.5GW.
- **Corio Generation** is planning to develop up to five projects totalling 3GW (including both fixed and floating projects) off the coasts of Cavite, Batangas-Mindoro, Iloilo, and Guimaras.

Sources: Copenhagen Infrastructure Partners[24]; The Blue Circle and CleanTech Global Renewables[25]; Iberdrola, Stream Invest Holding and Triconti ECC Renewables[26]; BlueFloat Energy[27]; Triconti Windkraft Group and Sea Wind Holding AG[28]; Corio Generation[29].

[24] Renewables Now (2024). *https://renewablesnow.com/news/cip-to-invest-usd-192bn-in-650-mw-philippine-offshore-wind-project-847027/*

[25] Orissa International (2022). *https://www.orissa-international.com/business-news/cleantech-ties-up-with-the-blue-circle-for-the-philippines-largest-offshore-wind-project/*

[26] Wind Insider (2022). *https://windinsider.com/2022/01/19/iberdrola-signs-agreement-with-triconti-ecc-renewables-joins-5-offshore-projects-in-philippines/*

[27] Power Technology (2023). *https://www.power-technology.com/news/bluefloat-offshore-wind-philippines/*

[28] OffshoreWind.biz (2023). *https://www.offshorewind.biz/2023/10/16/triconti-opens-door-to-new-partner-for-1-5-gw-wind-projects-offshore-philippines/*

[29] OffshoreWind.biz (2023). *https://www.offshorewind.biz/2023/07/19/corio-has-plans-for-3-gw-of-offshore-wind-in-philippines/*

ETP also commissioned BVG Associates for a MSP project, the results of which will impact existing OWESCs. According to the DOE's revision of its Omnibus Guidelines, developers are allowed to modify project designs even after the issuance of the Certificate of Confirmation of Commerciality (COCOC). This will prevent the need for full re-application of the OWESC in the case where any design changes are necessary based on the results of the MSP study.

3.2.2. Progress against the Roadmap

Main Roadmap recommendations	Status	Progress
Low growth scenario: *i.* Issue guidance to extend OWESC predevelopment beyond 5 years, and *ii.* beyond 25 years if project still in operation;	Addressed	The Omnibus guidelines note that the developer shall be given a period of 5 years from the date of execution of the OWESC, which will be extendible for up to 2 years to determine the existence of OSW resource under the pre-development stage. Developers are also provided with a Certificate of Authority after receiving approval of an RE Contract application to conduct necessary activities required to support the development of a pre-feasibility study for up to 5 years. The Omnibus guidelines that the OWESC shall have a term of 25 years from the date of execution which will include the pre-development stage and development/commercial stage, excluding the period covered by the Certificate of Authority. Within 6 months prior to the expiration of the 25-year period, the OWESC can be renewed for another 25 years.
iii. Extend EVOSS to cover relevant government departments to enable efficient and transparent permitting;	Addressed	In the process of extending EVOSS to cover all relevant government departments and streamlining the permitting process as part of the OPAF and ongoing ETP-funded TA noted above.
iv. Review design permit flexibility to prevent need for full reapplication and subsequent delays should any design changes be required as the project progresses;	In progress	The OPAF notes that the outcomes of the MSP project will be used to identify and resolve possible overlaps of the OWESC projects awarded prior to the issuance of the MSP by providing the developers with the option to submit a revised map of its contract area. The Omnibus guidelines note that developers may submit an application to change the design of the project, and the request must be supported by an updated technical study containing the detailed engineering design.
High growth scenario: *i.* Establish OSW development zones through MSP;	In progress	In the process of identifying OSW development zones through the MSP TA.
ii. Introduce OSW development zones that respect OWESCs, and guide their use in prioritizing OSW development in the most advantageous areas.	To be addressed	The MSP study will identify available zones for OSW planning, and the OPAF notes how the outcomes of the MSP study may be used in relation to the OWESCs. However, the processes that will be put in place to address the impact of the MSP findings on the OWESCs are to be developed.

3.2.3. Challenges and opportunities

A significant amount of activity is underway to tackle the initial bottlenecks affecting OSW developers in the pre-development phase. This is expected to address a considerable amount of uncertainty in the sector and accelerate developer interest in the region. However, further challenges will need to be addressed as the country anticipates outcomes from the TA project supporting the Philippines

Government to develop an MSP approach for identifying suitable OSW development areas. It may be possible that the constraints analysis shows that offshore wind development is not suitable in areas where OWESCs have already been awarded. In such cases, the contract areas under the OSWESCs may be amended in accordance with Section 69 of the DOE Department Circular No. DC2024-06-0018. This provision allows for **the revision or annulment of OWESCs that predate MSP activities, thereby supporting** the continued and sustainable growth of the sector.

3.3. Grid integration

3.3.1. Key developments

It is currently not clear whether developers who win auction rounds will be guaranteed a grid connection point. There are several studies underway to ensure that adequate grid infrastructure is available to wind farms before they become operational. These include:

- The World Bank's study on "**Transmission Planning and Grid Integration for OSW**" intends to inform policy and programs for extending and upgrading the transmission network. The study also aims to identify low-cost regions for OSW integration in order to guide which transmission sites are prioritised for upgrades.
- The DOE is working with financial institutions to identify **solutions for investment in transmission system upgrades**, including the use of concessional finance.
- Discussions between the DOE, USAID, the Transmission Corporation and the University of the Philippines are ongoing for the development of a "**Smart and Green Grid System Plan**" and "Competitive Renewable Energy Zones (CREZ) Phase II" to include OSW development.
- The DOE is working with the National Grid Corporation of the Philippines (NGCP) to expedite the conduct of **System Impact Studies** (SIS) for the RE Projects and ensure grid infrastructure readiness. Studies are also intended to identify compensation approaches for delayed grid connection availability.

These studies are intended to support the integration of OSW development zones into CREZ processes and the Transmission Development Plan. Following the completion of these efforts, the DOE plans to work with NGCP and TransCo to update the delivery, approval processes, and grid management practices to accommodate increased RE supply.

3.3.2. Progress against the Roadmap

Main Roadmap recommendations	Status	Progress
Low growth scenario *i.* Update Transmission Development Plan delivery, approval processes, and grid management practices to reflect more supply from RE sources;	In progress	The results of the World Bank's study on Transmission Planning and Grid Integration for OSW will be used to inform the policies overseeing the upgrade of the transmission network and interconnection facilities for OSW. The Smart and Green Grid plan is being developed to ensure that the Philippines can meet the capacity provided by ready and available RE. The DOE will also set policy on a Net Transmission Development programme.

ii. Ensure clarity for projects in securing grid connections, including compensation for delayed connections	In progress	Ongoing studies will provide findings necessary to support a grid connection agreement and clarity on point-to-point applications and compensation for delayed grid connection availability. The DOE is also working closely with the NGCP for the timely conduct and completion of SIS for RE Projects
High growth scenario *i.* Publish 2050 vision for a nationwide electricity transmission network for a decarbonized energy system that includes milestone plans for 2030 and 2040 and considers finance;	In progress	Further studies by DOE and partners are being conducted to address this recommendation.
ii. Incorporate OSW development zones into Competitive Renewable Energy Zones (CREZ) and transmission development plan processes;	In progress	DOE plans to include OSW development zones into the second phase of the CREZ, and are in discussions with USAID to support this.
iii. Undertake power systems studies with the DENR, NGCP, and TransCo to understand the potential impacts of large volumes of OSW on the future transmission network;	In progress	World Bank is currently studying the transmission requirement for OSW, with the aim of identifying the regions which should be prioritised for transmission upgrades to support OSW projects.
iv. Consider amendments to the Grid Code and Distribution Code to adjust to the significant RE power generated;		
v. Low-cost solutions for investment in transmission system upgrades	In progress	The World Bank study on Transmission Planning noted above is considering possible low-cost regions for integrating OSW, and the DOE is working with financial institutions to identify solutions for investment in transmission system upgrades, such as concessional finance.

3.3.3. Challenges and opportunities

There is ambiguity regarding whether the ongoing TA programs will address the transmission charging regime, particularly concerning **who bears the costs associated with different parts of the transmission infrastructure**, from onshore to offshore. This lack of clarity could potentially hinder the development of OSW projects, as developers may face unexpected financial burdens related to transmission infrastructure.

It also remains unclear whether current research efforts will adequately consider the most efficient offshore network designs, such as a meshed grid system. Without proper consideration of **optimal network configurations**, there is a risk of suboptimal infrastructure planning, potentially leading to inefficiencies and increased costs in OSW development.

The process by which the NGCP will determine the **prioritisation of grid upgrades** is unclear. This could pose a challenge for developers, as they are uncertain which of their projects would benefit from planned

grid upgrades. Addressing this issue is essential for ensuring equitable access to grid infrastructure and facilitating the timely and efficient integration of OSW projects into the existing power grid.

3.4. Incentive mechanisms

3.4.1. Key developments

Incentive schemes such as subsidies or grants are currently not available to support the OSW market. The DOE has proposed a competitive auction mechanism, the Green Energy Auction Program (GEAP) for OSW in the third quarter of 2025. While such competitive auctions can deliver substantial cost reductions, they must be designed to ensure the deliverability of projects and not invite low bids that become uneconomical for the project. The following technical assistance is therefore ongoing to address this risk:

- OWC and the Lantau Group's support to the ERC on **tariff assumptions**.
- ADB's TA on **cost and tariff determination of OSW** to the ERC involves developing Green Energy Auction Reserve (GEAR) prices for OSW based on industry consultations and financial modelling to reflect costs involved across the entire OSW value chain.
- The Global Wind Energy Council (GWEC) is running workshops with developers to seek industry inputs on the GEAP so that a **realistic tariff** for fixed bottom and floating OSW projects is enabled alongside clear **offtake design**. GWEC will also work with the Developers for Renewable Energy for Advancement (DREAM), Wind Energy Developers Association of the Philippines (WEDAP) and Pilipinas Offshore Wind Energy Resource (POWER) to enable a platform that facilitates collaboration and dialogue between industry stakeholders so that **OSW derisking solutions** can be developed for DOE's consideration.
- GWEC is setting up focus group discussions with multilaterals and financial institutions regarding the tariff and Power Purchase Agreement (PPA) bankability in order to build their capacity on OSW financing and ultimately unlock **concessional finance** for this sector.

Going forward, the DOE plans to explore the feasibility of Contract for Difference (CfD) mechanisms to support OSW market growth.

3.4.2. Progress against the Roadmap

Main Roadmap recommendations	Status	Progress
Low growth scenario *i.* Establish competitive system solely for OSW PPAs; *ii.* Publish timetable for OSW power procurement competitions and coordinate across key stakeholders to administer the competition;	In progress	DOE plans to include OSW as part of the Green Energy Auction by the end 2024 or 2025 following the completion of necessary studies on target and tariff setting. Going forward, the DOE plans to explore the feasibility of Contract for Difference (CfD) mechanisms to support OSW market growth.

iii.	Support OSW to access concessionary finance from Fis	In progress	DOE will be coordinating with the Department of Finance and relevant financial institutions to access concessionary financing for OSW development.

3.4.3. Challenges and opportunities

As the sector is getting close to its first auction round, with the GEAP expected to be held for OSW at the in the third quarter of 2025, there is an opportunity to **provide greater clarity on the auction eligibility criteria** for OSW developers. There is a concern that if the eligibility criteria set is too low, it may fail to deter speculative bidding and attract high-quality bids. In addition, if the GEAP is not announced with sufficient time to allow developers to prepare well-informed bids, then this may reduce the number of developers willing and able to participate in GEAP rounds.

3.5. Supply chain development

3.5.1. Key developments

While there are currently no specific policies in place targeted towards stimulating the OSW supply chain in the Philippines, there are ongoing efforts to develop different parts of the value chain:

- The Danish Embassy, the International Renewable Energy Agency (IRENA), GWEC and the Global Wind Organisation are working together to accelerate **the training, re-skilling, and upskilling of workers** in the renewable energy industry through the expansion and promotion of global certificates to foster a flexible renewable energy labour pool.
- The USAID-funded Energy Secure Philippines project is providing technical assistance to the Philippines government for the **capacity building** of government bodies, financial institutions, and developers to increase the deployment of OSW technologies. USAID is working closely with the DOE as well as other industry players to **map out existing skills and competency** to be developed to support the OSW sector.
- GWEC is supporting the development of an **OSW supply chain study** for the Philippines that aims to provide (i) an understanding of the current status and future potential of OSW in the Philippines, (ii) an assessment of the existing supply chain for OSW in the Philippines to discern opportunities available for the local market, (iii) an evaluation of potential collaboration and partnership opportunities between international and local entities to support OSW development, and (iv) recommendations on future industrial strategies that could be implemented by the government to develop the OSW sector.
- ADB is providing USD 400,000 for the **planning of ports development to support OSW** in the Philippines. The TA is the first step to addressing a key infrastructure challenge facing the Philippines at present which is that there are currently no ready ports for OSW. The TA includes (i) the preparation of a pre-feasibility study of ten candidate ports in terms of their readiness to support OSW construction, operation and maintenance, (ii) a list of priority ports for OSW development considering multiple factors such as port upgrading cost, construction time, port scalability, social and environment safeguard impact, financial sustainability, proximity of OSW sites, and grid connection access to identify priority OSW sites, and (iii) a time-bound action plan

for port development to enable OSW build-out from 2028 onwards. The study is expected to be completed by October 2024.[30]

- The DOE and the PPA are collaborating to enhance the country's OSW energy projects by modernising port infrastructure. This initiative aims to establish the Philippines as a leader in regional offshore wind development and improve renewable energy capacity. The PPA will support the DOE in repurposing three key ports—Currimao, Batangas, and Jose Panganiban—crucial for the installation and operation of OSW projects. Energy Secretary Raphael P.M. Lotilla emphasised that modernising these ports is vital for advancing the offshore wind sector, securing clean energy, and promoting economic growth. With strategic locations near multiple OWESCs, these ports will serve as logistical hubs throughout the lifecycle of OSW projects, contributing to energy security and job creation. Both agencies are committed to realising a sustainable energy future for the Philippines[31].

It is expected that the DOE will maintain a balanced vision for local supply chain development going forward and avoid restrictive local content requirements that add risk and cost to projects and slow deployment.

3.5.2. Progress against the Roadmap

Main Roadmap recommendations	Status	Progress
Low growth scenario *i.* Ports Authority to publish an OSW ports prospectus, showing port capabilities against OSW physical requirements;	In progress	ADB's ports planning study is the first step to addressing this recommendation. However, there are no ports ready to support OSW at this stage. New ports will need to be built, and existing ports will need to be re-purposed to support OSW.
ii. Present balanced vision for local supply chain development, encouraging international competition and avoid restrictive local content requirements;	In progress	GWEC's OSW supply chain study is currently underway and may inform the government's vision for local supply chain development going forward.
iii. Grow capacity and knowledge needed to support OSW projects across government and key stakeholders;	In progress	Ongoing TAs noted above are focusing on upskilling and re-skilling efforts to promote job creation in the OSW sector.
iv. Consider introducing gender equality requirements into leasing and power purchase frameworks, involve developers and supply chain companies in gender equality workshops, and determine key data collection requirements to measure diversity targets	To be addressed	Progress has been limited to date.

[30] ADB (2024). *https://www.adb.org/projects/57280-001/main*

[31] DOE and PPA strengthen partnership for OSW development with port infrastructure upgrades | Department of Energy Philippines

High growth scenario *i.* Philippines Ports Authority and the DOE to work with ports to build a vision of how a pipeline of projects in the potential OSW development zones could be delivered and to assess whether it is viable to establish any new port facilities;	To be addressed	Pending completion of ADB's ports planning study.
ii. Explore potential Philippine government and inward investment to finance port upgrades or new facilities	To be addressed	Pending completion of ADB's ports planning study.

3.5.3. Challenges and opportunities

In addition to the TA projects noted above, which will offer significant guidance to industry, there is a need to **develop policies aimed at stimulating the OSW supply chain**. These policies should facilitate access to essential supply chain components and adequate infrastructure, while fostering local manufacturing capabilities.

In particular, **policies to effectively transition workers** from various sectors into the OSW industry will be necessary to maximise the sector's potential for job creation. In addition, policies can be developed to **promote partnerships between local and international OSW industry players** and incentivise foreign developers to provide local workers with new skills and qualifications suitable across the OSW lifecycle.

3.6. Innovation support

3.6.1. Key developments

Policies can be used to ensure that early-stage technologies carrying higher short-term risks and costs are nurtured in order to benefit the long-term growth of the industry. While explicit policies targeted towards innovation in the OSW sector have not been developed as yet, **collaboration between government and industry** has been strengthening with examples of industry associations such as the DREAM, WEDAP, POWER and GWEC representing industry views to the DOE so that these can be tackled to ensure that early-stage technologies have the opportunity to be tested and demonstrated at scale. In addition, PHORA is another example of supporting public and private sector collaboration by streamlining developer interests and the DOE's priorities to identify and facilitate funding towards high impact research projects.

Direct innovation support by the government is otherwise limited. However, DOE plans to establish the **Philippine Wind Energy Institute** which will undertake research and development and provide technical services to wind energy sector. This could include the conduct of wind resource assessment and mapping, and the administration of a wind data sharing platform. For example, the DOE's revised Omnibus Guidelines notes the requirement for further **data sharing and access** to hasten the development of wind energy resources and reduce risk and costs from the private sector.

3.6.2. Progress against the Roadmap

Main Roadmap recommendations	Status	Progress
High growth scenario *i.* Establish, by circular, a long-term government-industry task force involving local and international project developers and key suppliers to address Roadmap recommendations and other considerations.	To be addressed	Government-industry collaboration platforms such as PHORA have been initiated to address OSW market barriers. However, a circular to establish a long-term task force is pending.

3.6.3. Challenges and opportunities

While existing public-private collaboration initiatives show promise, additional opportunities for innovation support can be identified via **technology roadmaps**. These roadmaps can map the current strengths within the Philippines' OSW sector and highlight the gaps that need to be addressed to accelerate technological advancements and promote sustainable growth in the industry.

Resources dedicated towards **research and development** is also necessary, particularly focusing on floating wind, encompassing substructure mass fabrication, port requirements, substructure and turbine assembly, weather window restrictions, substructure-cable dynamics, heavy maintenance, and mooring system inspections. These efforts are essential for overcoming technical challenges, improving efficiency, enhancing safety measures, and ultimately maximizing the potential of OSW energy production.

3.7. Overall progress

Policymakers in the Philippines must consider how all parts of the system come together, balancing a desire for rapid offshore wind expansion with adequate planning. The following chart summarises the OSW sector's progress in fulfilling select recommendations outlined in the Roadmap. Each bar corresponds to the status of progress made in addressing the recommendations within each category, with the numbers denoting the amount of recommendations evaluated for each category. Significant progress is evident under the site development pillar, while several studies supported by development partners are underway to address the Roadmap's recommendations across the other pillars.

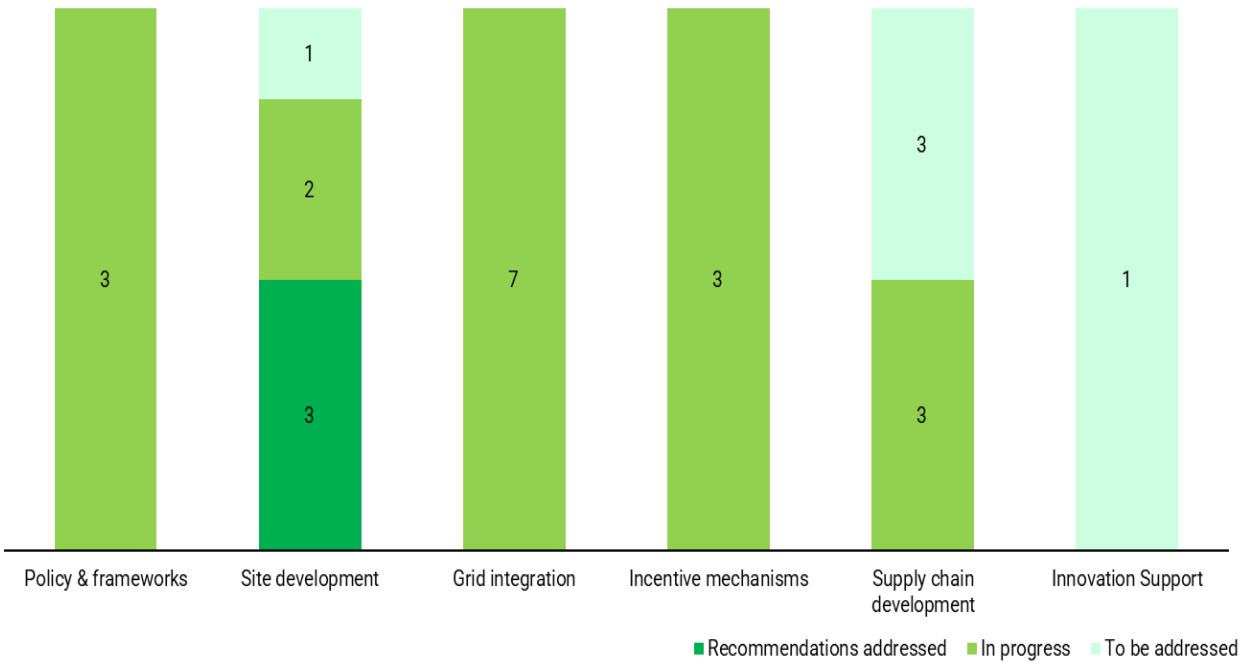

Figure 5: Summary of progress against assessed recommendations from 2022 World Bank OSW Roadmap

Policy & frameworks

The Philippines has accelerated its efforts to initiate policies and regulatory conditions to support OSW growth alongside setting short-term targets for 2028. While these ongoing efforts continue to strengthen the regulatory environment, setting long-term targets up to 2040 and 2050 based on the findings of current technical assistance initiatives will be a crucial next step.

Site development

Measures to address significant bottlenecks related to site development are currently underway via the MSP and Permitting and Consenting studies alongside policy measures to clarify foreign ownership concerns related to site development for example. However, uncertainty around the MSP outcomes is responsible for a degree of inertia in pre-development activities as it may impact the viability of existing OWESCs.

Grid integration

Initial studies are underway to identify suitable areas for grid connectivity for OSW power generation. However, there is a lack of clarity on whether there will be guaranteed grid access to winning auction projects and whether grid and transmission infrastructure will be ready to integrate OSW effectively.

Incentive mechanisms

While the GEAP is expected to be in place by the third quarter of 2025, questions remain on whether its design, bid timelines, and evaluation processes will sufficiently alleviate OSW developer concerns.

Supply chain development

Capacity building initiatives and studies on supply chain development and port infrastructure are facilitating the growth of the OSW sector. However, the absence of policies to stimulate the OSW supply chain, coupled with the expected complexities and timeframes involved in upgrading and expanding port infrastructure may present significant obstacles.

Innovation support

There is currently limited government support for innovation which can pose a challenge for industry growth. However, current collaboration efforts between industry and government are expected to drive innovation moving forward, with planned initiatives such as the **Philippine Wind Energy Institute** expected to further research and development efforts.

4. Future Outlook

The Philippines has advanced its OSW sector by accelerating the development of policy frameworks following the publication of World Bank's OSW Roadmap in 2022. Efforts to address site development bottlenecks are underway, while grid integration studies are progressing to provide greater clarity on the country's readiness to integrate large-scale OSW power into existing infrastructure. Concurrently, capacity building and supply chain development initiatives are gaining momentum alongside greater collaboration efforts between industry and government. Whether the Philippines will meet its expectation of achieving 2GW of OSW capacity between 2028 and 2030 depends on the effectiveness of the **EO No. 21**, **Green Lane, and EPNS** processes for OSW projects. However, equal emphasis should be placed on supporting long-term industry by focusing on key levers that will benefit the broader sector.

Moving forward, the future success of OSW development in the Philippines hinges on strategic priorities being taken forward and continued progress across key areas.

Investing in grid and port infrastructure should remain a priority.

To ensure the smooth integration of OSW projects into the grid, prioritising upgrades to transmission infrastructure is critical. Additionally, investing in port development will be crucial to support the logistical needs of OSW construction and maintenance.

Supplementary work on site development is necessary following the completion of the MSP.

PHORA's Steering Committee members noted the importance for identifying and/or designing suitable methods that can be used to guide developers to conduct pre-development site surveys and run data collection campaigns to ensure effective planning and decision-making in the sector. In addition, conducting comprehensive environmental and socio-economic impact assessments for identified development zones will be important to promote sustainable OSW growth. Another useful aspect to consider is the establishment of an **OSW data-sharing platform** focused on pre-development survey data that can be used by the DOE and developers to streamline access to information for planning and executing future projects.

A strong local supply chain is necessary to support long-term sector growth.

A comprehensive skills and training roadmap for OSW will be valuable to supplement existing workforce capacity building efforts underway. Additionally, reviewing **health, safety, and environment requirements** for the safe construction of OSW farms, as well as **turbine design standards** tailored to similar geographies, will enhance project safety and efficiency.

Just transition should be inherent in all activities.

Community engagement should not be an afterthought for developers, and key stakeholders such as fisheries and local communities likely to be affected by OSW development activities should be consulted at the outset of pre-development activities. Guidance on best practices to engage communities and promote social and environmental benefits of OSW development should be developed to foster local support and mitigate potential conflicts.

Preparation for floating OSW projects should not be delayed.

As the bulk of the Philippines technical OSW capability will come from floating OSW, a separate strategy is needed to integrate floating OSW into existing incentive mechanisms such as the GEAP or Feed-in

Tariffs. New considerations must be factored in to accommodate floating OSW technology in terms of regulatory frameworks and infrastructure requirements, and guidance must be developed once the government's **technology-specific OSW targets** are clarified.

Appendix 1: Supporters of the Philippines OSW energy market

This section maps the TA projects and activities currently underway in the Philippines by the stakeholders responsible for funding, coordinating or delivering them. This section serves to offer readers insight into available sources of support to advance the OSW industry.

4.1. Funders

4.1.1. Asian Development Bank (ADB)

- **Environmental safeguards (Ongoing – expected completion 2024):** ADB is supporting the DENR with drafting the Environmental and Social Standards Statement for OSW, based on gap analysis and international best practices of environmental and social management of OSW development. The technical assistance project involves the preparation of draft guidelines for compliance alongside social and environmental impact assessments.
- **GEAR pricing (Ongoing – expected completion 2024):** ADB is supporting the ERC to establish Green Energy Auction Reserve (GEAR) pricing for OSW through industry consultations and financial modelling. These prices aim to accurately represent costs across the entire OSW value chain.
- **Ports development (Ongoing):** ADB committed USD 400,000 in February 2024 to support the planning of ports development for OSW in the Philippines. The initiative includes conducting a pre-feasibility study of ten candidate ports, prioritising them for OSW based on factors like cost and environmental impact, and creating an action plan for OSW port development to enable OSW build-out in 2028 and onwards.

4.1.2. Energy Transition Partnership

- **Marine spatial planning (Completed):** The project involves establishing an MSP tool for the Philippines, to facilitate the development of OSW and reduce uncertainties and potential conflict during subsequent project development stages. The MSP tool aims to support the government to identify the most suitable areas for marine renewable energy development, and reduce future sea-user conflicts and environmental conflicts when large-scale OSW is deployment.
- **Permitting and consenting process for OSW projects (Completed):** The project involves the development of an efficient permitting process for OSW projects in the Philippines that is in line with international best practices. This includes (i) identifying all permit requirements and processes for an OSW project in the Philippines and any guidance associated with these permits, (ii) conducting stakeholder engagements with all national, regional, and local government stakeholders engaged with OSW permitting, (iii) providing recommendations on streamlining or simplifying current processes based on international best practices, (iv) training relevant agencies to carry out their role in the permitting process, and (v) facilitating the integration of regulatory bodies into the Energy Virtual One-Stop Shop (EVOSS).

4.1.3. Royal Danish Embassy

- **Certification (Ongoing – expected completion 2024):** The Danish Embassy alongside IRENA and GWEC announced the development of JOBS4RE Global Certificates for the Wind Power Industry at COP 28 which aims to bolster the capabilities of the workforce in the renewable energy sector in the Philippines and in other countries. The certificates are expected to be ready in 2024, and the Danish Embassy has engaged with OEMs, wind developers, training schools, labour organisations, technical experts, the Philippines government, and international partners to progress this initiative in developing a global, industry-led certificate for the wind industry.

4.1.4. Royal Norwegian Embassy

- **Workforce training (Ongoing):** The Embassy has initiated dialogue with the Norwegian Training Centre in Manila and the Norwegian Shipowners' Association in Oslo to provide the necessary training and equip seafarers in the Philippines with skills needed for OSW projects in the country.

4.1.5. UK Government

- **Study tour (Completed):** The UK's Department for Business and Trade, British Embassy Manila, and the Foreign, Commonwealth hosted a Philippine delegation for an OSW learning visit in the UK in February 2023. UK regulators and industry stakeholders shared best practices on regulatory frameworks and industry development to support the Philippines government to successfully develop a competitive OSW industry.

4.1.6. USAID

- **Grid integration (Ongoing):** USAID is working with the DOE, the Transmission Corporation and the University of the Philippines to develop a "Smart and Green Grid System Plan" and "Competitive Renewable Energy Zones (CREZ) Phase II" to cover OSW Projects. The Smart and Green Grid plan aims to support the integration of additional renewable energy capacity to the grid and is intended for publication in 2024. This plan is also expected to serve as the basis for NGCP's Transmission Development Plan. Under CREZ Phase II, USAID intends to identify areas with the potential for high concentrations of cost-effective floating solar, OSW and tidal projects with strong developer interest that will require transmission capacity.
- **Capacity building (Ongoing):** The Energy Secure Philippines project of USAID is providing mentoring and business development support to selected OSW developers and financial institutions in the Philippines. This includes enhancing OSW developer skills in technical aspects (OSW technology, design optimisation, engineering best practice), business development (market research, feasibility studies, competitive analysis), financing (financial modelling, risk assessment, investment analysis for OSW project financing), environment, social and governance (ESG) considerations, regulatory compliance, and policy alignment. With financial institutions, technical assistance is focused on integrating green finance principals with OSW projects.

4.1.7. World Bank

- **Grid infrastructure readiness (Ongoing):** The World Bank is supporting the Philippines with studies on grid integration and transmission planning related to OSW which includes (i) reviewing

wind speed model estimates and temporal trends, and (ii) transmission grid modelling of OSW buildout to investigate required grid upgrades. The technical assistance is intended to inform strategic planning for grid development so that it can target areas with the most favourable OSW conditions.

- **Transmission planning**: The World Bank is supporting the DOE to analyse the least cost of energy possible in regions with OSW resources. This involves identifying development zones that will be most cost-effective for OSW in order to inform the prioritisation of transmission site upgrades.

4.2. R&D Initiatives

4.2.1. Philippines Offshore Renewables Accelerator (PHORA)

PHORA is a Philippines focused public-private collaboration initiative set up in 2022 to accelerate offshore wind development in Philippines by conducting impactful research that resolves barriers to offshore wind. The aims of PHORA are to (i) provide a platform for effective collaboration between public and private organisations, (ii) accelerate OSW development in Philippines by conducting impactful research that resolves barriers, and (iii) build capacity with OSW sector participants in the Philippines and raise awareness of the opportunity it presents to Philippines. The PHORA Steering Committee is co-chaired by the DOE and the Carbon Trust and currently comprises of 16 local and international developers and two tier-1 suppliers. Together, the Steering Committee identifies and prioritises research projects that are most important to address for the Philippines OSW sector.

To date, PHORA has identified and facilitated funding into the following research projects:

- **Marine spatial planning:** Technical assistance to develop an MSP tool aligned with Good International Industry Practice that supports the identification of suitable OSW development zones.
- **Permitting and consenting:** Technical assistance to streamline permitting processes for OSW in the Philippines by establishing development periods, procedures and guidelines for developers and regulators to follow.
- **Vision and regulatory framework:** Research and advisory support to enable the adoption of realistic but ambitious OSW installation targets that are technology-specific and assessment of existing OSW tender policies to provide recommendations on possible refinements to reach OSW targets and support cost reduction.

Other priority projects that were highly ranked by PHORA's Steering Committee that have received funding outside of PHORA include ADB's ports planning study and GWEC's supply chain study for OSW. Beyond this, the Steering Committee noted the importance of grid integration studies to be conducted such as analysing large-scale renewables integration as well as a grid technical readiness assessment, elements of which are already funded and being delivered by other organisations (noted in section 4.1).

4.3. Industry Associations

4.3.1. Developers for Renewable Energy for Advancement (DREAM)

DREAM is an umbrella organisation of renewable energy associations launched in 2019. Its focus is on pushing for policy reforms to support the renewable energy industry deliver their services and enable the Philippines to achieve its renewable energy targets. DREAM does this by working with industry partners to conduct policy dialogues and consultations to convey the requirements and priorities of OSW developers to government.

4.3.2. Global Wind Energy Council (GWEC)

GWEC is an international trade association with members representing the entire wind energy sector, including manufacturers, developers, component suppliers, research institutions, national wind and renewables associations, electricity providers, finance and insurance companies. GWEC conducts engagements with policymakers and energy ministers, supports industry dialogue with government via workshops, conducts technical workshops, runs study tours for officials, and promotes knowledge sharing. In the Philippines, activities led by GWEC in 2024 include conducting dialogues with the OSW industry and the government on auction design, conducting pre and post GEAP workshops with industry stakeholders, supporting workforce development and re-skilling, and overseeing a supply chain study for OSW.

4.3.3. Pilipinas Offshore Wind Energy Resource (POWER)

POWER is a Philippines-based industry association launched in December 2023 to promote the success of the OSW industry. The current members include ACEN, The Blue Circle, BlueFloat Energy, Citicore Renewable Energy Corp, Ignis ZA Global and Marubeni Asian Power Philippines. The organisation aims to promote collaboration across developers with wind energy service contracts so that they can tackle common concerns and issues together.

4.3.4. Wind Energy Developers Association of the Philippines (WEDAP)

WEDAP includes members from both the onshore and offshore wind sector, and promotes their interests with the Philippines government as well as international partners. For example, WEDAP recently coordinated with the DOE on dialogue sessions with the government of Denmark and Danish firms on developing an Asian training hub in the Philippines for upskilling and reskilling talents in the OSW industry.

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Published in the UK: 2024