# VIETNAM OFFSHORE WIND COMPETITIVE INVESTOR SELECTION STUDY

GWEC
GLOBAL WIND ENERGY COUNCIL

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OWC – an ABL Group company – is a global specialist and service-focused renewable energy consultancy. We offer concept and project development services, owner's engineering and technical due diligence across global onshore and offshore wind, solar PV, subsea cables, hydrogen, energy storage, ocean energy and renewable ports and harbours markets.

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Pioneer International Consulting Pte Ltd. (PIC) is a strategic consultancy firm focused on energy transition and clean energy project development in Vietnam. The firm provides macro and sector research, policy and regulatory analysis and project development advisory services to investors, developers, donors and development partners participating in the Vietnam market.

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## Acknowledgement

This report was commissioned by the Global Wind Energy Council (GWEC). OWC and Pioneer International Consulting Pte Ltd. (PIC) set out the overview of the current legal and regulatory frameworks for offshore wind development in Vietnam, analysed existing mechanisms and frameworks necessary to introduce a -fit-for-purpose competitive investor selection process, and set out recommendations for the Vietnam context. Their contributions further include providing key information and insights on global best practices, methodologies, and mechanisms that facilitated invaluable policy recommendations.

The report was edited by the Global Wind Energy Council team: Liming Qiao, Mark Hutchinson, Bui Vinh Thang, Nguyen Van Trang, and Esther Fang.

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# Foreword

Vietnam is facing a crucial crossroads: It must decide which energy sources to lock in now to meet its growing electricity demand and power its high economic growth. The government has already taken important steps toward expanding clean, renewable energy, notably through the adoption of Power Development Plan 8 (PDP8) in 2023. The PDP8 sets out ambitious renewable targets to achieve net-zero emissions by 2050, with offshore wind positioned as a cornerstone of this strategy.

The government also aims to procure renewable energy in the most cost-effective way possible. This is why the Global Wind Energy Council (GWEC) believes that a robust competitive procurement process for offshore wind projects will be instrumental in achieving Long-term energy goals.

With its exceptional wind resources and the strong commitments to offshore wind outlined in the PDP8, Vietnam is set to lead the offshore wind development in Southeast Asia. Offshore wind, with its high capacity factor, is the perfect complement to other renewable technologies in Vietnam, coming closest to providing baseload power among all renewable sources. Vietnam is also uniquely poised to become a regional supply chain hub for the offshore wind industry. The country already exports towers to other Asian markets and is home to Southeast Asia's only wind turbine assembly plant. Furthermore, Vietnam's strong expertise in the offshore oil and gas marine industry can be transitioned to offshore wind, supporting sustainable industrialisation and creating significant job opportunities.

In light of these factors, GWEC commissioned this report on the competitive procurement of offshore wind in Vietnam. Our goal is to provide the government with a comprehensive, data-driven analysis of how offshore wind can be procured competitively, informed by international case studies. This report reflects the perspective of the industry as a whole and is intended to offer a framework for advancing competitive procurement of offshore wind in Vietnam. The study was conducted by OWC and Pioneer International Consulting Pte Ltd. (PIC), in consultation with key offshore wind industry stakeholders. The views expressed are those of GWEC and do not represent any individual company or GWEC member. The report is structured as follows: Section 1 contains an executive summary, Section 2 provides a market overview including a review of the current legal and regulatory frameworks, Section 3 presents international case studies on competitive selection processes, and Section 4 offers recommendations regarding the unique context of the Vietnamese market.

We hope the findings in this report will assist the Government of Vietnam in making offshore wind a foundational part of the country's future energy mix.

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# Acronyms

| | |
|---|---|
| AR | Allocation Round |
| ASP | Administrative Strike Price |
| CES | Crown Estate Scotland |
| CfD | Contract for Difference |
| CL | Commercial License |
| COD | Commercial Operation Date |
| CPPA | Corporate power purchase agreement |
| DONRE | Provincial Department of Natural Resources and Environment |
| DPI | Provincial Department of Planning and Investment |
| DPPA | Direct Power Purchase Agreement |
| EA | Energy Administration (Taiwan) |
| EEZ | Exclusive Economic Zone |
| EOI | Expression of Interest |
| EREA | Electricity & Renewable Energy Authority |
| EVN | Vietnam Electricity |
| FID | Final Investment Decision |
| FIP | Feed-in Premium |
| FIT | Feed-in Tariff |
| FL | Feasibility License |
| FS | Feasibility Study |
| GW | Gigawatt |
| GWEC | Global Wind Energy Council |
| IDA | Industrial Development Administration (Taiwan) |
| INTOG | Innovation and Targeted Oil and Gas |
| IPD | Investment Policy Decision |
| IPP | Independent Power Producer |
| IRC | Investment Registration Certificate |
| JETP | Just Energy Transition Partnership |
| km | kilometre |
| m/s | Meters per second |
| MOD | Ministry of Defence |
| MOEA | Ministry of Economic Affairs (Taiwan) |
| MOFA | Ministry of Foreign Affairs |
| MOIT | Ministry of Industry and Trade |
| MONRE | Ministry of Natural Resources and Environment |
| MPI | Ministry of Planning and Investment |
| MPS | Ministry of Public Security |
| MREA | Act on Promoting the Utilization of Sea Areas for the Development of Marine Renewable Energy Power Generation Facilities (Japan) |
| MSP | Marine Spatial Planning |
| MW | Megawatt |
| nm | Nautical Mile |
| NMSP | National Marine Spatial Plan |
| NPDP | National Power Development Plan |
| O&G | Oil and gas |
| OFTO | Offshore Transmission Owner |
| OFW | Offshore Wind |
| OIR | Offshore Infrastructure Regulator (Australia) |
| PC | Power Corporation under EVN |
| PDP8 | National Power Development Plan for the period 2021 to 2030, with a vision to 2050 |
| PDP8 Implementation Plan | Implementation Plan for Vietnam's National Power Development Plan for the period of 2021 to 2030 with a vision to 2050 |
| PPA | Power Purchase Agreement |
| PPC | Provincial People's Committee |
| PPP | Public Private Partnership |
| Pre-FS | Pre-Feasibility Study |
| PVN | Vietnam Oil and Gas Group |
| REC | Renewable Energy Certificate |
| RFP | Request for Proposal |
| SCADA | Supervisory Control and Data Acquisition |
| SIR | Sustainable Industry Reward |
| TBC | To be confirmed |
| TCE | The Crown Estate |
| VASI | Vietnam Administration of Sea and Islands |
| VND | Vietnamese Dong |
| VWEM | Electricity Wholesale Market |

# EXECUTIVE SUMMARY

# Executive summary

## 1.1 Background

Vietnam holds significant potential for wind energy as a scalable alternative to thermal power. With a coastline spanning 3,000 kilometres (km) and consistently high average wind speeds, Vietnam's offshore wind (OFW) technical potential is estimated at around 600 gigawatt (GW); factoring for 260 GW of fixed-bottom and 340 GW of floating wind potential.[1]

Additionally, Vietnam boasts a strategically located supply chain which is exporting key OFW components to other countries in the region, alongside capabilities in parallel industries, such as oil and gas (O&G) and onshore wind.

Within this context the Vietnamese government has demonstrated a strong commitment to fostering OFW projects with the issuance of the National Power Development Plan for the period 2021 to 2030 and with a vision to 2050 (PDP8). This establishes ambitious targets for OFW; 6 GW by 2030 and between 70 to 91.5 GW by 2050.

In 2024 legislation is expected (i) for the purpose of introducing a streamlined mechanism for the sale and purchase of wind power [2] and (ii) for a pilot programme for OFW which will launch a series of pilot projects and determine the legal and regulatory reform required for private sector investment.

However, despite the potential and positive foundations, Vietnam's OFW industry remains in its infancy, with only three projects granted survey licences to date. Development has been constrained by the lack of a detailed regulatory framework and clear guidance on aspects such as marine spatial planning, leasing and route to market. This has hindered project development, financing and project realisation and impacted confidence among developers, financiers, and the supply chain. Therefore, there is an urgent need to design and implement competitive selection processes to provide certainty and instil confidence in the industry.

The aim of this study is to define a future competitive selection process that is tailored to Vietnam's needs, aligned with international frameworks and ensure a balanced allocation of risks and responsibilities between the public and private sectors.

## 1.2 Vietnam's existing legal framework for OFW and competitive selection

To support the report's recommendations existing legal and regulatory frameworks have been reviewed to map the current project development process. This includes an in-depth analysis of the various options for competitive selection in Vietnam, and an assessment of related gaps and uncertainties. Previous studies were also reviewed for this purpose.[3]

OFW projects can be developed in Vietnam as an Independent Power Producer (IPP) project or as a Public Private Partnership (PPP). However, both investment frameworks are impacted by regulatory bottlenecks and challenges. With a focus on the IPP framework, this report identifies key issues impacting the approval and award of OFW projects, including planning, the need for clarity regarding the function and authority of different government entities, and capacity building at provincial and national levels.

Legal and regulatory challenges, as well as capacity constraints, are particularly pronounced in the competitive tendering of power projects in Vietnam. Recent legislation regulating the bidding process for power projects addresses certain key issues [4] [5], however, OFW projects are excluded from its scope and it will be necessary to monitor the deployment of new procedures to see if capacity constraints are resolved going forward.[6]

The power purchase agreement (PPA) is also not currently awarded on a competitive basis. Negotiation and award of the PPA with Vietnam Electricity (EVN) take place following the project and the investor approvals and are separate from the bidding processes that apply for this purpose.

[1] OFW Technical Potential in Vietnam, January 2021. The World Bank Group.
[2] Directive 05/CT-TTg on ensuring the supply of electricity, coal, and gas for electricity production in the coming period of the Prime Minister dated 14 February 2024 (Directive 05).
[3] Studies reviewed include:
(i) GWEC. Vietnam's future transition to OFW auctions – international best practices and lessons learned. Global Wind Energy Council, Brussels, 2021.
(ii) GWEC. Route to market for OFW development in Vietnam – GWEC's statement on implementing Vietnam's PDP 8 target and Net Zero Commitment. Global Wind Energy Council, Brussels, 2022.
(iii) The World Bank Group. OFW Roadmap For Vietnam. The World Bank Group, Washington, DC, 2021.
(iv) IET - International Energy Transition GmbH; eclareon GmbH. MOIT/GIZ Energy Support Programme. Assessing the applicability of Wind-Energy auctions for Vietnam. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, 2018.
(v) COWI. Study on criteria and regulatory setup for an efficient and sustainable OFW market in Vietnam. Danish Energy Agency, Royal Danish Embassy in Vietnam, Electricity & Renewable Energy Authority, 2021.
(vi) The World Bank Group. Vietnam: Achieving 12 GW of Solar PV Deployment by 2030 an Action Plan. The World Bank Group, Washington, DC, 2018.
[4] Decree 115/2024/ND-CP dated 16 September 2024 on detailing provisions and implementation measures of the Bidding Law regarding the selection of investors for land-attached investment projects (Decree 115).
[5] Law on Investment No. 61/2020/QH14 dated 17 June 2020 (Investment Law), and the Law on Bidding No. 22/2023/QH15 dated 23 June 2023 (Bidding Law).
[6] Articles 70.1(d), 70.4(a) and 70.4(dd), Decree 115/2024/ND-CP dated 16 September 2024 on detailing provisions and implementation measures of the Bidding Law regarding the selection of investors for land-attached investment projects (Decree 115).

An examination of the constraints under Vietnam's current framework supports the conclusion that a standardised competitive selection approach would provide confidence to investors, establish a level playing field attracting competitive domestic and international investment and accelerate deployment. In turn, the award of PPA tariffs through a competitive selection process could minimise public support costs.

## 1.3 International competitive selection processes

In order to inform proposals for the development of competitive selection models in Vietnam, relevant one-stage and two-stage competition models adopted by emerging and mature OFW markets globally are assessed. The review focuses on the UK, widely regarded as the blueprint for OFW development worldwide, and other markets in the APAC region with varying levels of maturity and different competitive selection models, including Taiwan, Japan and Australia.

The review recommends that a two-stage competitive selection model should be pursued in Vietnam with separate competitive selections for exclusive survey rights, the first stage, and the offtake, the second stage.

Relevant lessons from these markets are extracted to define the proposed model. These show the need for a regular and long-term timeline of competitive selections, objective and transparent eligibility and award criteria, providing certainty in the route to market, avoiding zero bids and electricity price exposure, and limiting local content requirements at the inception of a market.

## 1.4 Recommendations for Vietnam's competitive selection process

The competitive selection process outlined aims to achieve the following fundamental objectives: (i) ensuring the delivery of the projects awarded, (ii) arranging a straightforward competitive selection process, (iii) ensuring cost-effective electricity tariffs awarded to OFW projects, (iv) establishing objective, transparent, reasonable and non-discriminatory eligibility and award criteria, and (v) giving confidence to OFW investors on future opportunities to secure an offtake for the projects.

**The key points for Stage 1, the award of exclusive survey rights, are listed below.**

- OFW investors freely define site boundaries within larger areas identified in Vietnam's national marine spatial plan (NMSP).
- Large capacity awarded over multiple projects in the first rounds to create a diverse and competitive pipeline and to cater for attrition.
- Exclusive survey rights awarded for a period of at least 10 years.
- Award criteria which exclude price criteria and focus on the understanding of the context, project feasibility, risk identification and the capability and experience to develop and build the projects.
- Adoption of capped and balanced bid and performance bonds as enforcement measures of bid commitments.

**The key points for Stage 2, the award of a PPA with EVN, are listed below.**

- Price-only competitive selection, pay-as-bid, each investor bidding their own site.
- 20-year PPA with EVN, without any changes post award. Total or partial indexation to inflation and foreign exchange are recommended if denominated and paid in VND to enhance bankability.
- Price ceiling publicly released ahead of the process.
- Introduction of capped and balanced bid and performance bonds to ensure the timely realisation of the projects.

## 1.5 Pathways to reform in Vietnam

Finally, the two-stage model is considered within a Vietnamese context.

Implementation of the recommended two-stage model (Proposed Model) would require legislative and regulatory changes to address the divergences between the Proposed Model and the situation both under law and in practice in Vietnam.

The key practical, legal and regulatory challenges that would need to be addressed in order to introduce the Proposed Model are identified.

For Stage 1 reform, these include, among others, a review of the process and scope of site survey awards, and how the investment policy decision (IPD) application and approval process for OFW projects fits within the context of a new two-stage competitive process.

For Stage 2, it would be necessary to address the key issue of the PPA award and the price under the PPA not currently being determined pursuant to a competitive process. The PPA negotiation process in Vietnam for large scale power projects commonly takes a significant amount of time and is separate from existing competitive selection processes. Bankability issues are also a material hurdle under the current framework for OFW in the country.

In the absence of the legal and regulatory reform to implement the Proposed Model, the options for competitive selection for OFW projects within the current legal framework are also assessed as alternative options. However, practical issues in Vietnam present challenges for the PPA to be awarded concurrently with a bid process for this purpose. As a result, the PPA award remains a separate and non-competitive award in this scenario.

The analysis and recommendations in this report have been socialised within the industry and through the feedback obtained during an in-person workshop held in Hanoi on 18 June 2024, as well as through follow-up consultations with individual companies. Participants in the workshop included senior government officials and key industry representatives.

Transitional mechanisms preceding the implementation of a longer-term competitive investor selection regime are excluded from the assessment.


# MARKET OVERVIEW AND THE NEED FOR A COMPETITIVE INVESTOR SELECTION PROCESS

# Market overview and the need for a competitive investor selection process

## 2.1 Summary of the status of OFW in Vietnam

In pursuit of the parallel objectives of economic growth, energy security and sustainability, Vietnam has been actively working to expand energy capacity, prioritising renewable sources where feasible. Within this context this section discusses the status, as well as the challenges and opportunities that Vietnam's OFW sector faces.

### 2.1.1 Installed capacity

The installed capacity for wind power projects in Vietnam has seen a significant increase in recent years, reaching 4.8 GW at the end of 2023, with 3.9 GW of onshore wind projects and 874 megawatt (MW) of nearshore projects (Global Wind Energy Council (GWEC), 2024).

These projects are primarily situated in the central coastal provinces of Quang Binh and Quang Tri, as well as the southern coastal provinces of Ninh Thuan and Binh Thuan. Additionally, numerous wind power plants are located in the highland provinces of Gia Lai, Kon Tum, and a significant number are spread across the Mekong Delta area. A large proportion of projects in the Mekong Delta area are installed in nearshore conditions.

Whilst there is a current base of onshore and nearshore wind projects, no offshore projects have been constructed to date.

### 2.1.2 Power Development Plans

#### 2.1.2.1 PDP8

Given that energy transition is one of Vietnam's strategic priorities, Vietnam's PDP8 [7] places a focus on clean energy development. PDP8 aims to achieve 31 to 39 percent of renewable energy generation capacity by 2030 and 68 to 72 percent by 2050. OFW is planned to reach approximately 6 GW by 2030 and between 70 to 91.5 GW by 2050, with the potential for further growth in case of technological development, competitive costs, and swift transmission build out.

[7] PDP8 is issued under Decision 500/QD-TTg dated 15 May 2024 (Decision 500).

Figure 2-1 below presents the installed capacity of renewable energy sources in 2021, along with the planned installed capacity for 2030 and 2050. This highlights the promising growth of renewable energy in Vietnam in the upcoming years, particularly in OFW projects.

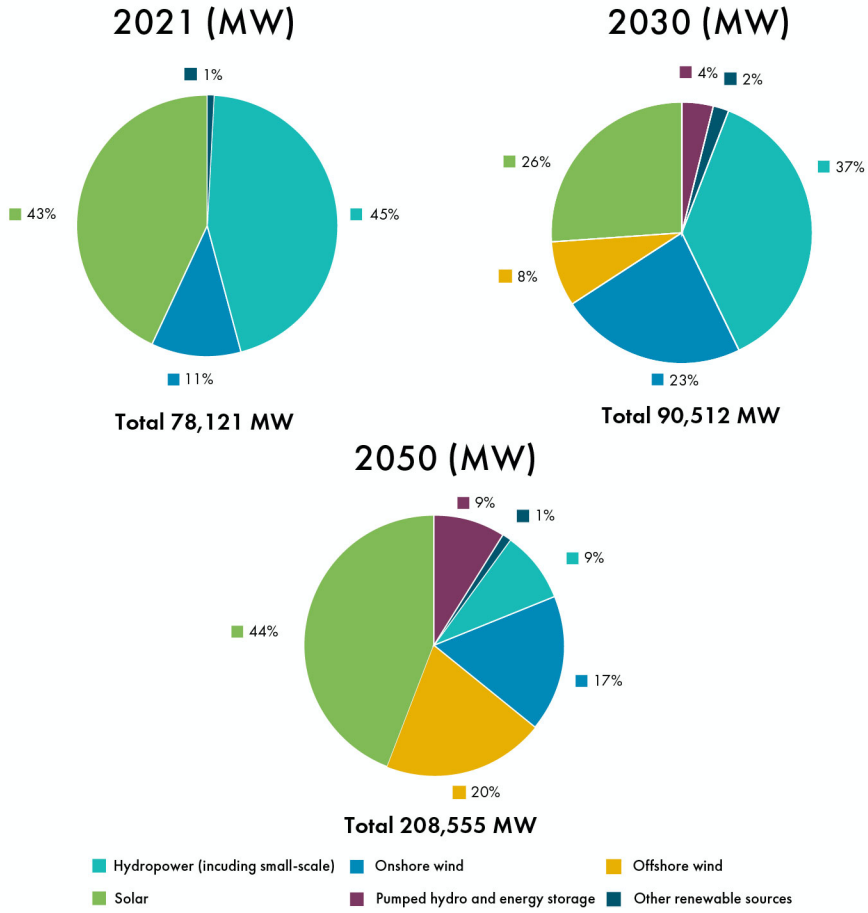



**Figure 2-1. Installed capacity of renewable energy sources in 2021 (EVN)**

### 2.1.2.2 PDP8 Implementation Plan

The Implementation Plan for PDP8 (PDP8 Implementation Plan) was approved under Decision 262/QD-TTg of the Prime Minister dated 1 April 2024 (Decision 262).

Key contents of the PDP8 Implementation Plan include:
**Approval and details of:**

- Priority power source and grid projects, including regional interconnected grid projects.
- Renewable energy projects for development to 2025 (small-scale hydropower, onshore wind power projects, biomass, waste-to-energy, etc.).
- Prioritised schemes and projects on policy and technology capacity enhancement with respect to the power sector.

**Policy and planning to:**

- Allocate resources and capital in power sector investment.
- Facilitate the energy transition to clean and renewable energy sources.
- Coordinate state agencies in the implementation of PDP8.
- Assign tasks and responsibilities for implementation of PDP8 under Decision 500.

The 6 GW of OFW capacity planned for development by 2030 is allocated on a regional basis, as shown in Table 2-1. The PDP8 Implementation Plan does not identify specific OFW projects.

**Table 2-1. OFW capacity by 2030 as per PDP8**

| Region | Total installed OFW capacity (MW) |
|---|---|
| Northern | 2,500 |
| North Central Coast | 0 |
| Central | 500 |
| South Central Coast | 2,000 |
| Central Highlands | 0 |
| Southern | 1,000 |
| **Total capacity** | **6,000** |

Amendments and supplements to the PDP8 Implementation Plan have been submitted to the Prime Minister and remain subject to approval.[8]

Following approval of the PDP8 Implementation Plan a further review of PDP8 is currently being undertaken by the Ministry of Industry and Trade (MOIT). Key power projects approved under the plan have been impacted by delays, whilst supply and demand forecasts are being reevaluated. Within this context, the prospect of developing 6GW of OFW capacity by 2030 has been assessed as challenging and the target may be subject to revision going forward.[9]

### 2.1.2.3 Key power projects

Priority power projects for development in the period to 2030 are detailed under PDP8, and in the PDP8 Implementation Plan. OFW projects are not included in the priority project list under PDP8 or the PDP8 Implementation Plan.

A list of key energy projects and programmes have also been identified under Decision 270/QD-TTg of the Prime Minister dated 2 April 2024 (Decision 270). Within the power sector, Decision 270 identifies key power source (thermal, hydro, pumped storage hydro) and grid projects.

Development and implementation of an OFW pilot programme (OFW Pilot Scheme) is a key project under Decision 270.[10] Projects under Decision 270 will be overseen by the State Steering Committee for key energy projects established under Decision 1447/QD-TTg dated 22 November 2023 of the Prime Minister.

The MOIT plans to submit the OFW Pilot Scheme in November 2024.[11]

[8] The latest proposal is delivered in Official Letter 5346/BCT-DL dated 25 July 2024.
[9] https://baodautu.vn/bo-cong-thuong-ly-giai-viec-dieu-chinh-quy-hoach-dien-viii-d224180.html
[10] Section 7, Appendix, Decision 270.
[11] Decision 2350/QD-BCT dated 30 August 2024 on the issuance of the plan for the implementation of Decision 500 dated 15 May 2023 on the PDP8 (Decision 2350).

### 2.1.2.4 Pilot OFW projects

The MOIT has been assigned responsibility for the development of the OFW Pilot Scheme. This includes an assessment of obstacles under the current legal framework and an identification of regulatory reform required.[12]

The MOIT has provided an assessment of OFW potential and the legal and regulatory reform required.

Following receipt of recommendations from the MOIT, instructions with respect to the OFW Pilot Scheme have been issued under Notice 356/TB-VPCP dated 30 July 2024 (Notice 356).[13]

Pursuant to Notice 356 the MOIT, in conjunction with EVN and PVN [14], are required to devise the OFW Pilot Scheme with the following requirements:[15]

- Identification of specific pilot projects.
- Detailing the OFW development process and relevant procedures including:
  - Determining if investor selection is (i) subject to direct appointment or bidding; and (ii) the relevant authority responsible: e.g. Government, Prime Minister or another authority.
  - Detailing requirements with respect to the proportion of foreign ownership and the transfer of interests in projects.
- Completing a review of existing legal regulations (including, among others, the Law on Electricity No. 28/2004/QH11 dated 3 December 2004 as PPP Law, Bidding Law, Law on Construction No. 50/2014/QH13 dated 18 June 2014 as amended from time to time (Construction Law), No. 27/2018/QH143 dated 14 June 2018 (Surveying and Mapping Law), Vietnam Maritime Code No. No. 95/2015/QH13 dated 25 November 2011 (Vietnam Maritime Law), etc.) and proposing any necessary reform required.
- Assessment of issues concerning national security and defence.
- Researching the production of OFW as a source of domestic power supply, for export and as part of an ecosystem for renewable energy hubs.

On 1 October 2024 the Government assigned the MOIT to report on the necessary procedures to assign PVN responsibility to conduct a survey and pilot scheme for the implementation of OFW.

### 2.1.2.5 OFW projects with a survey license

Only three OFW projects have been granted survey licenses to date, including:

i. Thang Long OFW Power Project in Binh Thuan province, developed by Enterprize Energy Group, with a capacity of 3,400 MW.

ii. The OFW project of Vietnam Oil and Gas Technical Services Corporation (PTSC) and Sembcorp in Ba-Ria Vung Tau province with the purpose of exporting 1.2 GW to Singapore pursuant to a Singapore Energy Market Authority tender.

iii. Ben Tre Wind Farm, co-developed by Mainstream and Advanced Information Technologies Corporation (AIT), with a capacity of 500 MW.[16]

### 2.1.2.6 Grid planning

The power grid in Vietnam relies on a 500 kV transmission line stretching from the South to the North and is currently operating on two circuits. This backbone is supported by 220 kV and 110 kV HVAC infrastructure.

However, Vietnam's transmission infrastructure is struggling to keep up with the growing demand for electricity across regions, leading to shortages and load shedding. To address this issue, plans are underway to upgrade the power infrastructure at all voltage levels. This includes constructing dedicated substations for connecting OFW power at 500 kV and 220 kV, as well as installing a third circuit for the 500 kV backbone.

Private sector investment into Vietnam's grid has been encouraged since 2004 but has been limited due to constraints under the legal framework. Following Law No. 03/2022/QH15, private investors are permitted to develop and operate grid assets, however, the implementing investment framework requires clarification.

The PDP8 Implementation Plan identifies 169 grid transmission assets as being open to private sector investment. The applicable investment framework and timetable for such projects is yet to be determined.

[12] Notice 42/TB-VPCP dated 5 February 2024 of the Office of the Government on Deputy Prime Minister Tran Hong Ha's conclusions following the meeting regarding removing obstacles for gas and OFW power projects under PDP8 (Notice 42/TB-VPCP).
[13] Notice 356/TB-VPCP dated 30 July 2024 of the Office of the Government on the conclusion of Deputy Prime Minister Tran Hong Ha on the development and promulgation of the Decree regulating mechanisms and policies to encourage the development of self-produced and self-consumed rooftop solar power and the OFW Pilot Scheme.
[14] State owned enterprises identified as potential investors in the OFW Pilot Scheme.
[15] Other requirements are specified under Notice 42/TB-VPCP
[16] https://baodauthau.vn/giao-dau-moi-phat-trien-dien-gio-ngoai-khoi-post166186.html

### 2.1.3 Just Energy Transition Partnership (JETP)

Concurrently with PDP8, the International Partners Group (IPG) and the Glasgow Financial Alliance for Net Zero (GFANZ), have successfully approved financial support for Vietnam's energy transition through the JETP.

The purpose of JETP financial support is to decarbonise energy systems in emerging countries that are heavily dependent on coal-based energy and threatened by climate change. This collaborative effort for Vietnam aims to mobilise an initial sum of USD 15.5 billion from both public and private sectors between 2023 to 2027.

The support of the JETP has accelerated the main development plans for renewable energy targets in Vietnam. Under the latest JETP implementation plan presented by the government at COP28, the share of renewable energy in total installed capacity was increased to 47 percent by 2030, as compared to 40 percent in PDP8.

### 2.1.4 Recent policy proposals

#### 2.1.4.1 Draft Electricity Law

The fifth draft of the new Electricity Law was published by the MOIT on 27 August 2024 **(Draft Electricity Law).** The Draft Electricity Law contains proposals to address four main outstanding issues with respect to OFW: (i) the definition of an OFW power plant; (ii) the authority to grant the IPD for OFW power projects; (iii) investor selection forms applicable to power source projects; and (iv) policies for OFW potential survey and development.

In the current draft, it is proposed that the Government determines a number of criteria applicable to the bidding for power projects, including OFW, these include pricing principles, minimum output commitments, investment guarantees, foreign currency conversion, commitments on technology transfer, using local contractors and maximising the localisation rate.[17] [18] The bidding process and procedures for investor selection shall follow the Bidding Law.

The Draft Electricity Law is currently subject to review and approval. This report references the version of the Draft Electricity Law dated 27 August 2024. Additional and amended versions of the Draft Electricity Law are expected before it is approved with the consequence that provisions impacting the OFW sector may change going forward.

#### 2.1.4.2 Bidding process under the Bidding Law for power projects

The recently issued Decree 115 clarifies Decree 137/2013/ND-CP guiding the Electricity Law (as amended) by supplementing key regulations on the bidding process for power projects (excluding certain technologies) and pre-FS cost mechanisms.

Accordingly, the investor selection process for relevant power projects is subject to the bidding process under the Bidding Law.[19] Power projects (including or excluding synchronous grids) that involve non-state budget capital are subject to the bidding process detailed in relevant legislation when two or more investors express an interest and register to implement the project.[20]

Certain technologies and special regimes, including OFW, are not subject to this bidding scheme. [21]

Land attached to power projects governed by Decree 115 must be (i) subject to land acquisition or be state managed property that can be acquired, and (ii) eligible for bidding.[22]

With respect to the Request for Proposal (RFP), a draft PPA, as agreed between the investor/seller and the power buyer, is required in addition to the inclusion of key documents such as the pre-FS and the FS (if any).[23] For power projects subject to the bidding procedures under Decree 115, the electricity price constitutes the main evaluation criterion and is comprised of (i) the ceiling price of the RFP, which must fall within the relevant tariff range issued by the MOIT; and (ii) the pricing principles agreed upon with the power buyer as stipulated in the RFP.[24]

Decree 115 will be subject to supplementary legislation going forward. This report is limited to an assessment with respect to Decree 115 dated 16 September 2024. Decree 115 excludes OFW from the scope of power projects to which it applies.

[17] Article 28.3, Draft Electricity Law.
[18] OFW projects that are not classified as PPP projects, public investment projects, projects exempt from land use rights auctions, or emergency power projects shall have investors selected through a bidding process.
[19] Article 70.1, Decree 115.
[20] Applicable power projects includes renewable energy projects; natural gas power sources, and LNG power sources, but excludes expanded hydropower, OFW power, and self-consumption power projects. (Article 70.1, Decree 115)
[21] Article 70.1, Decree 115
[22] Article 4.3, Decree 115.
[23] Article 70.2, Decree 115.
[24] Article 49.2, Decree 115.

### 2.1.4.3 OFW power pricing

Rules for determining renewable energy power project price ranges have been adopted under Circular 19/2023/TT-BCT dated 1 November 2023, effective from 19 December 2023 (Circular 19).[25] Following this Circular, EVN will manage the development of annual renewable energy power price ranges, which are subject to Electricity Regulatory Authority of Vietnam (ERAV)'s appraisal and the MOIT's approval. The price calculation will be based on data from a standard OFW plant.

It is expected that the MOIT will issue a supplementary Decision which provides solar and wind tariff ranges, including OFW. However, pending this Decision, OFW tariffs are not currently available.

Revised tariffs may be lower than the Feed-in Tariff (FIT) if the pricing trend of the transitional tariff regime continues. The transitional tariff for OFW power projects is capped at VND 1,815.95 (~US cent 7.5) per kWh, whilst the OFW tariff under Decision 39/2018/QD-TTg is US cent 9.8 per kWh. In addition, the current average retail electricity price of VND 2,006.79 (~US cent 8.3) per kWh remains lower than EVN's 2023 average cost of production (VND 2,098 per kWh, ~ US cent 8.5 per kWh), creating an additional pressure on pricing.

Following Directive 05, new Decree(s) on mechanisms for the purchase of gas and OFW power are expected to be submitted within 2024. The MOIT in collaboration with PVN and EVN are responsible for this.

The price range for wind power project is due to be submitted in September 2024 and will be issued under an MOIT's Decision. EVN has prime responsibility for devising this.[26]

### 2.1.4.4 Electricity wholesale market (VWEM) operation rules

On 12 March 2024, the MOIT published a Draft Circular on the operation rules for VWEM (Draft VWEM Circular) for public consultation. Under this Draft, grid-connected power plants with an installed capacity of over 30 MW, are required to directly participate in the VWEM, except certain special power plants and renewable energy power plants.

Non-hydro renewable energy power plants will participate indirectly or directly in the VWEM and on a voluntary basis, subject to having an installed capacity larger than 10 MW and required infrastructure.

### 2.1.4.5 Direct power purchase agreements (DPPA) mechanism

On 3 July 2024, the Government issued Decree 80/2024/ND-CP approving the introduction of a DPPA mechanism in Vietnam. This covers:

i. A physical DPPA via private transmission lines; and

ii. A virtual DPPA via the national grid which covers three contractual agreements including:

   a. PPA between EVN and a renewable energy generator, where EVN is the electricity buyer, and the renewable energy generator is the electricity seller.

   b. PPA between a large-scale customer or an authorised electricity retailer at an industrial park, an economic zone, an export processing zone, a high-tech park, a centralized information technology park, a high-tech agricultural park or a similar facility (Authorised Electricity Retailer) and a Power Corporation under EVN (PC), under which the PC sells electricity to the large-scale customer or the Authorised Electricity Retailer.

   c. Contract for Difference (CfD) or virtual PPA between a renewable energy generator and a large-scale customer/Authorised Electricity Retailer, in which the renewable energy generator is the electricity seller, and the large-scale customer/Authorised Electricity Retailer is the electricity buy

[25] Circular 19/2023/TT-BCT dated 1 November 2023 on the rules for developing power generation tariff ranges for solar and wind power plants.
[26] Decision 2350.

### 2.1.4.6 Port infrastructure and supply chain

Vietnam possesses robust port infrastructure. However, to position itself as an assembly hub for large-scale OFW projects, upgrades are imperative in most ports particularly in quayside water depth, ground bearing capacities, and storage areas. This would help the existing supply chain, which is successfully exporting components to other countries in the region and facilitate expansion to support future OFW projects in Vietnam.

EVN and PVN, in collaboration with other relevant agencies, are required to prepare a scheme for the OFW industrial and service hub by 2025.[27]

In developing the OFW Pilot Scheme, proposals have been submitted recommending a 70 percent localisation rate. If this recommendation was implemented at the inception of the OFW sector in Vietnam, this would challenge the financing and construction of projects and increase costs, given the current capacity of local suppliers. It is advised that local content is encouraged without stipulating minimum requirements as the experience in Taiwan suggests, see Section 3.2.2.

### 2.1.4.7 OFW site survey

Site survey activity and seabed leasing in Vietnam are currently distinct processes and subject to separate approvals (Decree 11/2021/ND-CP dated 10 February 2021 (Decree 11)).[28]

The Ministry of Natural Resources and Environment (MONRE) submitted the third Draft of a new Decree to amend Decree 40/2016/ND-CP and Decree 11 (Draft Decree amending Decree 11) dated 26 September 2022. This outlines the process for obtaining site survey permits and provides supporting definitions to determine the authority to grant site survey permits and sea area allocation decisions. The Draft Decree amending Decree 11 remains subject to approval.

[27] Decision 2350.
[28] Article 9.4, Decree 11.
[29] A definition of the South Western sea region is not included in the NMSP.
[30] Article 4.2(d), NMSP.

### 2.1.4.8 National marine spatial planning

The task of formulating the NMSP was approved on 24 July 2020 under Resolution 22/NQ-CP of the Government. MONRE is assigned primary responsibility for this legislation.

The NMSP was approved on 28 June 2024 under Resolution 139/2024/QH15 by the National Assembly.

OFW development is to be encouraged in 28 areas in the South Western sea region,[29] in addition to other potential sea areas in other regions.[30] Investigation, assessment, effective and sustainable exploitation of marine renewable energy sources is identified as a nationally important project and will be implemented throughout the entire planning period from 2021 to 2050.

A plan for implementation of the NMSP and issuance of relevant support materials (e.g. data, maps, diagrams) will be completed in parallel (NMSP Implementation Plan).

## 2.2 Overview of the current legal and regulatory frameworks for OFW project development in Vietnam

OFW is at a nascent stage in Vietnam and there is not currently a national government strategy or plan for the sector. OFW sites have not yet been identified or zoned by the government within the context of a national plan, as discussed in Section 2.1.

Development is regulated and governed by the legal and regulatory framework that applies to both onshore and OFW. However, OFW projects have been delayed by issues impacting the application and interpretation of this framework.

A definition of an OFW projects is provided under Article 2.7 of Circular 19.

Under Circular 19 an OFW project is defined as a grid-connected wind power plant with wind power turbines built in a sea area beyond 6 nautical miles (nm) from the mainland. However, Circular 19 is a ministerial-level document and it is only applicable in a limited context (i.e. for the generation of solar and wind power tariffs) and not to the OFW sector as a whole.

The Draft Electricity Law proposes a new definition for OFW projects under Article 32. This defines an OFW power plant as a wind power plant at sea with all of the wind turbines built in a sea area which is beyond 6 nm from the lowest sea level edge of the mainland (sea level measured as an average over many years). If approved, the revised Electricity Law will provide a more certain legal foundation than Circular 19.

### 2.2.1 Investment frameworks

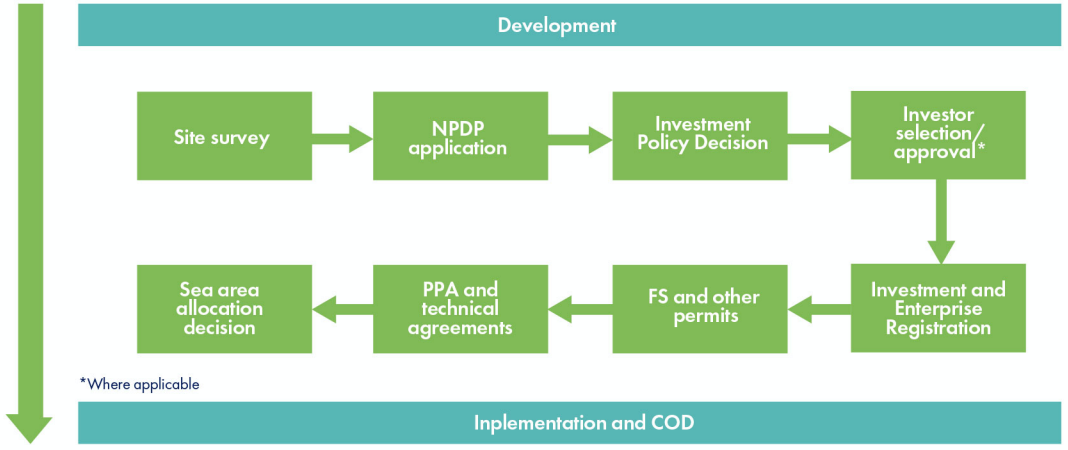
Two investment frameworks are available for OFW development in Vietnam. Projects can be developed as an IPP project, under the Investment Law and related regulation, or as a PPP project, under the PPP Law. There are significant parallels between the two licensing and permitting processes, however, there are also key differences.

To date planned IPP projects remain at an early stage of development and no OFW projects in Vietnam have been developed as a PPP project.

This section of the report analyses the challenges and bottlenecks with respect to development under the two frameworks, in parallel to detailing the existing legal and regulatory frameworks. In assessing pathways to reform, the analysis focuses on the IPP framework whilst noting key divergences and issues under the PPP model.

The process for developing a typical IPP OFW project under the current legal framework is presented in Figure 2-2 below. This is a simplified version of the development and approval process, reflecting key milestones as opposed to all permits, approvals and licences. A comprehensive diagrammatic overview of the process is provided in Appendix A – Vietnam's current OFW development process – IPP framework.

**Figure 2-2. Development process in accordance with the IPP framework for OFW projects**

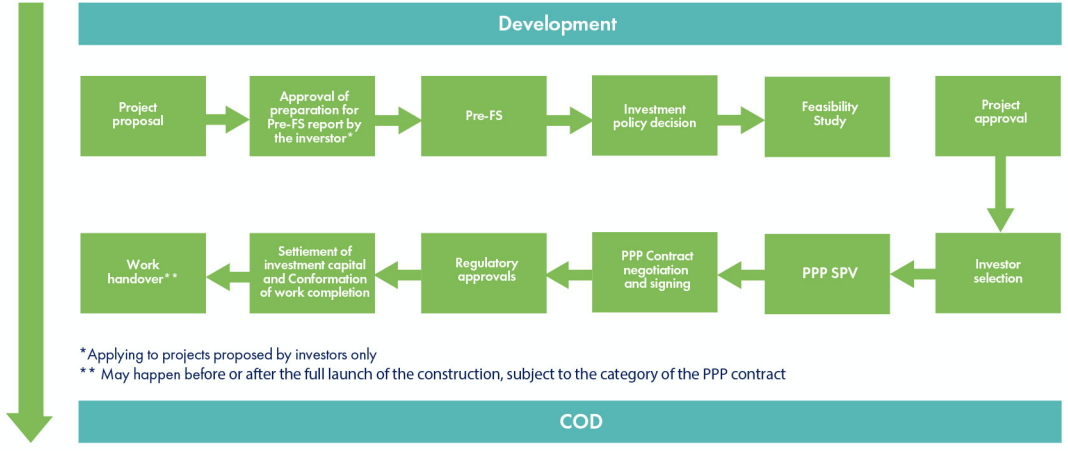



An OFW project can alternatively be developed under the PPP framework if the total investment is VND 500 bn or more. The investor's equity must account for at least 15 percent of the total investment.

There are six basic forms of PPP investment including Build-Operate-Transfer (BOT), Build-Transfer-Operate (BTO), Build-Own-Operate (BOO), Operate-Manage (O&M), Build-Transfer-Lease (BTL), and Build-Lease-Transfer (BLT). Two or more of these basic forms can be combined as a different one. To date, BOT is the only PPP form adopted in the power sector.

The main project development milestones for a PPP project are detailed below.

**Figure 2-3. Main development milestones for a PPP project**




The progression of planned OFW projects has been impacted by challenges with respect to the current project development process in Vietnam. An overview of these challenges is provided in Table 2-2 and the subsequent analysis.

**Table 2-2. Outstanding issues with respect to the OFW development process in Vietnam**

| | Stakeholders | Key challenges |
|---|---|---|
| **Site survey permit** | **Authority to grant site survey permits:**<br>• Prime Minister: for projects approved by the National Assembly or the Government.<br>• MONRE: for projects (i) approved by the Prime Minister, (ii) located in an inter-regional sea area, (iii) located outside the 6 nm sea area, unless the projects are subject to the Prime Minister's authority, and (iii) projects executed by a foreign-based investor.<br>• Provincial Peoples Committee (PPC): for projects (i) located within the 6 nm sea area, (ii) located on islands, except those subject to the Prime Minister's or the MONRE's authority. PPC will be consulted on all applications, irrespective of the approving authority.<br>**Possible authorities to be consulted:** MOD, Ministry of Public Security (MPS), Ministry of Foreign Affairs (MOFA), other relevant agencies. | • Detailed guidelines on the site survey application process and technical requirements are not available.<br>• The issue of overlapping sites has not been addressed.<br>• Large sea areas designated for OFW development have been outlined but a map of specific development areas has not yet been completed.<br>• Criteria for determining the optimal sea area for the purpose of sea survey activity are not in place.<br>• Standards for sub-sea surveys and related activities have not been issued.<br>• Government's role in identifying potential sites needs to be defined.<br>• Mechanisms for determining the ownership and confidentiality of survey data are required.<br>• There is not currently a viable or attractive mechanism for encouraging investors to support the State in undertaking the survey, and State authorities have not been allocated budget to do so on a standalone basis. |
| **National power planning and approval** | **Authority to approve the inclusion of a power project into the National Power Development Plan (NPDP):** Prime Minister.<br>**Authority to collect relevant data and develop project lists:** MOIT.<br>**Authorities to provide input for NPDP development:** PPCs. | • PDP8 and the PDP8 Implementation Plan have not named specific OFW sites or projects to be developed.<br>• Location of OFW development areas has not been determined in other planning documents. This is a key uncertainty for OFW projects. |
| **IPD application** | **Authority to grant IPD:** PPC/Prime Minister.<br>**Authority to organise the appraisal of IPD application:** Provincial Department of Planning and Investment (DPI)/ Ministry of Planning and Investment (MPI). | • Vietnamese authorities, including the MOIT, have queried the competent authority for approving OFW projects under the current legal framework.<br>• Market access requirements for foreign investors have not been detailed/determined.<br>• The proposed OFW pilot has not been fully developed and ratified. |

| Issue | Stakeholders | Key challenges |
|---|---|---|
| **Investor selection** | **Authority to organise the investor selection process:**<br>DPI/MPI<br><br>**Authority to approve the investor:**<br>PPC/Prime Minister. | • Both the Investment Law and the Bidding Law are unclear about OFW projects being subject to the selection of the investor by competitive selection, open bid or direct appointment.<br>• To date competitive tendering schemes for large scale power projects have proved to be ineffective and unsuccessful in Vietnam.<br>• No PPP power project has selected an investor through the bidding process under the PPP Law.<br>• Projects selecting investors through the bidding process under the Investment Law are subject to delay compared with the project timeline.<br>• Under the Investment Law and Bidding Law, the State is required to (i) undertake and prepare the pre-FS in order to issue investment policy approvals in respect of a process which is subject to bidding, and (ii) undertake the land clearance to implement the auction. However, State authorities have to date not been allocated sufficient budget and resources to do so.<br>• The technical assessment and analysis required for a pre-FS in respect of processes subject to bidding normally requires the participation of private sector investors. However, mechanisms to support or incentivise investors to support the State in undertaking these activities (e.g. a refund of costs if successful) have not been implemented for OFW. One option which has been proposed is that the investor who has incurred survey costs (Pre-FS costs) is prioritized in the selection process.<br>• Specific requirements for the selection of OFW investors have not been determined.<br>• The authorities responsible for the OFW investor selection process remain subject to review.<br>• The proposed OFW pilot has not been fully developed and ratified.<br>• OFW electricity pricing is not determined at the stage when the investor for the project is selected. |

| Issue | Stakeholders | Key challenges |
|---|---|---|
| **PPA** | **Authority to review PPA applications, negotiate and execute PPA:** EVN's Electric Power Trading Company (EPTC)/PC<br><br>**Authority in charge of appraising PPA draft:** EPTC's and PC's Legal Department and EVN's relevant departments.<br><br>**Authority in charge of approving PPA:** EVN<br><br>**Authority to be consulted (if needed):** MOIT | • OFW pricing is currently uncertain.<br>• The template PPA for wind power projects is not viewed as suitable for application in respect of OFW power projects.<br>• OFW electricity price may be subject to negotiation with EVN, so it may be different from that in the bid and the FS report.<br>• A price-only bidding process does not align with the current legal |
| **Sea area allocation** | **Authority to appraise applications:**<br>• Vietnam Administration of Sea and Islands (VASI): projects subject to MONRE's/ Prime Minister's authority.<br>• Provincial Department of Natural Resources and Environment (DONRE): projects subject to PPC's authority.<br><br>**Authority to decide on sea area allocation:**<br>• Prime Minister: for projects approved by the National Assembly or the Government.<br>• MONRE: for projects (i) approved by the Prime Minister, (ii) located in an inter-regional sea area, (iii) located outside the 6 nm sea area, unless the projects are subject to the Prime Minister's authority, and (iii) projects executed by a foreign-based investor.<br>• PPC: for projects (i) located within the 6 nm sea area, (ii) located on islands, except those subject to the Prime Minister's or the MONRE's authority.<br><br>**Possible authorities to be consulted:**<br>MOD, MPS, MOFA, other relevant agencies. | • The sea area allocation decision is issued following approval of the environmental impact assessment (EIA) report. This creates significant uncertainty for investors with respect to sea area rights and costs for a material part of the development process.<br>• Sea areas designated for OFW development have not been determined. |

## 2.2.2 Site planning

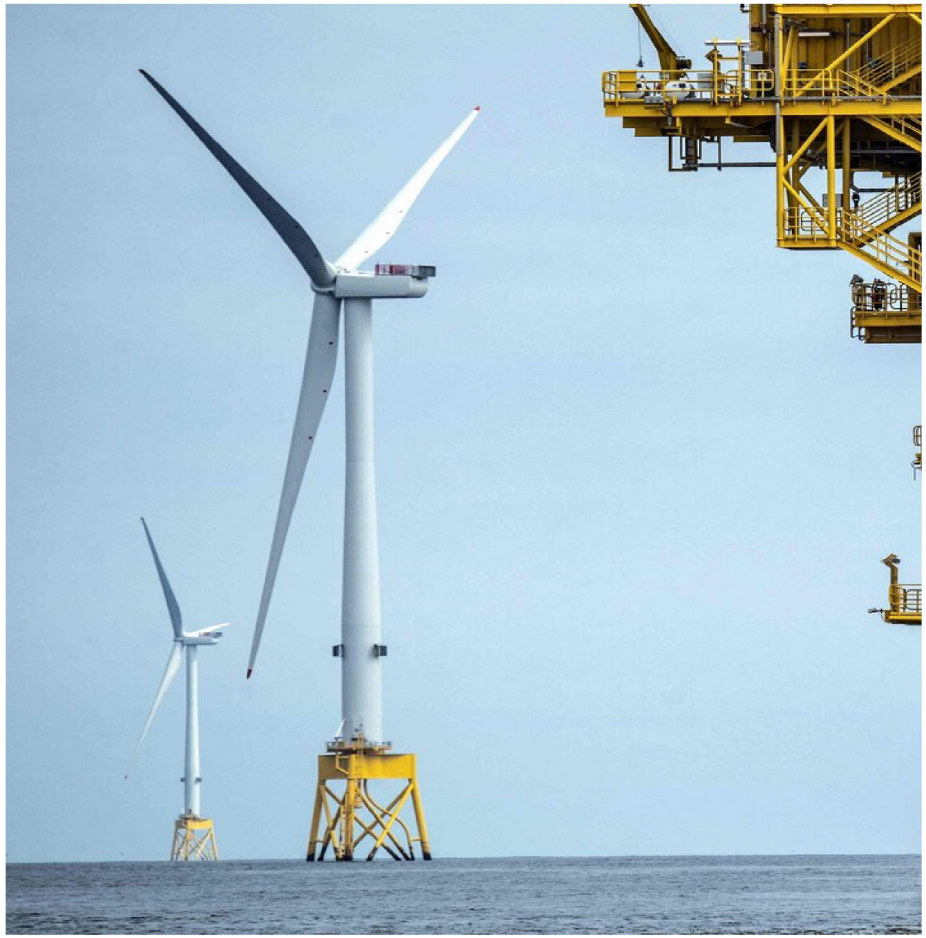
OFW sites have not yet been identified or zoned by the Government within the context of a national plan and the country currently adopts an open-door approach to site selection.

Planning is currently on the basis of national and regional capacity only. In addition to general plans such as the National Master Plan under Resolution 81/2023/QH15, OFW projects are governed by specialised plans including:

**Table 2-3. Additional plans related to the OFW sector**

| Plan | Date | Position |
|---|---|---|
| National Energy Master Plan (Decision 893/QD-TTg) | 26 July 2023 | Provides a general direction for OFW development. |
| National Energy Master Plan Implementation Plan (Decision 338/QD-TTg) | 24 April 2024 | Cross references the PDP8 Implementation Plan power project list. |
| PDP8 (Decision 500/QD-TTg) | 15 May 2023 | Specifies a national OFW capacity target of 6 GW by 2030. OFW power for electricity export and new energy production is permitted without a cap on capacity. |
| PDP8 Implementation Plan (Decision 262) | 1 April 2024 | Specifies a national OFW capacity target of 6 GW by 2030. This is allocated regionally and specific OFW sites or projects are not identified or approved. OFW power is not prioritised in this period. |
| National Energy Development Strategy (Decision 215/QD-TTg) | 1 March 2024 | The Strategy states additional regulation is required to confirm competent authorities with respect to the issuance of IPDs for OFW projects. |
| NMSP (Resolution 139/2024/QH15) | 28 June 2024 | Provides direction for use of marine space, designates sea space for various purposes of use. |

The basis for inclusion of a wind power project in the NPDP is prescribed under Circular 02/2019/TT-BCT (Circular 02) and the Law on Planning. The investor submits their pre-FS documents to the MOIT through the PPC/DPI and engages with the MOIT and relevant agencies to progress the application.[31] The PPC proposes supplementing the project into the NPDP (on an independent basis or in conjunction with other projects). The MOIT gathers the related agencies' opinions and submits these to the Prime Minister for consideration and a final decision.



[31] According to Circular 43, the investor can submit the application dossier to the Electricity and Renewable Energy Authority (EREA) directly. However, Circular 43 is not specific to wind power projects as Circular 02 is. It was issued before Circular 02, hence, Circular 43 should only be referred to with respect to those issues not regulated in Circular 02. This principle is provided under Article 156.3, Law on promulgation of legislative documents.

### 2.2.3 Site survey permit

The OFW site survey process in Vietnam is currently regulated by Decree 11 which regulates activities including the measurement, observation, investigation, survey and assessment of marine resources under Article 9.4 Decree 11. Under the current process an investor submits a survey application to MONRE.

The Prime Minister has authority over projects where the investment policy is approved by the National Assembly or the Government. With the exception of projects under the authority of the Prime Minister, the MONRE is the competent authority for, among others, (i) inter-regional sea areas, sea areas beyond 6 nm from the lowest sea level edge of the mainland and islands (sea level measured as an average over many years); and (ii) sea areas related to foreign investors or foreign-invested economic organizations. With the exception of projects under the authority of the Prime Minister and the MONRE, the relevant PPC can make decisions on sea areas within 6 nm from the lowest sea level edge of the mainland and islands (sea level measured as an average over many years).

Due to ambiguity with respect to the rights of foreign-based investors to conduct site surveys at sea,[32] engagement with a local firm with respect to survey activity has been an option selected by some foreign developers.

It is possible that government coordinated bidding will be introduced with respect to project sites going forward, however, the basis and structure of such a mechanism has not yet been determined. Options available to the Government for this purpose are assessed in Section 3.

The current site survey application and approval process has faced the following challenges:

**Absence of detailed guidelines on the site survey application process and technical requirements:** Decree 11 regulates the use of sea areas for OFW site surveys but lacks detailed guidelines for obtaining permits and granting survey rights. In 2022, the MONRE proposed a Draft Decree to address these issues, which is still awaiting approval.

**Need for regulations to address issues with respect to overlapping sites:** overlap is a significant issue in Vietnam, occurring when developers apply for survey rights in close proximity, seek the same area, or use areas for different purposes. The NSMP has begun to address this by prioritising development in overlapping areas, starting with marine tourism and services, followed by marine economic activities, O&G, aquaculture, and renewable energy.[33][34] The MOIT is also studying criteria for selecting project developers in the event of multiple proposals in respect of the same sea area.[35]

- **Criteria for determining the optimal sea area for the purpose of sea survey activity:** the survey area of an OFW project is currently proposed on an independent basis by investors. However, due to the multiple use of areas proposed for development, criteria need to be developed to determine the optimal use of a sea area proposed for an OFW project survey. This is to preserve and maximise the use of the seabed, manage project development, promote competition and reduce survey costs.[36]

- **Standards for sub-sea surveys and related activities:** to date site survey activity which has been approved and conducted at sea has primarily been related to wind measurements due to the limited number of offshore geological surveys which have been approved. Going forward, OFW projects will require approval of more extensive sub-sea surveys and related activities. Specific standards and technical codes for OFW are scheduled for issuance in the period of 2025 to 2030.[37]

- **Government's role in identifying potential sites:** a developer-led site selection model is currently applied in Vietnam, where developers identify potential sites without support or initial analysis from the Government.[38]

[32] MONRE raised this concern in the Proposal Letter 58/TTr-BTNMT dated 26 September 2022 submitted to the Government.
[33] Article 4.2, NMSP.
[34] The NMSP stipulates that the use of sea areas, where overlap occurs, shall be prioritised in the following order (1) national defense and security needs, (2) preservation and protection of marine ecosystems, and (3) economic development activities (Article 4.2, NMSP).
[35] https://monre.gov.vn/Pages/hoan-thien-co-che-chinh-sach-va-quy-dinh-ky-thuat-de-phat-trien-dien-gio-ngoai-khoi.aspx
[36] Ibid.
[37] Decision 2350.
[38] Shared by Intelligent Energy Systems (IES) during the Consultation Workshop for OFW development hosted by VASI in 2022.

The MOIT has recently been requested by the Deputy Prime Minister to assess the basis for a pilot scheme where the state budget is utilised to assess OFW potential, survey sites, approve guidelines and select investors.[39]

The PDP8 Implementation Plan requires EVN and PVN to survey OFW development conditions and prepare for being potential investors, while the Draft Electricity Law proposes using the state budget for OFW surveys. However, these surveys would be for general OFW potential and not for specific projects. Vietnam is consequently expected to continue with a developer-led site survey policy in the near term.

- **Ownership and confidentiality of survey data:** in Vietnam, developers collect survey data, which must be submitted to competent authorities for FS approval. These authorities can disclose the data but are not required to. Compensation mechanisms for investors if disclosure leads to a loss, require further clarification and supplementary guidance.

- **Site survey within the PPP framework:** to date, detailed guidelines on developing OFW projects in the form of a PPP have not been issued, including those with respect to site surveys required for the proposal of a PPP OFW project. Outstanding issues include whether a site survey is required before or after submitting a project proposal.

[39] https://vnexpress.net/pho-thu-tuong-thi-diem-dung-ngan-sach-khao-sat-du-an-dien-gio-ngoai-khoi-4705212.html

[40] An IPD is a decision of a competent authority to approve objectives, location, scale, progress and term of a project; investor or form of investor selection and special mechanisms and policies (if any) to implement the project (Article 3.1, Investment Law).

[41] An open auction of land use rights is considered successful if there are more than one participant.
An open bid is considered successful if there are more than one investor participating in an expression of interests (EOI) and qualified. (Article 29.3, Decree 31/2021/ND-CP).

## 2.2.4 Investment Policy Decision (IPD)

### 2.2.4.1 IPP framework

Following issuance of NPDP approval, an investment license is applied for in respect of the project. This requires issuance of an IPD.[40] An IPD marks the legal formation of the project. Current regulations do not confirm if an OFW project is subject to an IPD granted by a PPC, the Prime Minister or another authority.

The form of the IPD will depend on the type of investor approval and any applicable investor selection process, which is detailed in Section 2.2.5.1.

The investor may be appointed directly and simultaneously under the IPD. Alternatively, the investor may be subject to a competitive selection process and appointed under a subsequent and separate Decision.

When the investor is appointed directly, the IPD will include both approval of the investor and the investment policy. The document for this purpose is named a Decision on Investment Policy Approval and Investor Approval. Otherwise, the IPD will cover the approval of the investment policy and detail the applicable form of investor selection. The document for this purpose is called an Investment Policy Approval Decision (IPAD).

If the investor is selected following an open auction of land use rights or an open bid,[41] a Decision to approve the auction and confirm the investor selection result will be issued to recognise and name the investor. In case of a land use rights auction, this is called a Land Use Right Auction Result Decision, while in case of an open bid, it is called an Investor Selection Result Approval Decision.

Other than the above cases, the investor will be approved under an Investor Approval Decision, which is separate from the IPAD. Following issuance of the IPD and the relevant decision to approve the investor (where applicable) an investment registration certificate (IRC), in the case of foreign investors, and subsequently the enterprise registration certificate (ERC) are issued. The ERC is analogous to the project company's certificate of incorporation. Together, these form the legal basis and license for the named investor to invest in and develop the project.

The Draft Electricity Law proposes to supplement the Investment Law with a provision that the Prime Minister will have the authority to issue the IPD for OFW projects located within a sea area (i) which is not within a province's administrative boundary; (ii) is under the jurisdiction of the Prime Minister; or (iii) spans more than one province. This position follows the Prime Minister's authority to grant sea area allocation decisions under Decree 11, whilst the relevant PPC will have authority with respect to nearshore projects.[42]

Under the Draft Electricity Law, in the event that an OFW project is classified as urgent, proposed projects could be assigned to specific investors encompassing (i) state-owned enterprises or (ii) subsidiaries entirely owned by state-owned enterprises, approved by the Prime Minister. This does not apply to projects funded by an emergency public investment fund or those with an IDP issued by the National Assembly. In cases under Prime Minister approval, it is possible the IPD process would not apply in certain cases in the future.[43]

The authorities responsible for approving the investment policy with respect to OFW projects are yet to be confirmed. Reviews have consequently recommended that it is necessary to confirm whether an OFW project is (i) a land-attached project; (ii) subject to special mechanisms and policies to be approved by the National Assembly; or (iii) subject to the authority of the Prime Minister according to Article 31.4 of the Investment Law. With respect to project classification, the MOIT has recommended identifying nationally important projects, subject to special mechanisms and policies to be approved by the National Assembly under Article 7.5 of the Public Investment Law" with "With respect to project classification, it has been recommended that nationally important projects are identified, subject to special mechanisms and policies to be approved by the National Assembly under Article 7.5 of the Public Investment Law.

With respect to provincial jurisdiction, as PPCs have authority to allocate sea areas within 6 nm from the lowest sea level edge of the mainland (sea level measured as an average over many years), it has been recommended the scope of management of marine administrative boundaries of PPCs should be clarified as a basis for determining PPC authority.

[42] Articles 31.4, 32.1(d), Investment Law, Article 122.1, Draft Electricity Law.
[43] Article 20.2, Draft Electricity Law.
[44] Section 1 and 2, Chapter II, PPP Law.
[45] Article 27.1(c), PPP Law.
[46] Article 16.4, PPP Law.
[47] Article 12, PPP Law.

### 2.2.4.2 PPP framework

A PPP project can be formed by a competent state agency or an investor.[44] A PPP project proposed by an investor must satisfy the requirements in the Article 26 of PPP Law and the investor can only make a project proposal file upon the approval of the competent agency.[45] Consequently, selection of the PPP investment framework is a matter of policy as opposed to being determined by the investor.

The investment policy of PPP projects is assessed and approved on the basis of a pre-FS report. Therefore, the approval of a pre-FS report equates to the PPP IPD.[46]

The authority to approve a PPP project may belong to the National Assembly, the Prime Minister or the MOIT Minister.[47]

Preparation of an FS report will follow the PPP IPD approval and be subject to appraisal and final approval before investor selection, unless it is a hi-tech project which is not the case for OFW projects, see Section 2.2.5.2.1 for more details.

## 2.2.5 Investor selection

### 2.2.5.1 IPP framework

#### 2.2.5.1.1 Overview

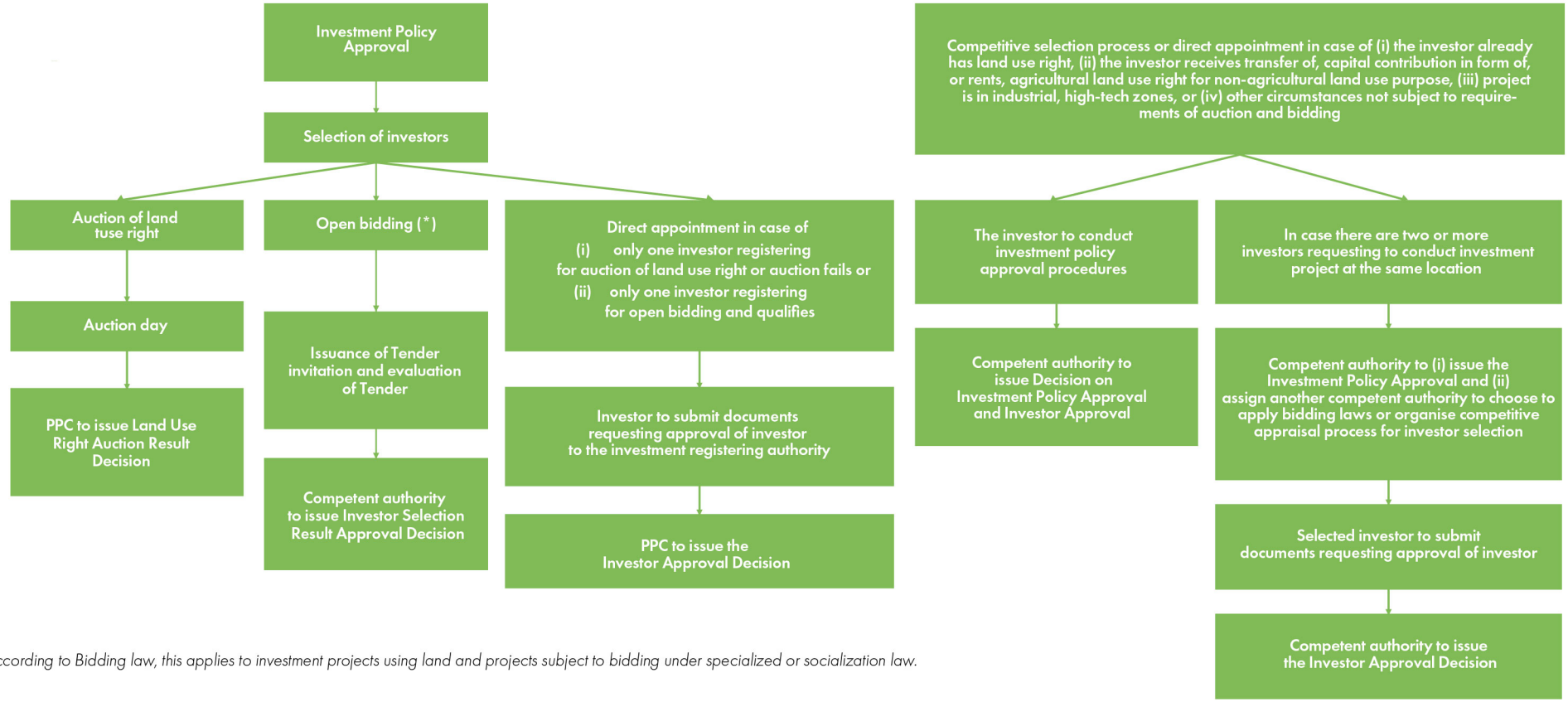
This section details the investor selection process under the IPP framework.

An investor can be approved pursuant to direct appointment or via an investor selection process that takes the form of (i) an open auction of land use rights (a process not applicable to power projects); or (ii) investor bid selection via competitive selection or open bidding.

The different forms of investor selection under the Investment Law and Decree 31/2021/ND-CP, and the general investor selection process under the Bidding Law apply to OFW and are described in Figure 2-4, and Table 2-4. The relevant approval documents and statutory timing are detailed in Figure 2-6.

Details of the bidding process requirements for power projects (excluding OFW power projects and certain technologies) are also provided.

**Figure 2-4. Investor selection process for an IPP project**




*Note:*
*(*) According to Bidding law, this applies to investment projects using land and projects subject to bidding under specialized or socialization law.*

**Table 2-4. Investor selection within IPP projects**

| | Projects subject to bidding | | | Projects subject to competitive selection |
|---|---|---|---|---|
| | **Scenario 1** | **Scenario 2** | **Scenario 3** | **Scenario 4** |
| **Invitation for investment dossier application** | Only one (1) investor/ consortium submitted an application and qualified. | At least two (2) investors/ consortia submitted applications, but only one (1) investor/ consortium qualified. | At least two (2) investors/ consortia submitted and qualified. | At least two (2) investors/consortia submitted valid applications within statutory timing. |
| **In-principle investment approval** | Approval of the project and the investor/ consortium at the same time. | Approval of the project and the investor/ consortium at the same time. | Approval of the project only. | Appraising and approving the project only, on a first come first served basis. |
| **Investor selection process** | N/A | N/A | Open bid. | Competition among investors with valid application files. |
| **Investor selection criteria** | N/A | N/A | Bidding Law. | Article 33.3 of the Investment Law, Bidding Law and the RFP document. |
| **Selection of investor** | Approval of investor. | Approval of investor. | Approval of investor selection result. | Approval of investor. |

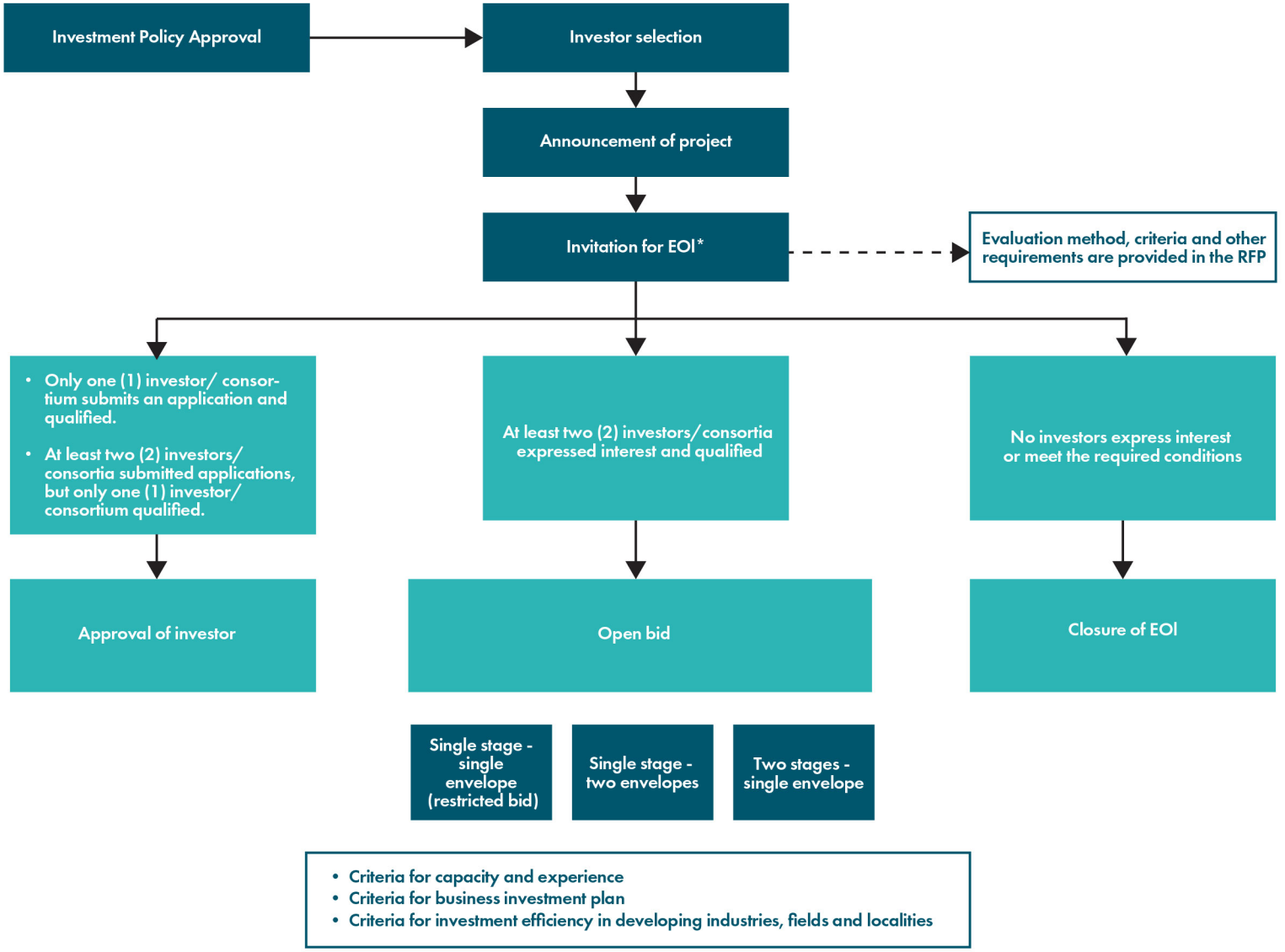
Pursuant to Decree 115, where two or more investors register to implement a power project (with certain exceptions including OFW), each investor must submit an EOI application for assessment. Following this the investor may be selected through (i) an open bid, where an RFP is issued and a tender process commences) or (ii) the approval of an investor.

If no investors submit an EOI or meet the required conditions, a written notice will be issued to formally close the tender process.

Fundamentally, the scenarios in Table 2-4 remain but the investor selection criteria under Decree 115 apply.

The specific bidding process under Decree 115 for applicable power projects is detailed in Figure 2-5 below and in further detail in Appendix B.

Figure 2-5. Bidding process for power projects (excluding OFW) [48]




*Note:*

*(*) Applicable for project with a need for determining the number of interested investors.*

[48] Single stage – two envelope method only applies to projects with valuable architectural work (Article 35.2(a), Bidding Law).

#### 2.2.5.1.2 Process

Table 2-4 shows that investors will be subject to investor bid selection in two scenarios:

**i. Open bid**

Open bidding under the Bidding Law will apply (a) when a project is subject to bidding and more than one qualified investor/consortium joins the bid and (b) for the selection of investors for IPP projects if it is selected by the relevant State authority (e.g. local authority). A Decision to approve the investor selection result will be issued when the winner is identified.

**ii. Competitive selection**

Competitive selection will apply when a project is eligible for direct appointment of the investor but there is more than one valid application, and the second application is submitted within 20 days (projects under the Prime Minister's authority) or 15 days (projects under the PPC's authority) from the receipt of the first application.

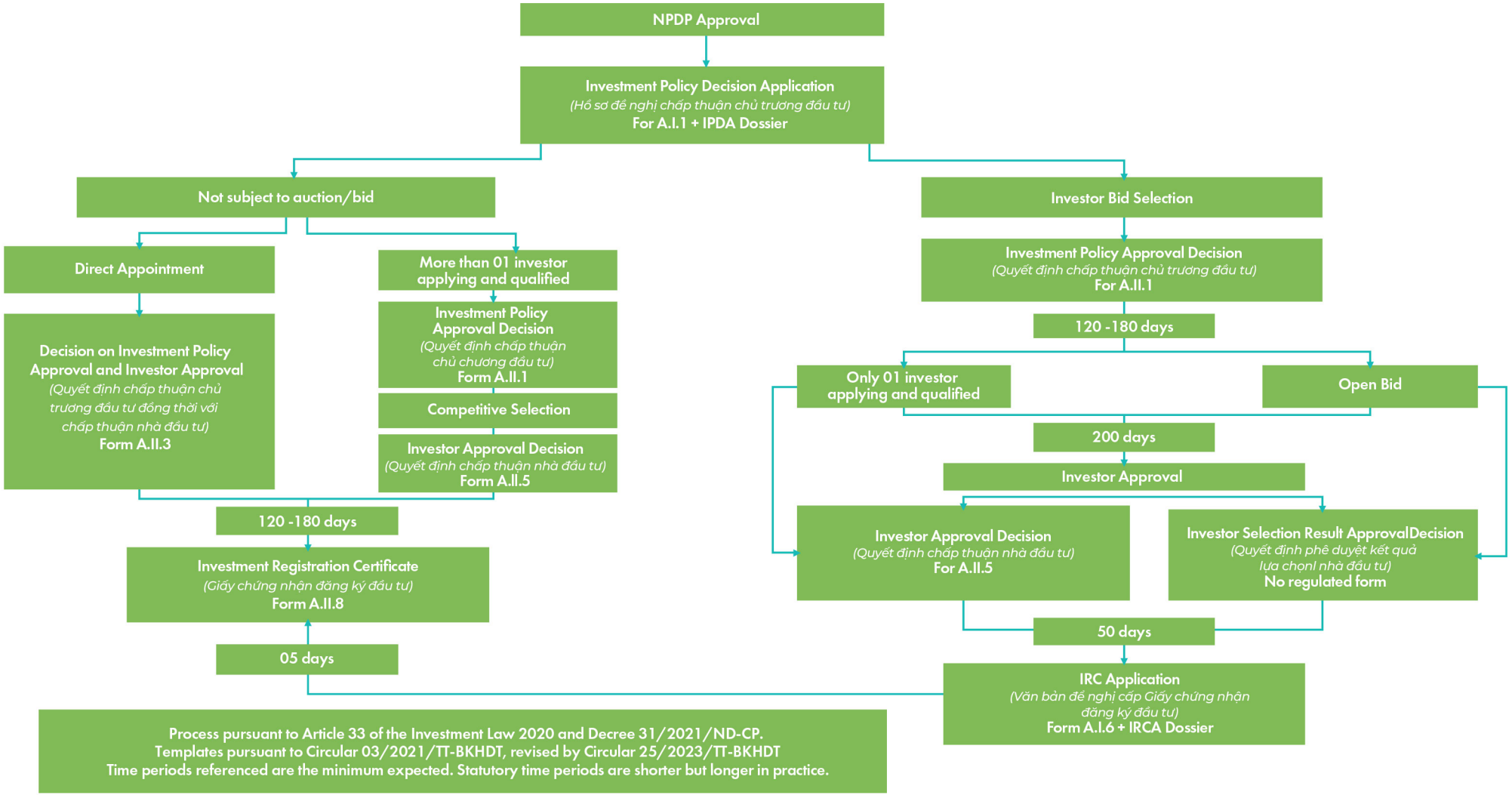
The competitive selection process starts with the appraisal and approval of the project's investment policy on a first-come-first-serve basis. Specifically, the competent authority will assess the first submitted application and grant an IPD to the applicant or move to the second application. When an IPD is issued to a project, the investor selection process for such project will start and IPD applications submitted after the submission of the approved application will not be considered.

The investor selection process will be held amongst investors which have submitted valid applications, including those not considered for an IPD.

Within the context of competitive selection according to Article 29.7 of Decree 31/2021/ND-CP, the issuance of an IPD to a project can be seen as an initial recognition of the investor.

Assessment and selection of the investor shall also be based on criteria and methodology provided under the Bidding Law. The investor is approved pursuant to an Investor Approval Decision.

## Figure 2-6. Investor selection process approvals and decisions



#### 2.2.5.1.3 Investor selection criteria

The applicable investor selection criteria may vary according to the type of project, the circumstances, practical situation and the investors qualifications and experience.

The selection of investors for IPP projects requires compliance with the Bidding Law, whether it is an open bid (Article 29.2(b), Decree 31/2021/ND-CP) or a competitive selection process (Article 29.7(c), Decree 31/2021/ND-CP).

The applicable regulatory criteria are focused on the investor's ability to implement the project. Three categories of criteria assess (i) capacity and experience; (ii) the investment and business plan; and (iii) sectoral, industrial and local development efficiency. Under each group, there is a series of sub-criteria with additional details.

Price criterion is not assessed on a standalone basis, and instead in conjunction with other qualitative and quantitative criteria. Assessment of price is referenced to a relevant price range/ceiling price. In addition, it is related to the investor's general investment and business plan as an input and impact on the project's viability. There is not standard methodology for determining the product/service price.

Whilst the detailed criteria for investor selection for OFW are still unavailable, those for power projects governed by Decree 115 are provided. With respect to this criterion electricity pricing, constitutes 80 to 90 percent of the total evaluation score.

Pursuant to the investor selection process, the investor is required to prepare a proposal consisting of all required items, including proposed product/service price. However, it should be noted that the investor selection process is followed by various subsequent steps including a FS. The consequence of this is that the inputs the investor has relied on to prepare its bidding proposals may be subject to change.

Within the context of power projects, this is particularly relevant with respect to electricity pricing where the final electricity price is determined following negotiation with EVN. Consequently, the electricity price approved under the FS report approval may not be the final price.

Following the issuance of the new Bidding Law in 2023, no power project in Vietnam has been subject to the new bidding scheme. Though there are differences between the old and the new laws, the electricity price has always been subject to subsequent negotiation with EVN and the applicable price range.

**Table 2-5. Evaluation criteria in terms of power projects governed by Decree 115**

| Criteria | | Sub criteria |
|---|---|---|
| Capacity and experience (5 to 10% of total score) | Capacity | • Owner's equity of total investment;<br>• Debt-raising capacity;<br>• Other financial indicators (if any). |
| | Experience | • Experience investing and constructing similar projects;<br>• Experience operating and managing similar projects;<br>• Experience of key personnel and specialized equipment in case required by the laws;<br>• History of disputes and lawsuits regarding completed and ongoing projects;<br>• History of investment activities suspended or terminated in the province or city the project is implemented (if any). |
| Business investment plan (5 to 10% of total score) | Technical | • The compliance of the investment proposal submitted by the investor (including scope, scale, estimated total project implementation cost, time, schedule, investment phasing, spatial organization and architectural layout, and landscape ensuring consistency with the overall project) with the approved plan(s);<br>• The feasibility of the technological solutions (if any);<br>• Requirements for technology transfer (if any);<br>• Compliance with the investment and business conditions stipulated by the Investment Law and laws governing the industry or sector (if any);<br>• Requirements for operation and business organization;<br>• Other standards as guided by the MOIT (if any). |
| | Society | • Compensation, support, and resettlement plan and costs as per Land Law regulations (if any);<br>• Ability to contribute to social welfare for local workers; |
| | Environment | • Compliance of provided goods and services with the environmental laws;<br>• Prioritisation of waste reduction, promoting environmentally friendly products and services;<br>• Environmental protection, clean production, energy efficiency;<br>• Land use indicators and land use coefficient;<br>• Requirements for resource use;<br>• Ability to conserve biodiversity, improve land, resources, and natural ecosystems in the project area;<br>• Solutions to minimise negative environmental impacts;<br>• Prioritizing the transfer and application of advanced, high and environmentally friendly technology at best available (applicable to projects having a high risk of adverse environmental impacts). |
| Efficiency of investment in and development of the industry, field and locality (80 to 90% of total score) | | Evaluation criteria consist of:<br>• The electricity price ceiling of the RFP within the relevant tariff range issued by the MOIT; and<br>• The pricing principles agreed upon with the power buyer as stipulated in the RFP. |

## Decree 115

Decree 115 introduces a new payment mechanism for Pre-FS and FS costs. However, this is not expected to be applicable to OFW since OFW is not currently designated as subject to bidding and is excluded from Decree 115. Supplementary guidance and regulation on this issue is anticipated for OFW going forward. Costs liabilities falls on either the investor or the state authority on the following basis: [49]

(i) With the investor selected for project implementation following the bidding process; [50] or

(ii) With the investor who proposes the project where (a) the proposed project is not granted an investment policy, or (b) no investor is selected for project implementation following the applicable bidding process; or

(iii) With the competent authority or the authority making decision on organising the bidding process if the project is not proposed by an investor and the bidding process fails to approve an investor.[51]

[49] Article 70.4, Decree 115
[50] The selected investor might not propose the project.
[51] Where the relevant authority cannot allocate sufficient funds, the power buyer may make advance payment and get reimbursement at a later stage.

### 2.2.5.2 PPP framework

#### 2.2.5.2.1 Overview

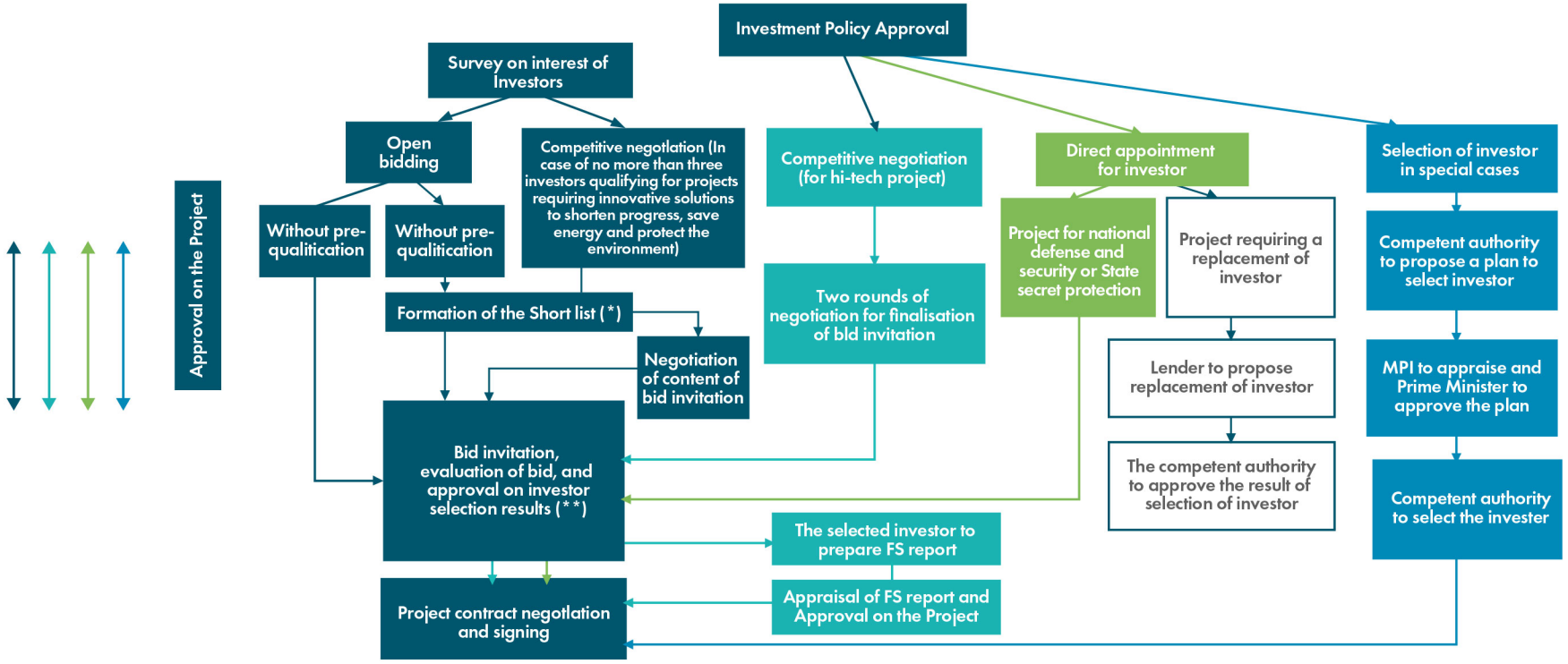
With respect to PPP projects the process of investor selection is required to follow Chapter 3 of the PPP Law.

The investor selection process is usually conducted following the approval of the FS report. For projects applying high technology on the list of high-tech projects prioritized for investment and development [52] or a new technology [53] (hi-tech projects), the investor selection process is conducted in advance of preparing the FS report to select the entity responsible for preparing the FS.[54] OFW is not listed specifically as a high technology.

With respect to PPP projects, open bidding applies in most cases, except (i) projects with no more than 3 qualified investors invited; (ii) hi-tech projects; (iii) projects that need to ensure requirements for national defence, national security, and protection of state secrets; (iv) projects with an urgent need of a replacement investor; and (v) projects with special and unique conditions and where no provided forms can be applied. These will be subject to competitive negotiation, direct appointment, or a special mechanism approved by the Prime Minister.

The investor selection process is depicted in Figure 2-7.

**Figure 2-7. PPP investor selection process**




Note:
(*) The Short list is approved under the Approval on the Project with respect to the case of competitive negotation of no more than three investors qualifying for project requiring innovative solutions to shorten progress, save energy and protect the envirmonment.
(**) Contents of the bid invitation documents are different subject to the form of selection of investors.

[52] The List of high technologies prioritized for investment and development is provided under Appendix II of Decision 38/2020/QD-TTg.
[53] New technology means technology created or applied for the first time in Vietnam or in the world, with a higher level than the level of technology of the same type currently available in Vietnam, environmentally friendly, and applicable in practice and the ability to improve product productivity and quality (Article 2.4, Technology Transfer Law).
[54] Article 11.2, PPP Law.

#### 2.2.5.2.2 Investor selection criteria

In an open bid to select a PPP investor, pre-qualification applies if at least six investors register to join the bid.

The following key criteria will be assessed at this stage (i) financial-commercial capacity, including the ability to mobilise capital, deploy the business in the form of a PPP, and provide public products and/or services; and (ii) experience in operating similar projects. The capacity and experience of key personnel shall be assessed if required. Specific assessment methods and benchmarks are provided in the pre-qualification invitation. A short list naming investors qualified shall be prepared, approved and published.

Where pre-qualification does not apply, all investors registered will join the bid. Assessment of investor bids is based on various criteria and divided into two phases. Technical bids are assessed first and publicly. A list of investors technically qualified shall be prepared, approved and announced to all investors registered before the assessment of financial-commercial bids to identify the winning bid.

There are three groups of investor selection criteria: (i) capabilities and experience; (ii) technical criteria; and (iii) financial-commercial criteria.

In contrast to the IPP framework, price is a criterion which is assessed on a standalone basis, among other financial-commercial criteria. Specific standards for assessment of this criterion are subject to clarification in relevant bid invitation documents.

With respect to power projects, the electricity price is subject to more than one round of assessment, from the beginning (i.e. pre-FS report appraisal), through to investor selection, FS report appraisal and negotiation with EVN. The electricity price may also be adjusted from time to time, according to agreed terms under the PPP contract.

The PPP investor selection process is organised by an agency appointed by the competent authority. Within the OFW context, the competent authority is likely the MOIT or a relevant PPC.

### 2.2.6 OFW power pricing and PPA

#### 2.2.6.1 Overview

In Vietnam the negotiation and signing of the PPA occurs following the issuance of the investment approval and any applicable investor selection process. This may result in a divergence between the final approved electricity price and that approved in the preceding stages.

Technical agreements, including the grid connection agreement, metering agreement, supervisory control and data acquisition (SCADA), dispatch information system and protective relay and automation agreements are attached to the draft PPA agreed by EPTC/PC and submitted to EVN for approval (Article 10.2(b), Decision 1431/QD-EVN).

Uncertainty with respect to the applicable electricity tariff and the subsequent revenue of OFW in Vietnam has been a material issue impacting an assessment of the viability and bankability of OFW projects in the country.

Following Directive 05 of the Prime Minister dated 14 February 2024, the MOIT is required to develop a price framework with respect to gas, wind, and solar power in accordance with market mechanisms and submit a proposal within 2024 (Notice 51/TB-VPCP dated 12 February 2024 of the Office of the Government). The MOIT in collaboration with PVN and EVN is to devise purchase mechanisms for electricity sourced from gas and wind power within 2024.

Currently, tariffs for OFW projects are determined according to Circular 19. Accordingly, EVN is responsible for the tariff range calculation, which is subject to ERAV's appraisal and MOIT's approval. The price calculation is based on data from a standard OFW plant. It is expected that the MOIT will issue a subsequent Decision to provide specific solar and wind tariff ranges, including that for OFW. Pending this Decision, OFW tariffs are not currently available.

The challenge of price uncertainty is compounded by issues with the template PPA for wind power projects in Vietnam provided under Circular 02 as amended by Circular 01/2023/TT-BCT. This is not assessed as suitable for OFW power projects. Key bankability risks under this template include, the absence of a pre-agreed termination formula, curtailment risk, the absence of a take or pay mechanism, governing law and change in law risk.

The introduction of the DPPA framework is seen as an alternative approach to addressing both pricing and PPA risks.

OFW projects with an appropriate installed capacity may also seek a market-based pricing mechanism by participating in the VWEM, provided that the Draft VWEM Circular is approved (See Section 2.1).

### 2.2.6.2 Electricity price bidding under the existing frameworks

Both the Bidding Law and the PPP Law require investor selection on a comprehensive basis rather than one which is based solely on price.

Under the Bidding Law, price may be the sole criterion for assessment if the bidding process serves the selection of contractors of procurement bidding packages where technical, financial and commercial proposals are assessed on the same basis.

With regards to bidding for power projects (excluding OFW), electricity price is evaluated in parallel with other criteria encompassing (i) capacity and experience and (ii) business investment plan.

The price element representing the efficiency of investment in and development of the industry, field and locality accounts for a significant proportion (up to 90 percent) of the total score.[55]

Consequently, there is not a basis for price-based bidding in respect of power projects at the current time.

## 2.2.7 Sea area allocation

The sea area allocation decision is a crucial consent for the purpose of progressing OFW projects, however under Vietnam's current legal framework, a developer can only officially apply for the use of a sea area following issuance of the EIA approval (Article 15.1(c), Decree 11). The term for the allocation and recognition of sea areas is outlined in Table 2-6.[56]

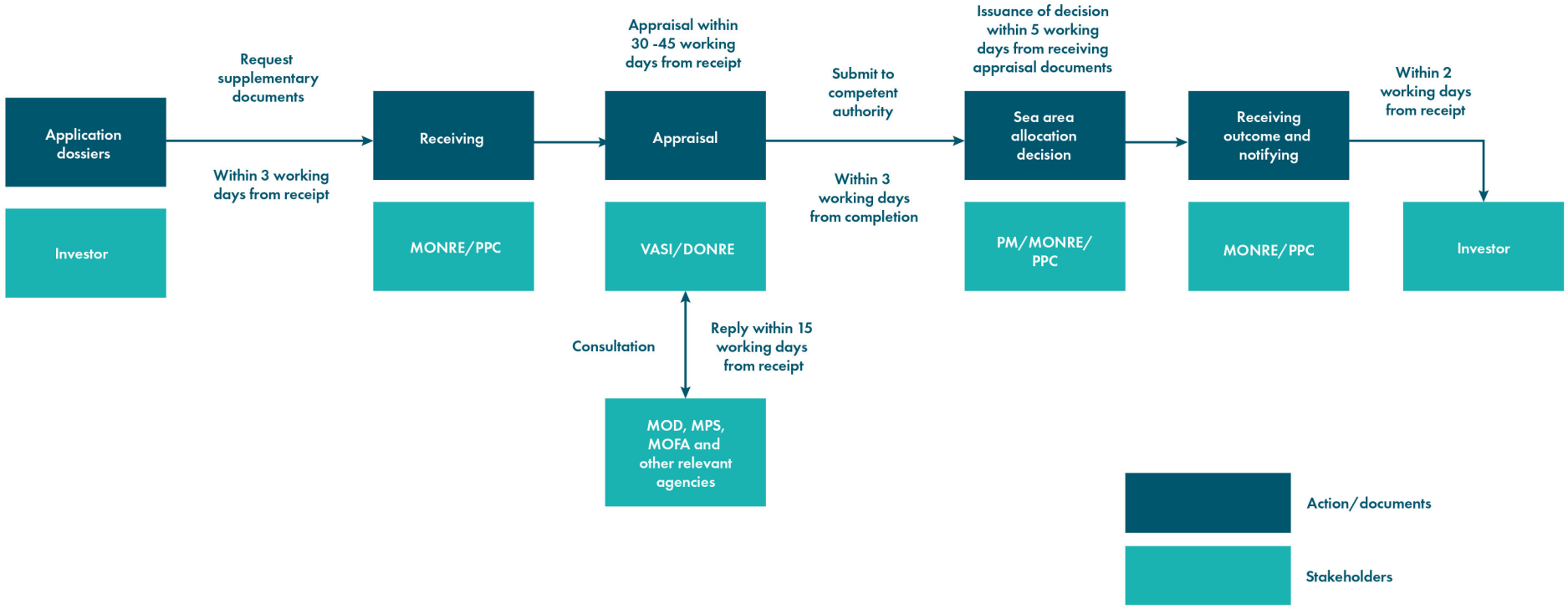
**Table 2-6. Term for the allocation of sea areas**

| Term for allocation of Sea Areas | | Term for recognition of Sea Areas |
|---|---|---|
| 30 Years | More than 30 years | Equal to the remaining period in the decision on land allocation or the lease of land with coastal water surface or sea surface. |
| The maximum term unless qualifying for more than 30 years or an extension. | Projects approved or decided by a competent state agency or granted an investment registration certificate or investment certificate with a term of more than 30 years. | |
| Extension | | |
| The Allocation term may be extended multiple times subject to a maximum or cumulative extension of not more than 20 years. | | |

[55] Article 45.4(c), Decree 115.
[56] Article 6, Decree 11.

The sea area allocation process is governed by Decree 11 and summarised in Figure 2-8

**Figure 2-8. Typical sea area allocation process**




Subject to the location of the OFW project, the application file is submitted to MONRE or the relevant PPC. Respectively, VASI or the relevant Provincial Department of Natural Resources and Environment (DONRE) will appraise the application (Appraisal Authority).

A consultation process following the aforementioned appraisal is mandatory. The MOD, MPS and MOFA must be consulted under all circumstances, among other relevant agencies.

If necessary, an appraisal council may be established and a site examination may be conducted. Time for consultation and site examination is not included in the time for appraising the application.

Following the appraisal and site examination (where applicable), the Appraisal Authority shall determine the sea use fee. Currently, the fee for exploitation of wind energy ranges from VND 3m per hectare per year to VND 7.5m per hectare per year. Specifically:

**Table 2-7. Seabed use fee in Vietnam** [57]

| Project location | Sea use levy |
|---|---|
| Within the 6 nm sea area; within an inter-regional sea area. | VND 7.5m per hectare per year |
| Outside the 6 nm sea area and within the 9 nm line. | VND 7m per hectare per year. |
| Outside the 9 nm sea area and within the 12 nm line. | VND 5.5m per hectare per year. |
| Outside the 12 nm sea area and within the 15 nm line. | VND 4.5m per hectare per year. |
| Outside the 15 nm sea area. | VND 3m per hectare per year. |

Pursuant to the Appraisal Authority's appraisal result, the competent authority (i.e. the Prime Minister, MONRE or relevant PPC) will issue a Sea Area Allocation Decision, if approving the proposed sea area allocation, or a document stating the reason for rejection, in case of rejection.

Key challenges with respect to this process include.

- **Timing of the award:** the sea area allocation decision is issued following approval of the EIA. This creates significant uncertainty for investors with respect to sea area rights and costs for a material part of the development process.
- **Sea areas designated for OFW development have not been clarified:** the NMSP has been published, however, supporting materials, including a map of sea areas, have not yet been completed and published and are subject to issuance of a related implementation plan.
- **Protection of stakeholders' rights:** the rights of the investors (and the lenders when exercising the step in right), with respect to the right to use the allocated sea area and the assets constructed within such area, are not clearly regulated and protected during the project term. An Authorisation and Consent issued by MONRE in favour of lenders, as the competent authority in case of IPP, or on behalf of the Government in case of PPP, should be provided under the law.

## 2.3 Framing the need for a competitive investor selection process

### 2.3.1 Rationale

The development framework for OFW projects in Vietnam presents certain risks and uncertainties that could be mitigated through a clear, transparent and objective competitive selection process.

The key challenge is that competitive tendering schemes for large scale power projects have proved to be ineffective and unsuccessful in Vietnam. To date there has not been a power project where an investor has been selected through the bidding process under the PPP Law. Additionally, projects where investors are selected through the bidding process under the Investment Law are subject to delay.

The need for regulatory change is outlined below.

[57] Circular 18/2021/TT-BTNMT dated 29 October 2021 of MONRE. Valid until the end of 30 March 2026.

- A standardised competitive selection approach would provide confidence to investors, establish a level playing field attracting competitive international investment and accelerating deployment.
    - Conducting investor selection after the investor conducts site surveys exposes investors to high development risks. Risk would be mitigated if the competitive investor selection processes occurred before these resource- and cost-intensive activities are undertaken or if successful investors were granted preferential rights or status with respect to subsequent investor approval processes. Alternatively, a mechanism could be introduced to incentivise investors to support the State in undertaking survey activity and where the costs for doing so are shared.
    - The appraisal criteria for investor selection in Article 33.3 of the Investment Law, and Article 62.2 of the new Bidding Law, for IPP projects, and that in Articles 29, 41 and 42 of the PPP Law, for PPP projects, are not specific to OFW projects, are not actionable and leave significant room for discretion. OFW projects are one of the most complex and specialised infrastructure asset classes. The large-scale long-term deployment of OFW in Vietnam needs clear, transparent and measurable OFW-specific appraisal criteria for investor selection.
- Enhancing price certainty and the bankability of the PPA.
    - Currently, tariffs for OFW projects are determined according to Circular 19. This approach hinders price certainty and allows discretionary decisions and delays. Awarding a fixed price through a competitive investor selection process that is approved by the MOIT and EVN would provide the price certainty investments require.
    - The wind power project PPA template presents multiple bankability issues. Developing a PPA template with reference to international experience and market practice would strengthen OFW projects' financial viability, especially for large-scale projects.
- Achieving cost-effective OFW tariffs.
    - Awarding PPA tariffs through a competitive selection process would minimise public support costs.
    - An open and competitive selection process with an adequate split of risks between the government and investors would enable price discovery to demonstrate the cost of OFW projects in Vietnam, allow the identification of cost structures and challenges. Price discovery and transparency over subsidies, contracts and other support are fundamental for market expectations to be set, enabling learnings and supply chain development for continuous cost reduction.

### 2.3.2 Preparation

Given the rationale of a competitive investor selection framework analysed in Section 2.3.1 and the fact that the FIT ended several years ago without a replacement, the establishment of a new mechanism for investor selection, whether by adopting new legislation or amending existing legislation, is critical.

To introduce a suitable competitive investor selection framework for Vietnam, three key issues with respect to the design of such framework should be considered and determined: (i) whether the model awarding survey rights and the electricity tariff is a one-stage or two-stage process; (ii) the investor selection criteria; and (iii) the OFW pricing mechanism.

In parallel, the following preparatory steps will assist in supporting development of a new competitive selection process.

- **Clear and achievable OFW targets:** Vietnam has set an OFW target of 6 GW by 2030 and allocated this capacity on a regional basis. However, given the long development time for OFW projects and the existing legal framework, this target may require revision.

- **Develop the OFW legal and institutional frameworks:** after determining the preferred investor selection model, Vietnam may need to amend legislation and regulations to enable OFW development and investor selection. Three key issues that require attention are (i) establishing an appropriate risk allocation between stakeholders (i.e. investors, the Government and donors); (ii) simplifying administrative procedures; and (iii) securing land for onshore assets.

- **Develop stakeholder capacity:** the government stakeholders responsible for the approval process are yet to be clarified and new specialised agencies may be required. In addition, the government may find it necessary to strengthen the capacity of institutions and individuals in order to support for the development of the OFW sector.

- **Clear grid connection plan:** the development of an OFW grid connection plan is widely recognised as necessary. This could be incorporated into the existing PDP8 and PDP8 Implementation Plan. Identification of power grid projects to support OFW projects would help investors to identify OFW sites and optimise power transmission.

- **Strengthening the bankability of the PPA:** the current wind power project template PPA is not assessed as suitable for the OFW sector, revisions are necessary to attract local and international capital. Key issues to address include the creditworthiness of EVN as the offtaker, risk allocation and the availability of credit risk mitigation measures.

### 2.3.3 Vietnam's opportunity

Decisions are needed soon, implementing a competitive investor selection framework is imperative to accelerate the development of OFW in Vietnam. The current developer-led open-door site selection model may have served its purpose initially, but it lacks the efficiency and transparency necessary for rapid and sustainable progress. Defining a long-term competitive investor selection model would provide certainty to all stakeholders, allow the development of infrastructure and achieve learning curve cost reductions.

OFW is a global market with numerous opportunities for investment and continuous competition to attract fabrication capacity. For Vietnam's supply chain to succeed, continuity of the projects with survey licences needs to be ensured. Given the competitive local labour, extensive fabrication capacity and strong local offshore O&G sector, stimulating internal OFW demand would increase export opportunities and economic development, while reducing costs further.

In addition to the aforementioned points, the urgency of implementing a competitive investor selection framework for OFW development in Vietnam is further underscored by the timeline constraints set forth by PDP8 and its Implementation Plan. With specific OFW targets of 6 GW by 2030 and considering that OFW projects typically require at least seven years from development to operation, time is of the essence now.

Given the technical and market fundamentals of OFW in Vietnam, it is anticipated that a well-structured, competitive investor selection regime would attract substantial investor interest, ensuring the success of the process. This report proposes an OFW-specific investor selection design with a balanced risk allocation among the Vietnamese Government, electricity ratepayers and investors.

# INTERNATIONAL COMPETITIVE INVESTOR SELECTION PROCESS ANALYSIS

# International competitive investor selection process analysis

## 3.1 Fundamentals of one-stage and two-stage competition models

Typically, there are two key milestones in the lifecycle of an OFW project that could be subject to competition: seabed leasing and the allocation of revenue support on the electricity production.

- **Seabed leasing:** most OFW markets allocate seabed leases competitively, while a minority have established bilateral non-competitive processes working on a first-come, first-served basis. This is the case of Vietnam, South Korea and the Philippines, where OFW developers apply for survey or pre-development licenses to then secure survey or seabed use rights after the completion of further studies and applications.

- **Revenue support on the electricity production or offtake:** most OFW markets award revenue support on the electricity production competitively to minimise expenditures. Other markets establish standard compensations, sometimes in the form of a FIT programme or via Renewable Energy Certificates (REC) for qualifying projects.

  Non-competitive frameworks are common at the inception of markets when the primary objective is to launch a technology, projects are relatively small, and competition is limited. This was the case when OFW was launched in the UK, Taiwan, Denmark, the Netherlands, or Germany.

  At the moment, the main market keeping this approach is South Korea where OFW projects receive the wholesale electricity price plus RECs, with the REC weights or multipliers depending on the characteristics of the project (distance to shore and water depths).

  However, Korea is transitioning into an auction regime to: (i) reduce costs through competition, (ii) facilitate the route to market by reducing risks associated with the volatility and the forward visibility of the certificates market, and (iii) provide long-term confidence to developers and financiers. The first auctions under this regime were held in 2022 and 2023 awarding 1.5 GW of OFW projects in total. The auction regime keeps the REC multipliers compensating projects that would be built in more expensive areas.[58]

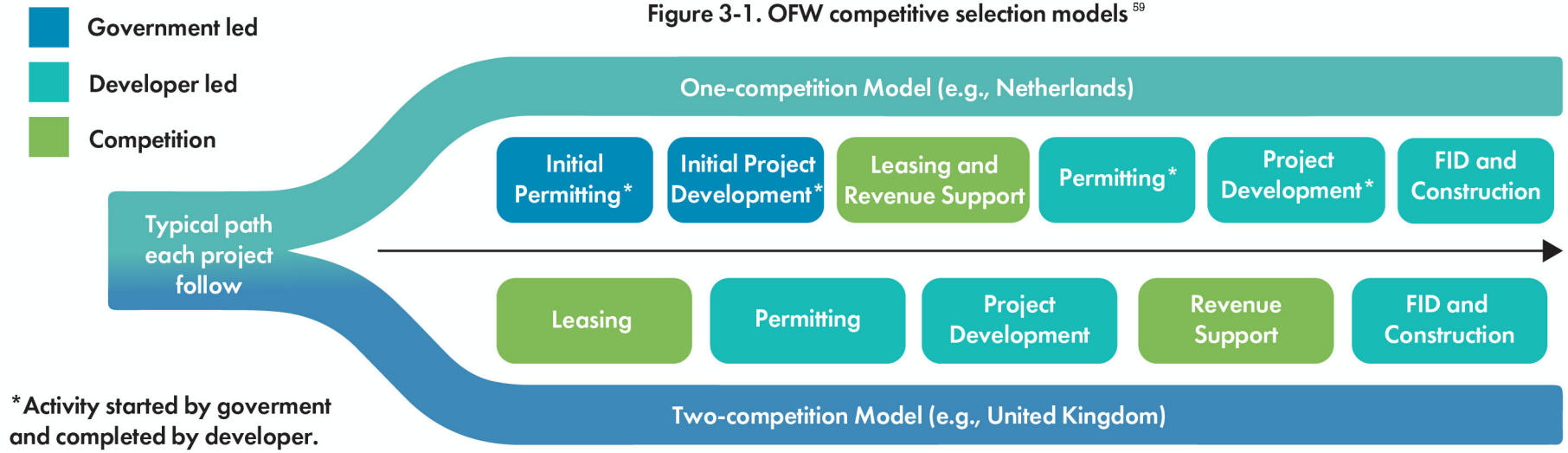
- **Simultaneous competition for seabed leasing and revenue support on the electricity production:** in some markets seabed areas and revenue support on the electricity production are auctioned simultaneously. This is the case of France, Denmark, Belgium, Japan, Taiwan, Germany, or the Netherlands.

The allocation of responsibilities between governments and OFW developers and the order of OFW development activities usually depends on how and if these key milestones are tendered competitively.

Figure 3-1 shows the typical split of responsibilities in markets where seabed leasing and revenue support on electricity production are open to competition. The model where seabed leasing and revenue support are allocated simultaneously is sometimes named ''one-stage'' or ''one-competition'' model, while that where the two competitive selections are held separately might be presented as a ''two-stage'' or ''two-competition'' model.

[58] Korea New and Renewable Energy Center (KNREC), 2024. Fixed price contract bidding system. Fixed-Price Contract Bidding System (knrec.or.kr)

Figure 3-1. OFW competitive selection models [59]




Competitive selection processes for OFW and other renewable energy technologies are context-specific and there is no design that fits for all markets. Frameworks are dynamic and continuously adapted to the status of the technology, market, and policy objectives.

There are great differences on the design of competitive selection processes for OFW projects mainly due to:

- Policy objectives.
- OFW targets and level of maturity of OFW in the country.
- Budgetary support available.
- Level of competition.
- Experience and resources of the auctioneer.
- Aim for quantitative or qualitative evaluations, complexity and duration of the review process.
- Known site conditions.
- Differential between electricity tariffs required by OFW projects and long-term power prices.

The model recommended for Vietnam, Section 3.3, and the specific auction building blocks and recommendations for implementation, Section 4, factor these considerations.

## 3.2 Case studies

The following markets have been studied to extract lessons and propose a strategic competitive selection model for OFW projects in Vietnam.

- UK.
- Taiwan.
- Japan.
- Australia.

[59] World Bank Group, 2021. Key Factors for Successful Development of OFW in Emerging Markets. ESMAP, World Bank, Washington, DC.

## 3.2.1 UK

### 3.2.1.1 Introduction

As the world's second largest OFW market after China, the UK has been a trailblazer since commissioning its first demonstration OFW farm, the Blyth OFW Farm, in 2000. Since then, the sector has witnessed rapid growth, driven by technological advancements, supportive government policies, and declining costs.[60]

At the end of 2023, the UK had 14.8 GW of operational OFW projects (GWEC, 2024), with the total pipeline comprising approximately 93 GW in different stages of development. In alignment with its commitment to achieve net zero emissions by 2050, the UK Government set the ambition to achieve up to 50 GW of OFW by 2030, including 5 GW from innovative floating technology.[61] [62]

The UK now follows a two-stage model, in which seabed leasing and revenue support are held in two separate competitive auctions. Revenue support is awarded in CfD Allocation Rounds (ARs).

### 3.2.1.2 Project development process

**Planning and Site Selection.** The process in England, Wales and Northern Ireland is overseen by The Crown Estate (TCE), a public body that manages the seabed belonging to the British Monarch, and around half of the foreshore areas in those countries. In Scotland, the responsibility for seabed leasing lies with Crown Estate Scotland (CES), which manages Scottish Crown Estate assets on behalf of Scottish Ministers.

TCE and CES conduct NMSPs and extensive consultation processes considering factors like wind resources, water depth, seabed conditions, and environmental impact to designate specific seabed areas for leasing to developers. To award seabed rights to developers, TCE and CES carry out separate seabed leasing rounds.

**Early Development Stage – initial permitting and project development activities.** These activities are typically conducted independently by investors although some site characterization activities are run by TCE and CES as part of site selection processes. For the upcoming Round 5 in the Celtic Sea in 2025, TCE have invested in providing successful bidders preliminary ground conditions, metocean and environmental surveys in the hope of accelerating project development.

**Late development stage.** Conducted by the investor.

**Construction.** Conducted by the investor.

**Operations.** Conducted by the investor.

**Offshore transmission model.** A separate party to the OFW developers, known as Offshore Transmission Owner (OFTO), owns the offshore transmission assets, including the on- and offshore substations, cables and other assets which connect from the offshore point of connection with the wind farm to the national electricity transmission system. Investors usually build these assets which are then transferred in a separate auction to this third party, the OFTO.


[60] https://www.great.gov.uk/international/content/investment/sectors/offshore-wind/
[61] https://assets.publishing.service.gov.uk/media/5a7cc291e5274a2f304efe55/Offshore_wind_media_briefing_19_Feb_factsheet.pdf
[62] RenewableUK, August 2022. Press release: Wind power reaches new milestone of 25 gigawatts, powering two-thirds of UK homes.

### 3.2.1.3 Summary of the design elements of the competitive selection model

For the UK, the design elements for competitive seabed leasing and CfD auctions are presented separately. For seabed leasing the focus is on ScotWind, presented in Table 3-1.

**Table 3-1. ScotWind auction design elements** [63]

| Auction Design Element | Description |
|---|---|
| Technology Selection | OFW-only auction, no distinction between fixed-bottom and floating technology. |
| Site Selection | Investors applied for specific site boundaries within larger areas identified by CES through Marine Spatial Planning (MSP) |
| Seabed Lease Occupancy Period | Option Agreements last for 10 years, giving exclusive rights over site development activities. Investors can then enter into a lease to allow project construction lasting up to 60 years, hence allowing two project lifecycles. |
| Award Criteria | Multi-criteria with sliding fees capped at GBP 100k/km2. Results of the qualitative evaluation fed into a coarse grading system with three bands and a detailed numerical score. The coarse grading removed those projects at the lowest band. The ranking order then successively considered the coarse grading first, followed by the applicant valuation, and the numerical score between 0 to 450 points. A random number allocation decided the awards in case of ties in all criteria.<br><br>The majority of investors scored the top band and bid on the cap, hence awards depended on the detailed scoring of the qualitative evaluation. The detailed numerical scoring per category that applied to ScotWind is listed in Table 3-2.<br><br>No local content requirements were set, but bidders had to prepare supply chain development statements clarifying separately the expected expenditures along the project lifecycle in Scotland, rest of the UK, rest of Europe and rest of the world. They had to issue specific "commitments" and "ambitions", a summary of these plans was publicly released, and delivery of the commitments will be reviewed by CES along the project lifetime. Investors are then subject to small financial penalties for failure to deliver on their commitments, and if more than 75% of a developer's commitments have not been honoured, CES might withdraw the seabed lease. |
| Pricing Rule | Pay-as-bid. The site valuation multiplied by the site area determined the Option Fee. The Option Fee had to be paid at the time the Option Agreement was entered. |
| Price Limits | Sliding fees capped at GBP 100k/km2. |
| Bidding Process | Sealed-bid. |
| Area / capacity awarded per application | The area per individual application could not exceed 860 km2 and there was no maximum capacity per site. The minimum capacity per site was 100 MW. |
| Auction Quantity | The auction aimed to award up to 8,600 km2 of seabed leases. |
| Bid and Performance Bonds | Financial security required under the Option Agreement and Lease, dependent on installed capacity. For example, for projects over 1 GW the financial security for the Option Agreement is GBP 5 m and for the Lease GBP 15 m. |
| Key Eligibility Criteria | Eligibility criteria included technical, financial and legal criteria. Single application submission without pre-qualification stage. |
| Seller Concentration Rules | Bidders could submit up to five applications, no limit on number of projects awarded per investor. |

[63] ScotWind Leasing. Seabed leasing for new OFW farms. Guidance Notes April 2021. April 2021. Crown Estate Scotland.

**Table 3-2. Detailed scoring in ScotWind leasing auction**

| Criteria | Maximum score | Percentage (%) |
|---|---|---|
| Desktop FS, preferred project concept (Part B) | 75 | 17 |
| Project delivery plan to Final Investment Decision (FID) (Part C) | 75 | 17 |
| Development budgets (Part E) | 125 | 28 |
| Capability and experience (Part D) | 125 | 28 |
| Preparedness (Part G) | 50 | 11 |
| Total | 450 | 100 |

## Table 3-3. UK's CfD AR6 auction design elements [64]

| Auction Design Element | Description |
|---|---|
| Technology Selection | Technology-neutral auction with separate pots: Pot 1 with "established technologies" such as onshore wind and solar PV; Pot 2 for floating OFW projects and other "less established technologies" such as geothermal, tidal stream or wave power; Pot 3 solely for fixed-bottom OFW projects. |
| Site Selection | Each investor bids their own site. |
| Award Criteria | Price only. |
| Remuneration Model | Type: CfD.<br>Duration: 15 years.<br>Indexation: full indexation to UK Consumer Price Index (CPI).<br>Caps (on remuneration received / electricity production): no caps. |
| Pricing Rule | Pay-as-clear. |
| Price Limits | There is a budget set and published by the government in advance of the auction. The budget notice specifies the amount that is available for each delivery year within the AR, along with the highest strike price per technology (known as the Administrative Strike Price (ASP)) and any lower or upper budgetary restrictions for particular technologies eligible to bid in the auction. |
| Bidding Process | Sealed-bid. |
| Auction Quantity | Budget per pot set so the capacity awarded depends on the clearing and reference prices, and the capacity factor considered per technology. |
| Bid and Performance Bonds | No financial bonds apply. Penalties for non-delivery of a project are the exclusion of the investor for the next CfD auction. |
| Key Eligibility Criteria | Eligibility criteria include planning consents, grid connection agreements and the submission of supply chain statements. |
| Seller Concentration Rules | No seller concentration rules apply. |

[64] CfD Allocation Round 6: Allocation Round Notice, March 2024. Department for Energy Security & Net Zero.

### 3.2.1.4 Commentary on the competitive selection model

#### 3.2.1.4.1 Outcomes

**Seabed leasing.** Regular seabed leasing rounds were conducted in the UK, the most recent resulted in just under 5.5 GW awarded by CES for the Innovation and Targeted Oil and Gas (INTOG) leasing round, and 27.8 GW in the ScotWind leasing process. TCE granted 8 GW in Round 4. Round 5, to be held in the Celtic Sea in 2025, targets 4.5 GW of capacity.

**CfD auctions.** The UK has carried out six CfD ARs. The UK now holds CfD auctions annually. Below Table 3-4 shows detailed OFW CfD auction results.

**Table 3-4. OFW CfD auction outcomes in the UK** [65]

| AR | Project Name | Investor | Capacity Awarded (MW) | Award Date | COD | Strike Price (GBP/MWh, 2012 real) |
|---|---|---|---|---|---|---|
| AR1 | East Anglia ONE | ScottishPower Renewables, GIG, TRIG, InfraRed Capital Partners | 714 | 2015 | 2017 | 119.89 |
| | Neart na Gaoithe | EDF, ESB | 448 | | 2018 | 114.39 |
| AR2 | Triton Knoll | RWE Renewables, J-Power, KEPCO | 860 | 2017 | 2021 | 74.75 |
| | Hornsea Project 2 | Ørsted, AXA IM, Credit Agricole | 1,386 | | 2022 | 57.50 |
| | Moray East | Ocean Winds, Diamond Green, Equitix, CTG | 950 | | 2022 | 57.50 |
| AR3 | Dogger Bank A | Equinor, SSE Renewables, Vårgrønn | 1,200 | 2019 | 2023/24 | 39.65 |
| | Dogger Bank B | Equinor, SSE Renewables, Vårgrønn | 1,200 | | 2024/25 | 41.61 |
| | Dogger Bank C | Equinor, SSE Renewables, Vårgrønn | 1,200 | | 2024/25 | 41.61 |
| | Forthwind | Cierco | 12 | | 2023/24 | 39.65 |
| | Seagreen | SSE Renewables, TotalEnergies, PTT | 454 | | 2024/25 | 41.61 |
| | Sofia | RWE Renewables | 1,400 | | 2023/24 | 39.65 |

[65] https://dp.lowcarboncontracts.uk/dataset/auction-outcomes

| AR | Project Name | Investor | Capacity Awarded (MW) | Award Date | COD | Strike Price (GBP/MWh, 2012 real) |
|---|---|---|---|---|---|---|
| AR4 | TwinHub | Hexicon | 32 | 2022 | 2026/27 | 87.30 |
| | Inch Cape | Red Rock Power, ESB | 1,080 | | 2026/27 | 37.35 |
| | East Anglia THREE | ScottishPower Renewables, Masdar | 1,372 | | 2026/27 | 37.35 |
| | Norfolk Boreas | RWE Renewables | 1,396 | | 2026/27 | 37.35 |
| | Hornsea Project 3 | Ørsted | 2,852 | | 2026/27 | 37.35 |
| | Moray West | Ocean Winds, Ignitis, | 294 | | 2026/27 | 37.35 |
| AR5 | No OFW bids submitted, no projects awarded. | | | 2023 | - | - |
| AR6 | Inch Cape* | Red Rock Power, ESB | 266 | 2024 | 2027/28 | 54.23 |
| | Moray West* | Ocean Winds, Ignitis | 74 | 2024 | 2027/28 | 54.23 |
| | Hornsea Project 3* | Ørsted | 1,080 | 2024 | 2027/28 | 54.23 |
| | Hornsea Project 4* | Ørsted | 2,400 | 2024 | 2027/28 | 58.87 |
| | East Anglia TWO | ScottishPower Renewables | 963 | 2024 | 2027/28 | 58.87 |
| | Green Volt | Vårgrønn, Flotation Energy | 400 | 2024 | 2028/29 | 139.93 |

* A new provision was implemented in AR6 allowing projects that had been awarded a CfD before to withdraw up to 25% of the capacity and compete for a new CfD.

### 3.2.1.4.2 Main challenges relevant for Vietnam

The main challenges experienced in the UK relevant to Vietnam are summarised below.

- Planning
  - **Long development timelines.** The development of OFW projects in the UK typically takes up to 10 years from seabed lease award to FID. Though there are multiple reasons behind this timetable, activities under the oversight of the government play a key part, specifically on consenting and grid connections.
  - **Consenting processes.** This is subject to ongoing reform given the extended timelines from consent submission to award, with numerous recent projects taking more than two years. A further result of policy uncertainties in relation to the consenting of OFW projects has been the increase in judicial review challenges resulting in additional delays.[66]
  - **Grid connection.** This is a key driver for FID and COD for OFW in many regions given the divergence between the limited grid connection capacity available and the significant deployment of OFW and other renewables. The cost and long-lead times for building transmission infrastructure is another contributing factor. However, multiple reforms are ongoing to optimise grid connection queues, streamline network build-up, and build offshore transmission networks to integrate OFW projects, especially those awarded in ScotWind.[67]
- CfD auctions
  - **Increasing UK economic impacts.** While the CfD scheme has been very successful in lowering costs certain benefits might not have been fully captured by the UK economy. These include supply chain development, the deployment of innovative technologies or reaping wider socio-economic benefits. Cost reduction pressures, coupled with recent rising commodity costs, inflation and interest rates have squeezed margins of the supply chain, further preventing this added value projects could bring.

    To address these issues a Sustainable Industry Reward (SIR) is planned to be introduced from AR7, to be held in 2025. This would consist of a top up to the awarded CfDs in exchange for investments in supply chains in deprived areas in the UK and /or in more sustainable means of production. The mechanism to allocate SIR funding would be a competitive auction just before the main CfD auction. These criteria are expected to evolve to capture more initiatives in the near term.[68]
  - **Inadequate calibration of reserve prices.** The CfD AR5 held in 2023 resulted in no OFW bids being submitted due to the ASPs proposed being deemed too low and not reflecting the cost increases the OFW industry experienced due to growing inflation, interest rates and the costs of commodities and raw materials.

    Nevertheless, the UK Government rectified this policy missteps in AR6 by increasing the ASPs from AR5 levels: for fixed-bottom OFW projects by 66%, from GBP 44/MWh to GBP 73/MWh (in 2012 real prices), and for floating OFW projects by 52%, from GBP116/MWh to GBP176/MWh (in 2012 real prices).[69]

### 3.2.1.5 Lessons learnt for Vietnam

The lessons learnt for Vietnam after reviewing the project development process and auction experiences in the UK are discussed below.

- **Regular long-term timeline of auctions.** These provide confidence to investors, financiers and the supply chain. This allows learning curves, investments in lateral infrastructure, and building pipelines to elicit synergies, all leading to cost reductions.
- **Removing electricity price risk.** As with the UK CfD, long-term inflation-indexed contracts with a highly creditworthy counterparty provide the certainty required for competitive debt financing by removing market price exposure. This reduces financing costs, electricity tariffs and accelerates deployment.
- **Objective auction award criteria.** Auctions, such as the UK CfD, with predictable, objective and transparent award criteria ensure rapid deployment of OFW projects.
- **Adequate auction price ceilings.** These should be set through open market dialogues with investors and supply chains. Price ceilings should also reflect Vietnam's site conditions, technology options, supply chains, regulatory frameworks, tax regimes, financing conditions, project costs and any market risk premiums.

[66] Pick, Tim. Independent report of the OFW Champion Seizing our Opportunities. March 2023.
[67] Ibid.
[68] Contracts for Difference for Low Carbon Electricity Generation. Government Response to the Consultation on Introducing a CfD Sustainable Industry Reward, March 2024. Department for Energy Security and Net Zero.
[69] CfD Allocation Round 6: Allocation Round Notice, March 2024. Department for Energy Security & Net Zero.

## 3.2.2 Taiwan

### 3.2.2.1 Introduction

Taiwan is a leading OFW market in APAC with targets of 13 GW by 2030 and up to 50 GW by 2050, from 2.25 GW operational by the end of 2023. Taiwan has been active in OFW since 2017 when the 8 MW Formosa 1 Phase 1 demonstrator project went into operation.[70] [71]

Taiwan follows a one-stage model with the seabed lease and offtake awarded simultaneously.

### 3.2.2.2 Project development process

The development of OFW in projects in Taiwan has evolved over time as shown in Table 3-5. Taiwan is the archetypical example of launching and upscaling a market from an initial demonstration phase to competitive auctions with the participation of leading international investors and successful national champions.

**Table 3-5. Taiwan OFW development and auction models**

| | Phase 1: Demonstration (2012-2020) | Phase 2: Zone of Potential (2015-2025) | | | Phase 3: Zonal Development (2026-2035) | | | |
|---|---|---|---|---|---|---|---|---|
| Stage | 1 | 2.1 | | 2.2 | 3.1 | 3.2 | 3.3 | 3.4 |
| Award Date | Jan 2013 | Apr 2018 | | June 2018 | 2022 | 2024 (ongoing) | 2025 (expected) | 2026+ (expected) |
| Grid Connection | 2020 | 2020 | 2021-2024 | 2025 | 2027/2028 | 2028/2029 | 2030/2031 | 2032-2035 |
| Support Mechanism | Demonstration Incentive Program (DIP) Subsidies & FIT | FIT | FIT | Competitive Bidding | Competitive Bidding | | | |
| Localization Requirements | No | No | Yes | No | Yes | | | |
| Awarded Capacity | 237 MW | 738 MW | 3,098 MW | 1,664 MW | 2,335 MW | 3 GW + 665 MW (remaining of R3.1) | 3 GW | 6 GW |

**Planning and site selection.** OFW was launched in Taiwan in 2012 with the "Thousand Wind Turbines Project". That program was divided into three phases aiming for progressive deployment: Demonstration Round, Zone of Potential Round, and Zonal Development Round, as shown in Table 3-5.

The initial demonstration phase comprised of three projects: Formosa Demonstration, TPC Demonstration and Fuhai Demonstration. To implement Phase II the guidelines for site planning were promulgated in 2015, identifying 36 zones potentially suitable for OFW development. Still, investors were allowed to select zones outside these areas.[72]

The current Zonal Development Round was launched in 2021 and "highly sensitive areas" for OFW acting as exclusion zones were identified. In this phase, planning and site selection is developer-led, with investors submitting their sites for site planning approval or recordation with the Energy Administration (EA). The goal is to provide the EA a general picture of the project at a preliminary stage before the EIA process commences.[73]

**Early and late development stage.** Conducted by the investor including all site characterisation surveys, EIA and consenting, and engineering and design.

**Construction.** Conducted by the investor.

**Operations**. Conducted by the investor.

**Offshore transmission model.** The investor builds, owns and operates the OFW project's transmission assets up to the point of interconnection with the grid's onshore substation.

While Taipower, Taiwan's national transmission system operator, is responsible for planning, upgrading and constructing the onshore grid, grid enhancement costs necessary to connect projects might be shared with investors subject to Ministry of Economic Affairs (MOEA)'s approval.[74]

[70] 12 Key Strategies for Taiwan's 2050 Net-Zero Transition (Draft). Key Strategy 1 - Wind/Solar PV, December 17, 2022.
[71] Bureau of Energy, Ministry of Economic Affairs.
Taiwan's OFW Power Installation Exceeds 2GW to Lead the Asia-Pacific Region in 2023, March 13, 2024. Ministry of Economic Affairs.
[72] Su, Yi-Jiun; Cheng, Vivian. 2023. "Taiwan". In C. Knütel (ed.), OFW Worldwide: Regulatory Framework in Selected Countries. \Hamburg: Hogan Lovells International LLP
[73] Ibid.
[74] Ibid.

### 3.2.2.3 Summary of the design elements of the competitive selection model

The auction design elements for Round 3.2 in Taiwan are discussed in Table 3-6.

**Table 3-6. Auction design elements for Round 3.2** [75]

| Auction Design Element | Description |
|---|---|
| Technology Selection | Technology-specific auction for OFW projects. |
| Site Selection | A single auction where each investor bids their OFW site. |
| Award Criteria | Bid price, with localization commitments solving ties. In the Round 3.1 and Round 3.2 auctions all bids were 0 NTD/kWh (the floor price), so awards depended on the industrial relevance plan (localization commitments).<br>The qualification review involves technological competence (construction capability, engineering design and operations and maintenance planning); and financial capability (financial and risk management proposal, financial soundness of the shareholders). Applicants need to score more than 70 points in technical and financial capability or would be disqualified.<br>With regards to localization, the Industrial Development Administration (IDA) under the MOEA has labelled a total of 24 industry relevance items (120 points in total). IDA assigns scores to each item and the applicant may choose the items to be implemented. A minimum of 70 points are required to participate in the price auction. |
| Remuneration Model | Type: FiT with Taipower.<br>Duration: 20 years.<br>Indexation: no indexation to inflation or foreign exchange.<br>Caps on remuneration received: no caps. |
| Pricing Rule | Pay-as-bid. |
| Price Limits | Including ceiling and floor prices, disclosed ahead of the auction. The ceiling price was set as 2.49 NTD/kWh for Round 3.2. The floor price was set as 0 NTD/kWh. |
| Bidding Process | Sealed-bid. |
| Area / awarded capacity per application | Strict capacity limits per applicant:<br>1st place awarded – max. 900 MW; 2nd place awarded – max. 700 MW; others awarded – max. 500 MW. An additional capacity of 100 MW can be allocated to investors who plan to enter into Corporate Power Purchase Agreements (CPPAs) with at least two domestic enterprises. |
| Auction Quantity | Maximum auction capacity established in the auction guidelines, cap of 3.7 GW for Round 3.2. |
| Bid and Performance Bonds | Performance bond of 2 NTDm/MW, at least half paid before the signing of the administrative contract. The rest of the bond must be paid within a year of signing the contract or within a month of securing project financing, whichever comes first. |
| Key Eligibility Criteria | Eligibility conditions apply including site planning approval (recordation), EIA approval (complete or conditional) and grid connection opinion letter from Taipower. |
| Seller Concentration Rules | Provided that the OFW projects have the same ultimate shareholder, an investor may group their multiple OFW projects, with the capacity of each of the projects below the maximum capacity, under one application. Multiple applicants/projects under the same developer group will also be collectively subject to the same maximum capacity requirement. The "same developer group" is defined as applicants with the same representative person or a common shareholder owning 20% of the applicant's shares. |

[75] "OFW Power Zonal Development Site Capacity Allocation Guidelines" (離岸風力區塊開發場址容量分配作業要點), November 2023. Ministry of Economic Affairs.

### 3.2.2.4 Commentary on the competitive selection model

#### 3.2.2.4.1 Outcomes

The results of OFW auctions in Taiwan are depicted in Table 3-7. This shows only zero (or near to zero) bids were awarded in Round 3.1 and Round 3.2. Note the results of Round 3.2 were announced in August 2024 and the deadline for the signature of administrative contracts is the 11 November 2024.

**Table 3-7. OFW auction results in Taiwan**

| Round | Project Name | Investors | Project Capacity (MW) | Auction Award Date | COD | Bid Price (NTD/kWh) |
|---|---|---|---|---|---|---|
| 1 | Formosa 1 | Ørsted, JERA, Seagull | 128 | 2013 | 2019 | Admin FIT |
| 2 | Taipower Phase 1 | TPC | 109 | 2013 | 2021 | Direct subsidy |
| 2.1 | Yunlin | Skyborn, TotalEnergies, Egco, Sojitz | 640 | 2018 | 2022/23 | Admin FIT |
| 2.1 | Greater Changhua 2a | Ørsted | 295 | 2018 | 2022 | Admin FIT |
| 2.1 | Greater Changhua 1 | Ørsted | 605 | 2018 | 2022 | Admin FIT |
| 2.1 | Formosa 2 | Swancor, Macquarie, JERA | 378 | 2018 | 2022 | Admin FIT |
| 2.1 | Hai Long 2a | Northland Power, Yushan Energy, Mitsui | 300 | 2018 | 2024 | Admin FIT |
| 2.1 | Changfang Xidao | CIP | 600 | 2018 | 2022/24 | Admin FIT |
| 2.1 | Zhongneng | CSC, CIP, Mitsubishi | 300 | 2018 | 2024 | Admin FIT |
| 2.1 | TPC2 | Taipower | 300 | 2018 | 2024 | Admin FIT |
| 2.1 | Haixia 1 | Skyborn | 300 | 2018 | 2025 | Admin FIT |
| 2.2 | Greater Changhua 2b | Ørsted | 337 | 2018 | 2025 | 2.55 |
| 2.2 | Greater Changhua 4 | Ørsted | 583 | 2018 | 2026 | 2.55 |
| 2.2 | Hailong 2b | Northland Power Yushan Energy, Mitsui | 232 | 2018 | 2025 | 2.22 |
| 2.2 | Hailong 3 | Northland Power Yushan Energy, Mitsui | 512 | 2018 | 2025 | 2.22 |
| 3.1 | Fengmiao | CIP | 500 | 2022 | 2027 | 0 |
| 3.1 | Haiding 2 | Corio, TotalEnergies | 600 | 2022 | 2026 | 0 |
| 3.1 | Formosa 4 | SRE | 495 | 2022 | 2027 | 0 |
| 3.1 | Huanyang | EDF, Taiya | 440 | 2022 | 2027 | 0 |
| 3.1 | Haixia 2 | Skyborn | 300 | 2022 | 2026 | 0 |
| 3.2 | Youde | Shinfox | 700 | 2024 | 2029 | 0 |
| 3.2 | Formosa 6 | SRE | 800 | 2024 | 2029 | 0 |
| 3.2 | Fengmiao 2 | CIP | 600 | 2024 | 2029 | 0 |
| 3.2 | Haiding 1 | Corio, TotalEnergies | 360 | 2024 | 2028 | 0 |
| 3.2 | Meisen | Enervest | 240 | 2024 | 2028 | 0 |

In Taiwan an administrative FIT applies to eligible OFW projects allowing investors to choose between a constant 20-year tariff or a scaled tariff with a constant rate for the first 10 years followed by a lower rate for the following 10 years. The tariff that each investor selected is not publicly released.



#### 3.2.2.4.2 Main challenges relevant for Vietnam

The main challenges experienced in Taiwan relevant to Vietnam are discussed below.

- Planning and site selection
  - **Site overlaps.** These occur due to exclusion zones leaving limited space in the Formosa Strait. Investors need to complete site investigations and engineering and design exercises to start procurement and contracting activities to address the auction award criteria related to industrial relevance. Therefore, granting  of site exclusivity with auction award results in major costs at risk.
- Auction
  - **Policy uncertainty.** Continuous policy changes hinder market development, bid preparation and project execution activities for investors. They also erode confidence in the market for investors, suppliers and financiers, and prevent long-term commitments and investments.
  - **Onerous local content requirements.** This is one of the most controversial topics in Taiwan, a market with very limited experience and capabilities in offshore construction, O&G and manufacturing of large components. Local content was first established in Round 2.1 in 2018 before the demonstration projects were built and when just 8 MW of OFW capacity was operational.

    Local content requirements have evolved to the less prescriptive model proposed in Round 3.2 as described in Table 3-6. Indeed, auction rules in Round 3.1 required at least 60% of foundations and WTG towers, blades, transformers and switchgears to be manufactured in Taiwan.[76]
  - **Delivery of projects and localisation commitments are at risk.** The delivery of the Round 3.1 localisation commitments with all projects targeting similar commissioning dates is highly uncertain and has created a sellers' market pushing project costs. Global increases in inflation and interest rates, costs of commodities and raw materials, and the disruption of supply chains have greatly impacted projects as well.

[76] OFW power zonal development. Industry related policies. August 26, 2022. Bureau of Energy, Ministry of Economic Affairs.

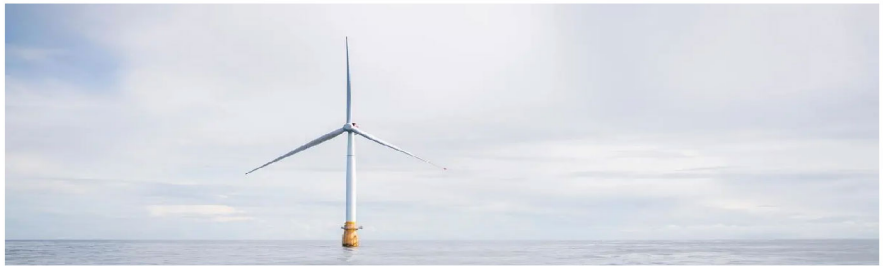
While Round 3.1 projects had to be operational by 2026/27 none have reached Financial Close as of September 2024 and the timeline to operations has been delayed by a year. This is also explained by the difficulties to secure a long-term offtake, as discussed below.[77]

- **Uncapped penalties for non-realisation.** For Round 3.1 projects these could surpass the performance bonds and are virtually uncapped for industrial relevance commitments. This hinders project financing.

- **Restrictions on project capacity.** Capacity was capped at 500 MW in Round 3.1, to stimulate competition diminishing economies of scale. This was amended for Round 3.2 after extensive negotiations, however project capacities over 500 MW are just awarded to the top 2 bidders, see Table 3-6

- **Dangers of zero bids.** Setting the reserve price in an auction at a level lower than project costs and power prices pushes investors to zero bids trying to secure PPAs with corporates. Additionally, the great number of OFW projects seeking offtake contracts with the same timeline and the limited number of creditworthy offtakers has created a buyers' market with challenging CPPA price expectations. The absence of CPPAs to stabilise project revenues is hindering financing Round 3.1 projects and ultimately project build out.

- **Lack of market confidence.** This results from a misalignment between all stakeholders with respect to cost and localisation expectations, electricity tariffs and risk allocation. This is exemplified with leading international OFW developers exiting the market in the last years, major international developers passing auction rounds, and continuous distress calls from international original equipment manufacturers (OEMs). This happens despite the solid fundamentals for OFW projects in Taiwan; consistent world-leading wind speeds and the sole scalable renewable energy source to enhance energy independence and security.



### 3.2.2.5 Lessons learnt for Vietnam

The lessons learnt for Vietnam after reviewing auction experiences in Taiwan are discussed below.

- **Under a two-stage model site overlaps should be avoided when awarding survey rights.** This is due to the fact developers will spend years completing development activities to inform bids for the competitive allocation of the offtake with major costs at risk.

- **Avoid enforcing local content in the short and medium term and especially at the inception of the OFW industry.** Strict local content obligations would likely be contentious and increase costs. Vietnam's competitive local labour, extensive fabrication capacity and strong local offshore O&G sector will naturally lead to localising manufacturing activities once there is a clear pipeline of projects. Investors could submit plans for creating and sustaining local benefits as part of the competitive selection processes to stimulate engagement with local supply chains.

- **Cap penalties for non-realisation, bid and performance bonds.** This is to limit the exposure of investors and ensure the bankability of projects.

- **Award large-scale OFW projects.** This enhances economies of scale, allow the development of local supply chains and reduce costs.

- **Avoid zero bids.** This pushes investors to sign PPAs with corporates. However, this could be unfeasible after auction award if the electricity tariffs required by the projects are not aligned with power market developments, and price, term and volume expectations of potential creditworthy offtakers. Reducing financing costs is a fundamental objective for Vietnam being a new market with distinctive macro-economic risks (interest rates, inflation, foreign exchange, regulatory risk).

- **Align cost, revenue and risk expectations among all stakeholders.** This will be fundamental for the success of OFW in Vietnam. Market dialogues must be established to monitor the evolution of costs, technologies and business cases. OFW auction design including modelling of reserve prices should be updated through these dialogues.

[77] Wang, Jason; Kubitschek, Raoul; McCatherin, James. Taiwan OFW after Round 3.1, September 12, 2023. Euroview.

## 3.2.3 Japan

### 3.2.3.1 Introduction

Japan is one of the OFW markets in APAC with the greatest growth potential, with targets of 10 GW by 2030 and 30 to 45 GW by 2040, from 190 MW operational at the end of 2023 (GWEC, 2024). Japan has the sixth largest exclusive economic zone (EEZ), predominantly suitable for floating wind due to significant water depths, and a leading shipbuilding industry. Indeed, industrial strategy is at the core of Japan's OFW vision to realise a ''virtuous cycle'' to develop projects and a domestic supply chain.

Japan follows a **one-stage model** with the seabed lease and the offtake awarded simultaneously in an auction.

### 3.2.3.2 Project development process

The ''Act on Promoting the Utilization of Sea Areas for the Development of Marine Renewable Energy Power Generation Facilities'' (hereafter ''MREA'') is the master regulation setting out the process for the designation of OFW areas within promotion zones. Article 8 (1) of the MREA established that promotion zones for marine renewable energy may only be designated in the territorial and inland waters of Japan. The territorial waters of Japan are those within a 12 nm distance from the coastal low-water mark.[78][79]

An amendment to the MREA was passed on 12 March 2024 to allow installations in the EEZ.[80] Since the development process for projects in the EEZ is still under discussion, the analysis focuses on OFW projects within the territorial waters. A two-stage model is an option for OFW projects in the EEZ, but a decision has not been made yet.[81]

**Planning and site selection.** The process starts with cities, prefectures or investors completing initial studies to engage with local stakeholders and assess technical and environmental project feasibility. Most investors have started greenfield development in sites within the larger areas identified as part of the cities or prefectures' zoning studies.

This information is gathered by the national government and a ''preparatory zone'' might be designated. Among these, those zones where stakeholders can be identified and these consent to form a council are announced as ''promising zones''. When an area is selected as a ''promising zone'', the council is established and convened with the national and prefectural governments, local stakeholders, especially the fishing industry, and academic experts, and local consensus-building takes place.[82]

Finally, once a site is designated as ''promotion zone'' a public tender is arranged. Zones are designated, organised and disclosed every fiscal year.

**Early development stage - initial permitting and project development activities.** A central model of OFW development is progressively being implemented trying to replicate the success of central models in Denmark, Germany or the Netherlands. This aims to improve coordination between local and national governments as well as reduce costs and risks for developers on site characterisation studies and certain environmental surveys, securing grid connection capacity, and engaging local stakeholders.[83] Even though the central model was announced in 2020 it has not been fully applied to any auctions yet.

**Late development stage.** Conducted by the investor including site characterisation surveys, EIA and consenting, and engineering and design activities.

**Construction.** Conducted by the investor.

**Operations.** Conducted by the investor.

**Offshore transmission model.** The investor builds, owns and operates the OFW project's transmission assets up to the point of interconnection with the grid's onshore substation. While utilities are responsible for planning, upgrading and constructing the onshore grid, the selected investor will be required to contribute to some of the costs related to connecting the OFW project to the onshore grid.[84]

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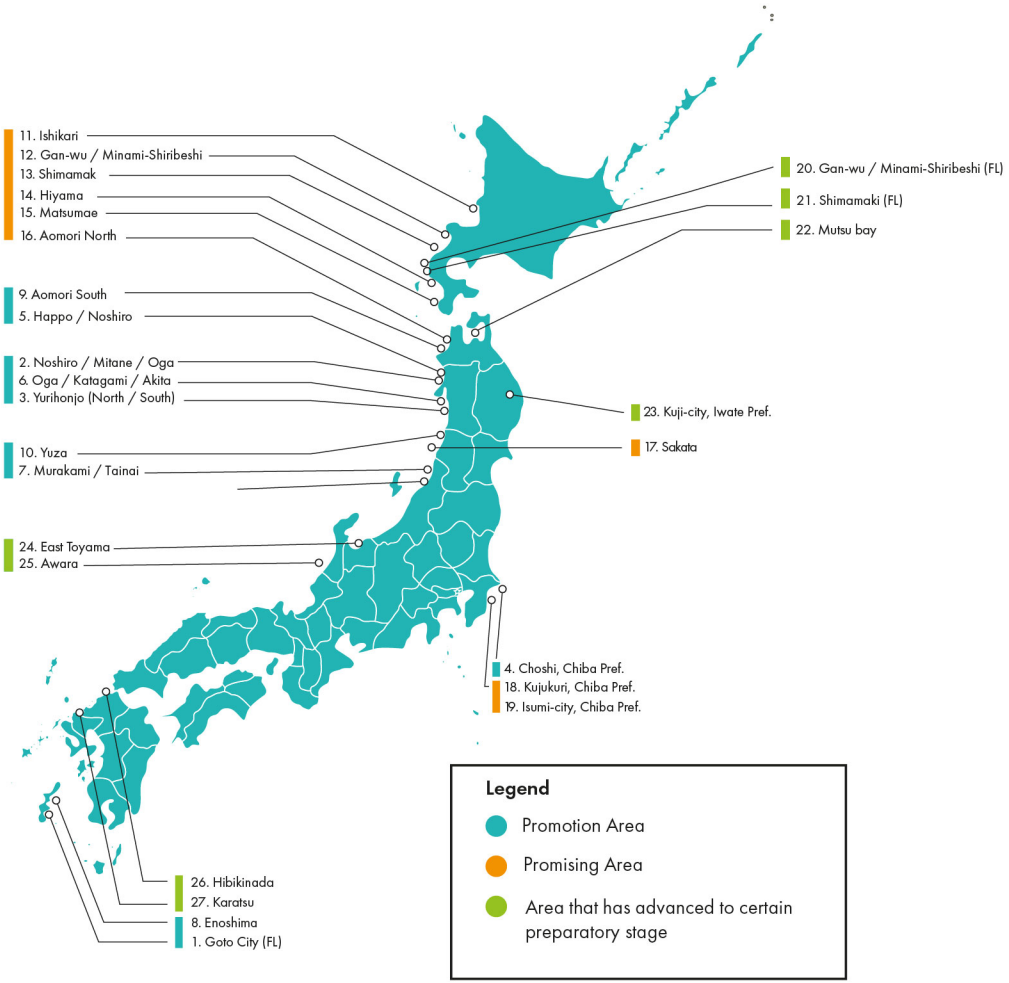
[78] Act on Promoting the Utilization of Sea Areas for the Development of Marine Renewable Energy Power Generation Facilities (Act No. 89 of 2018), December 7, 2018.
[79] Note Japan's Ports and Harbour Act was revised in 2016 (Article 37-3) to allow the installation of OFW projects in port areas. Indeed, six port projects have been awarded and are in different stages of development.
[80] Cabinet Decision on the Bill for the Act for Partially Amending the Act on Promoting the Utilization of Sea Areas for the Development of Marine Renewable Energy Power Generation Facilities, March 12, 2024. Joint Press Release with the Cabinet Office, the Ministry of Land, Infrastructure, Transport and Tourism, and the Ministry of the Environment.
[81] Remaining issues and proposed directions for EEZ development, January 26, 2024. Ministry of Economy, Trade and Industry Agency for Natural Resources and Energy; Ministry of Land, Infrastructure, Transport and Tourism Ports and Harbours Bureau.
[82] Designation of marine renewable energy power generation facility development promotion area, revised July 2021. Agency for Natural Resources and Energy of the Ministry of Economy, Trade and Industry; Port Bureau of the Ministry of Land, Infrastructure, Transport and Tourism.
[83] Vision for Power Industry (1st), December 15, 2020. Public-Private Council on Enhancement of Industrial Competitiveness for OFW Power Generation.
[84] Kamoto, Wataru. 2023. "Japan". In C. Knütel (ed.), OFW Worldwide: Regulatory Framework in Selected Countries. Hamburg: Hogan Lovells International LLP

**Figure 3-2. Designated area status as of October 3, 2023 (Ministry of Economy, Trade and Industry, Ministry of Land, Infrastructure, Transport and Tourism)**




### 3.2.3.3 Summary of the design elements of the competitive selection model

The auction design elements for Round 3 in Japan are discussed in Table 3-8.

**Table 3-8. Auction design elements for Round 3 in Japan** [85]

| Auction Design Element | Description |
|---|---|
| Technology Selection | Technology-specific auction for OFW projects. |
| Site Selection | A separate auction per promotion zone is held. |
| Seabed Lease Occupancy Period | Typically 30 years. |
| Award Criteria | Multi-criteria: combination of bid price (50%, 120 points) and non-price criteria (50%, 120 points).<br><br>Non-price criteria appraise project feasibility; development, construction and operations plans; early commencement of operations; and local stakeholder acceptance and positive economic impacts in the local community. Non-price criteria are discussed in detail in Table 3-9. |
| Remuneration Model | Type: sliding Feed-in Premium (FIP) or one-sided CfD for fixed-bottom projects, operators keep the upside if the market reference price exceeds the bid price.<br>Duration: 20 years.<br>Indexation: no indexation to inflation or foreign exchange.<br>Caps on remuneration received: no caps. |
| Pricing Rule | Pay-as-bid. |

[85] Sea of Japan off the coast of Aomori Prefecture (south side)", "Oki Yuza Town, Yamagata Prefecture". Marine renewable energy power generation facility development promotion area. Public offer occupancy guidelines. January 2024. Ministry of Economy, Trade and Industry; Ministry of Land, Infrastructure, Transport and Tourism.

| Auction Design Element | Description |
|---|---|
| Price Limits | Including ceiling and floor prices, disclosed ahead of the auction. The ceiling price depends on the conditions of the site. The floor price, also known as zero-premium level, is set since points are awarded considering the ratio between each bidder and the lowest bid in the auction. The floor price in Round 2 (2023) and Round 3 (2024) was set at 3 yen/kWh, meaning projects bidding this floor were virtually unsubsidized. |
| Bidding Process | Sealed-bid. |
| Area / capacity awarded per application | Maximum project capacity established in the auction guidelines. |
| Bid and Performance Bonds | First bond - 500 yen/kW - submitted by bidders at bid stage. Aim to ensure the information provided in the bid is trustworthy.<br>Second bond - 5,000 yen/kW - after bid award, within eight weeks. Since the first bond is kept the security paid is the difference between the second and first bonds.<br>Third bond - 13,000 yen/kW - provided within 24 months of selection. Since the second and first bonds are kept, the security paid is the difference between these and the third bond.<br>The third bond may be executed for various reasons, among those if the investor does not meet the planned COD. The project must be commissioned by the date specified in the bid or by the period for which the marks were awarded, see Table 3-9. |
| Key Eligibility Criteria | Eligibility conditions apply comprising track record in offshore civil engineering works, financial capabilities (criteria dependent on the financing strategy pursued; balance sheet or project finance), and legal criteria (misconduct, sanctions). Each bidder must be a Japanese entity, foreign companies that have not established a legal presence in Japan may submit bids provided they are a shareholding member of a Special Purpose Company (SPC). |
| Seller Concentration Rules | After a single consortium won the three sites put to auction in Round 1 (2022), a capacity limit of 1 GW was set in Round 2 (2023). The capacity limit applied on a consortium basis, these were deemed the same if more than 50% voting rights were held by the same entities or individuals.[86] Seller concentration rules do not apply to Round 3 (2024). |

A summary of the non-price criteria that applied in Japan in Round 2 (2023) and Round 3 (2024) is presented in Table 3-9 below.
The scoring methodology considers:

- For all categories, except early commencement of operations, six scales are defined: top runner, excellent, middle runner, good, minimum required level, disqualification.
- The full score (100%) is awarded to top runners, 75% of the marks to excellent bidders, 50% to middle runners, 25% to good bidders, and 0% to the bidders who did not achieve the minimum required level.
- The auction guidelines present a number of risk scenarios to consider when bids are structured, these serve to test and demonstrate project feasibility.
- For early commencement marks are given for certain commissioning windows. Then, the commitments for early commencement of operations are weighed by the project feasibility scoring to penalise unrealistic or unfeasible targets.
- The project feasibility evaluation score shall be adjusted in accordance with the following formula, based on the total score for each evaluation item. Thus, the bidder with the highest score gets all points for the qualitative criteria and the scores of the others are relative to the highest.

Project Feasibility Criteria Marks = (the relevant bidder's total marks/total marks of the highest bidder in the same promotion area) × (full score (120 marks))

[86] Selection of operators based on the Renewable Energy Sea Area Utilisation Act. Evaluation approach, June 23, 2022. Ministry of Economy, Trade and Industry; Ministry of Land, Infrastructure, Transport and Tourism.

## Table 3-9. Detailed non-price criteria for Round 3 in Japan [87]

| Criteria | Category | Subcategory | Evaluation |
|---|---|---|---|
| Project Feasibility Criteria (80 points) | Early commencement of operations (20 points) | | Scores given depending on the commissioning window proposed, windows known ahead of the auction. |
| | Reliability of project fundamentals (20 points) | Project implementation structure and track record (10 points) | In terms of experienced personnel, risk management systems, systems for community co-existence, response to natural emergencies, delays in concluding main contracts, non-performance / termination of contracts. |
| | | Finance plan (10 points) | Risk management plans for cost increases (interest rates, imbalance costs (under the FIP system), failures and accidents, labour costs, insurance premiums); and reductions in revenue (lower wind speeds, curtailment, decline in wholesale prices, default or insolvency of an offtaker). |
| | Project execution plan (20 points) | Plan up to commissioning (15 points) | Risk of schedule delays and mitigation measures including licensing process (EIA, certification), design changes, procurement of major components and key installation vessels, construction delays, coordination with local stakeholders. Detailed program from auction award to FID. |
| | | Plan for operations phase (5 points) | Education and training of maintenance personnel, creation of employment opportunities, risk of damages or failures of key components and equipment due to accidents and natural disasters, decommissioning cost estimation and reserves. |
| | Stable supply of electricity (20 points) | - | Risk management plans for the availability of parts, vessels and personnel during operations. |
| Local community / economic impact (40 points) | Coordination with the head of the relevant municipalities (10 points) | - | Results of coordination with government agencies from inception to completion of OFW projects, onshore wind projects or coastal civil engineering projects. |
| | Cooperation and co-existence with surrounding ports and fisheries (10 points) | - | Tangible methods for cooperation and coexistence with fishery operators and relevant shipping companies. |
| | Impact on the local economy (10 points) | - | Promotion of domestic investment (manufacturing facilities; construction, maintenance and logistic centers), and employment creation. |
| | Impact on the national economy (10 points) | - | Promotion of domestic investment (manufacturing facilities; construction, maintenance and logistic centers), and employment creation. |

[87] "Sea of Japan off the coast of Aomori Prefecture (south side)", "Oki Yuza Town, Yamagata Prefecture". Marine renewable energy power generation facility development promotion area. Public offer occupancy guidelines. January 2024. Ministry of Economy, Trade and Industry; Ministry of Land, Infrastructure, Transport and Tourism.

### 3.2.3.4 Commentary on the competitive selection model

#### 3.2.3.4.1 Outcomes

Two auctions have been held in Japan with a third that closed on July 19, 2024. The results of the auctions are displayed in Table 3-10. The high FIP for Saikai Enoshima is explained by the challenging ground conditions, including very hard substrate, expected to compromise installation activities.

**Table 3-10. OFW auction results in Japan**

| Round | Project Site | Consortia Awarded | Project Capacity (MW) | Award Date | COD | FIT/FIP | Price (JPY/kW) |
|---|---|---|---|---|---|---|---|
| R1 | Noshiro Mitane Oga | Mitsubishi Corp., Mitsubishi Corp Energy Solutions, C-Tech (Chubu EPCO Group) | 479 | 2021 | 2028 | FIT | 13.26 |
| R1 | Yurihonjo | Mitsubishi Corp., Mitsubishi Corp Energy Solutions, C-Tech (Chubu EPCO Group), Venti Japan | 819 | 2021 | 2030 | FIT | 11.99 |
| R1 | Choshi | Mitsubishi Corp., Mitsubishi Corp Energy Solutions, C-Tech (Chubu EPCO Group) | 391 | 2021 | 2028 | FIT | 16.49 |
| R2 | Happo Noshiro | JRE, Iberdrola Renewables Japan, Tohoku EPCO | 375 | 2024 | 2029 | FIP | 3.00 |
| R2 | Oga Katagami | JERA, J-Power, Itochu, Tohoku EPCO | 315 | 2023 | 2028 | FIP | 3.00 |
| R2 | Murakami Tainai | Mitsui, RWE, Osaka Gas | 684 | 2023 | 2029 | FIP | 3.00 |
| R2 | Saikai Enoshima | Sumitomo, TEPCO RP | 420 | 2023 | 2029 | FIP | 22.18 |

#### 3.2.3.4.2 Main challenges relevant for Vietnam

The main challenges experienced in Japan relevant to Vietnam are summarized below.

- Planning and site selection
  - **Site-specific MSP instead of nationwide.** This slows down development as extensive stakeholder engagement and site characterisation activities are repeated per zone.
  - **Lengthy stakeholder acceptance processes.** While local stakeholder acceptance is fundamental for the development of OFW projects, the planning framework in Japan puts local stakeholders in a controlling position, so they can easily block or delay the nomination of areas and the development of projects.
  - **Lack of clarity on OFW auction timelines.** With multiple areas in different stages of development. This is due to the resource intensive and stakeholder-centred designation process, with the date for designating a promotion zone ultimately being unpredictable. This hinders investors' auction preparation activities, portfolio management and overall cost reductions.
- Central model
  - **Inadequate and delayed results of site investigations.** Results are generally received late and are not of the quality and level of detail investors require to prepare their bids. Therefore, most investors end up conducting their own surveys to supplement the data received.
  - **Strain on government resources (time, budgets, personnel).** To conduct site characterisation studies for the large number of areas designated well in advance of auctions. Indeed, the complete application of the central model is only planned for a small number of sites at the moment.
- Auction
  - **Insufficient information on site conditions for bid preparation in a one-stage model.** This leads to investors conducting their own preliminary surveys, ultimately leading to limited certainty on their bid price and project costs.
  - **Lack of transparency on the evaluation of bids.** Auction results and the evaluation process were not appropriately disclosed in the first tenders. Efforts have been undertaken to mitigate this issue. Indeed, a greater level of detail was provided with the Round 2 auction results.[88]

[88] Selection Results of OFW Power Producers in Happo Town and Noshiro City, Akita Prefecture, March 22, 2024. Ministry of Land, Infrastructure and Tourism.

- **Extensive auction preparation, complex and subjective criteria.** The auction award criteria leave a significant room for discretion. The preparation of the auction is very resource intensive for the government and investors. The evaluation of proposals is complex and lengthy.

- **No price discovery and market price risk allocated to investors.** The shift to the FIP after Round 1, where a competitive FIT was in place, has led to near-zero bids, as shown in Table 3-10. This prevents price discovery as the costs of projects and the electricity tariffs they require are not disclosed. This is fundamental at the inception of a market, so price and cost expectations are set for investors, financiers and the supply chain. Additionally, transferring electricity price risk to investors, who would aim to secure PPAs with corporates or utilities, is translated into greater financing costs, ultimately increasing the cost of electricity.

#### 3.2.3.5 Lessons learnt for Vietnam

The lessons learnt for Vietnam after reviewing auction experiences in Japan are discussed below.

- **Conduct centralised marine spatial planning.** These processes are lengthy and highly resource intensive. Large-scale deployment requires centralised marine spatial planning, at least on a regional basis, instead of project-specific exercises.

- **Challenges for government-led surveys in one-stage models.** The implementation of a one-stage model with government-led surveys is a complex exercise taking multiple years and auction rounds where the outcomes will be suboptimal. Typical issues include costs; time to launch, executing and processing the studies and surveys; and validity and data quality.

- **Evolution of non-price criteria.** The implementation of appropriate non-price criteria is a long process taking multiple years and auction rounds. This is a progressive and dynamic exercise, usually controversial, and highly dependent on the experience and resources of auctioneers.

- **Clarify the OFW project development pipeline.** Specific auction timelines per area should be released, so investors can adequately build a portfolio of project opportunities and cost reductions are realised. Adequate tender frequency allows to elicit synergies between sites reducing costs by building pipelines.

## 3.2.4 Australia

### 3.2.4.1 Introduction

In 2021, the Commonwealth Government released the Offshore Electricity Infrastructure (OEI) Act, officially kick-starting the OFW industry in Australia by defining the process leading to the declaration of the first OFW zone in Gippsland, Victoria. As of early 2024, OFW zones were declared in New South Wales and Victoria, while additional OFW zones are currently open for consultation in Western Australia and Tasmania. All proposed and declared OFW zones are in Commonwealth Waters, more than 3 nm from the shore.[89]

Although the Commonwealth Government has not set OFW capacity targets, the State of Victoria targets 2 GW by 2032, 4 GW by 2035 and 9 GW by 2040. At this stage, no other State has provided the same level of transparency and coordination.

### 3.2.4.2 Project development process

Australia follows a **two-stage model** starting with the award of project-specific Feasibility Licences (FL), akin to a seabed lease in other markets, granting exclusive rights to awarded applicants for a nominal period of 7 years from award. The process is then followed by an offtake auction currently envisaged to be arranged separately by the States.

The Offshore Infrastructure Regulator (OIR) is part of the Commonwealth Government and administered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA), leveraging expertise from the domestic offshore O&G sector. The OIR remains in charge of coordinating processes related to OFW development in Commonwealth Waters, including initial stakeholder management.

The current approval process relies on the following steps: application and issuance of a FL by the Commonwealth Government, followed by a Commercial Licence (CL) application issued pre-Financial Close.

**Planning and Site Selection.** Zones shortlisted for OFW projects are defined and proposed by the OIR before opening for public consultation. Upon review of the consultation results, the Commonwealth Government revises the zone and proceeds with the declaration of the zone.

**Early & Late Development Stage.** Conducted by the investor and interfaces with various Commonwealth and State Government entities.

**Construction.** Conducted by the investor within the validity of the CL.

**Operations.** Conducted by the investor within the validity of the CL.

**Offshore transmission model (for Victoria).** Investors will build, own, and operate transmission assets from the OFW farm to the onshore grid connection point designated.

### 3.2.4.3 Summary of the design elements of the competitive selection model

Regulations and processes are currently in a phase of trial and error with frequent revisions issued to address concerns from market participants or reflect the latest market conditions and additional regulations. This approach enables the OFW industry to start although the regime applicable to the first projects and differences with subsequent rounds remain uncertain.

[89] Activities in State Waters are expected to be covered by a separate framework currently under development in the State of Victoria. No other insights were provided by other States.

## Table 3-11. Summary of key design elements for FLs [90]

| Auction Design Element | Description |
|---|---|
| Technology Selection | OFW-only auction, no distinction between fixed-bottom and floating technology. |
| Site Selection | Investors apply for specific site boundaries within larger areas identified by the OIR through MSP. |
| Seabed Lease Occupancy Period | FL with nominal duration of 7 years, unless extended for up to 7 years. Expiring at the time of granting the CL. |
| Award Criteria | Applications are selected based on the following key non-price criteria, note the specific weight per criterion was not disclosed to investors.<br>1. **Technical and financial capability:** quality of the internal and external expertise available to the Applicant; access to sufficient financial resources; and ability to carry out the (survey) works allowed by the FL.<br>2. **Project viability:** technical complexity of the project and how this is managed by the Applicant including the robustness of the project development plan to address identified risks; identified route-to-market options and demonstration of how to achieve each option; estimated commercial return to the Applicant including reasonableness of the proposed financing plan and ability of the Applicant to mitigate identified risks.<br>3. **Suitability to hold the license:** Applicant past performance (in terms of compliance with relevant legislation in Australia and internationally on offshore or other infrastructure projects); financial strength; and suitable corporate governance arrangements.<br>4. **National interest:** impact on the Australian economy and local communities; impact on National Security; reasonableness of the project timing; efficient use of the FL area including maximised power density; management of other uses in the FL area (i.e. O&G, fisheries). |
| Overlap Process | The process will only occur if Applications deemed of equal merit partially or fully overlap, this relies on the following high-level process:<br>• Overlapping Applicants are then invited by the OIR to initiate discussions to resolve the overlap.<br>• Applicants are then required to resubmit their application after resolving the overlap.<br>• Should Applicants be unable to resolve the overlap, a one-time financial offer may be required by overlapping Applicants in the form of a single uncapped sealed-bid to secure the FL. |
| Pricing Rule | Not applicable, auction award criteria exclude bid price, except for the overlap process (pay-as-bid). |
| Price Limits | Not applicable, auction award criteria exclude bid price, except for the overlap process where bids are not capped. |
| Bidding Process | Sealed-bid. |
| Area / capacity awarded per application | Maximum area per project 700 km$^2$. |
| Bid and Performance Bonds | No financial securities required. |
| Key Eligibility Criteria | Qualification criteria included technical, financial and legal criteria. Single application submission without pre-qualification stage. |
| Seller Concentration Rules | Applicants are not restricted on the number of applications submitted and awarded per FL round. |

[90] Guideline: Offshore Electricity Infrastructure Licence. Administration – Feasibility Licences. In relation to the Offshore Electricity Infrastructure Act 2021. Version 3, March 2024. Australian Government. Department of Climate Change, Energy, the Environment and Water.

Offtake auctions are expected to be coordinated by each State Government. Table 3-12 outlines the latest information released on the design elements for the State of Victoria, the most advanced. The auction framework and award criteria are still under discussion and will likely change.

**Table 3-12. Summary of initial auction design elements for the State of Victoria** [91]

| Auction Design Element | Description |
|---|---|
| Technology Selection | Technology-specific auction. |
| Site Selection | Each investor bids their own site. |
| Award Criteria | Price and non-price factors with main weighing on price factors. State-specific localization requirements. Partnership with Traditional Owners (i.e. first nations or aboriginal groups). |
| Remuneration Model | Type: CfD with the strike price set by the government, investors would bid on additional payments to close the revenue-cost gap. Additional payments might take the form of periodic payments contingent upon availability of the generation asset.<br>Duration: up to 20 years.<br>Indexation: potentially indexed, specific index still under discussion.<br>Caps (on remuneration received / electricity production): TBC. |
| Pricing Rule | TBC. |
| Price Limits | TBC. |
| Bidding Process | TBC. |
| Auction Quantity | 2 GW of capacity for the first auction scheduled for 2026. |
| Bid and Performance Bonds | TBC. |
| Key Eligibility Criteria | Applicants will need to hold a valid FL to participate in the auction. Other criteria to be confirmed. |
| Seller Concentration Rules | TBC. |

[91] Implementation Statement 3. December 2023. OFW Energy Victoria.
[92] Supporting OFW, February 14, 2024. Port of Hastings.

#### 3.2.4.4 Commentary on the competitive selection model

##### 3.2.4.4.1 Outcomes

The flexibility demonstrated by both the Commonwealth Government and the Victorian State Government allows the industry to incorporate lessons-learned in the process and account for the country's specificities (i.e. State approach, historically high localization, spread energy demand). So far seabed lease applications have been submitted in the States of Victoria (Gippsland) and New South Wales (Hunter), with 12 investors awarded in the former totalling 25 GW of projects and one investor in the latter with a 2 GW project.

##### 3.2.4.4.2 Main challenges relevant for Vietnam

The main challenges experienced in Australia relevant to Vietnam are summarized below.

- **Limited transparency over award criteria and ranking of applications.** The weights per criterion and the ranking methodology were not disclosed to investors.
- **Site overlaps and suboptimal use of zones.** As opposed to a grid / block-like system allowing developers to bid for pre-defined zones, the current process induces overlaps and a suboptimal use the larger zone auctioned.
- **Overlapping process requiring major overhaul.** Challenges are expected with the FL overlapping process as there is little incentive for Applicants to collaborate and resolve overlaps. Applications for the Gippsland FL process were submitted in April 2023 and awards were announced a year later in May 2024 demonstrating these issues.
- **Uncertainty over national OFW pipeline**. Apart from the State of Victoria's OFW target of 2 GW by 2032, no other targets have been defined at this stage in other States.
- **Small capacity auctioned for offtake support.** A capacity of 2 GW is expected to be auctioned by the State of Victoria in 2026. Most FL awarded in the Gippsland FL round rely on OFW projects with a capacity ranging from 1.0-3.0 GW to maximise the total allowable area of 700 km2 per FL. This essentially indicates that one or two projects would secure an offtake via the 2026 auction, which remains insufficient to entice the supply chain to support the projects.
- **Conflicting interfaces between Commonwealth and State Governments.** This is demonstrated with the rejection of a new terminal in the Port of Hastings, expected to support OFW, proposed by the State of Victoria and rejected by the Commonwealth Government on environmental concerns over a wetland.[92]

### 3.2.4.5 Lessons learnt for Vietnam

The lessons learnt for Vietnam after reviewing the project development process and auction experiences in Australia are discussed below.

- **Non-price criteria should be quantitative or measurable in a qualitative manner.** This is to aid the ranking proposals, allowing differentiation between applications. Award criteria that lead to the majority of applicants achieving the same score should be avoided.

- **Site selection greatly impacts market development.** The choice between leasing pre-defined blocks or allowing investors to freely define project boundaries impacts MSP and the government's auction preparation activities; the efficiency on the use of the seabed; the potential for overlaps and award criteria to solve these; investors' project concepts and business cases; and the level of standardization of OFW projects in the market (capacity, technology selection, anticipated cost levels), among other factors.

- **Certainty on the route to market.** Required if a two-stage model is adopted establishing a clear timeline of offtake auctions.

- **Aligning national and local governments.** This is required for the successful completion of competitive selection processes, and the development of the lateral infrastructure (ports, national transmission infrastructure) and supply chains the OFW industry requires.

## 3.3 Model proposed for Vietnam

**A two-stage model is proposed for Vietnam** considering the detailed review of the legal framework, the status of the OFW industry, the current capacity of key government authorities (nationally and locally), international auction processes and lessons learnt. The proposed model was socialised within the industry receiving positive feedback.

- Within the context of Vietnam, a one-stage competitive selection model presents the risk of major premia or stranded projects. Both could erode the confidence of financiers. Indeed, the protracted period between offtake auctions and FID is one of the main reasons behind the major electricity tariff renegotiations and project cancellations in the United States in 2023.

- Factors contributing to major premia or stranded projects under a one-stage model include:
  - Likely absence of site characterisation survey data and challenges for the government to conduct such surveys (cost, time, validity, data quality). Whether these are completed by the government or independently by OFW investors, major uncertainties remain in the market to fund the costs which site investigations require.
  - Investors would be required to commit to a long-term fixed electricity price, 20 years under the current PPA with EVN, before the award of exclusive survey rights.
  - The significant uncertainties in Vietnam's OFW sector, discussed in Section 2.1 cannot be solved in the short to medium terms to mitigate the risk of major program delays and underestimating project costs, the so-called winner's curse risk.
  - Given the status of Vietnam's OFW sector the period between a prospective competitive award of survey rights and the FID of projects is anticipated to be significant, increasing the risk of cost rises.
- Establishing a two-stage model would speed up the investor selection process and development of the market. This would give more time to clarify and amend key legal and regulatory frameworks required before the competitive award of the offtake, such as the terms and bankability of PPAs with EVN, the FS, grid connections and the expansion of the national electricity transmission system, and EIA and consenting regulations, among others.
- In the meantime, OFW investors could initiate project development and site characterisation activities, and engagement with local supply chains and stakeholders. For that to happen, a clear commitment including a timeline and target capacity for the second stage, the competitive award of the offtake, is required when the first stage, the competitive award of survey rights, is launched.

# RECOMMENDATIONS FOR VIETNAM'S COMPETITIVE SELECTION PROCESS

## 4.1 Key objectives for competitive selection processes in Vietnam

The design of an investor selection mechanism depends on the strategic objectives it is meant to achieve. Its success hinges on how well it addresses the specificities of the technology and market. The various design elements of the selection process can enhance the achievement of certain objectives but may also compromise others.

The objectives of the competitive selection model proposed for Vietnam are discussed below, and the proposed design aligns with these objectives.

- **Ensuring the delivery of the projects awarded.** Investor selection should assess project feasibility and the capabilities and experience to develop the projects. Additionally, safeguards need to be established to ensure project completion and timely delivery, track commitments, and prevent speculative bids. Delays or abandonments of projects would compromise decarbonisation, socio-economic objectives, the launch of the OFW sector, and the overall energy security of the country.

  The delivery of the projects awarded is ensured by setting adequate eligibility criteria, and with the criteria for the award of survey rights focused on project feasibility, capability and experience. Bid and performance bonds for the competitive award of survey rights and the offtake are also recommended.

- **Arranging a straightforward competitive selection process.** The complexity of the first competitive selection process should be minimised for a quick and successful delivery. The design of the process needs to be aligned as much as possible to the existing legal and regulatory frameworks in Vietnam to minimise the regulatory risk and the need for regulatory change.

  The fit of the process proposed and the potential regulatory change needed are outlined in Section 4.4.

- **Ensuring cost-effective electricity tariffs awarded to OFW projects.** This is required to safeguard the affordability of electricity tariffs for end-users, and considering opportunity costs in the electricity sector and other infrastructure programmes.

  This is achieved by proposing a price-only competitive selection for the offtake.

- **Establishing objective, transparent, reasonable and non-discriminatory eligibility and award criteria.** Any failures in the implementation of the first rounds of competitive award of survey rights or any major legal challenges would have long-lasting impacts in Vietnam's OFW market. This would also hinder attracting international investors and financiers that could provide the lowest cost of capital.

  The delivery of these objectives is intended with the proposed award criteria and evaluation method.

- **Giving confidence to OFW investors on future opportunities to secure an offtake for the projects.** OFW investors need visibility and confidence on future competitive selection processes for the offtake, i.e. on additional opportunities to win such offtake, so they can fund the expensive development activities required before competing for the offtake (surveys, licensing, engineering and design, procurement).

  The delivery of this objective would be achieved if a schedule of competitive offtake awards was officially established when the competitive award of survey rights is launched.

## 4.2 Key design elements of the competitive selection processes

A two-stage model with separate competitive selections for exclusive survey rights, the first stage, and the offtake, the second stage, is proposed for Vietnam. This is extensively justified in Section 3.3.

The two-stage model discussed in this section is proposed for the development of projects under the IPP framework. Key divergences for development under the PPP framework are noted where applicable in footnotes in Section 4.4, but the base case assumption is the development of an IPP OFW project.

## 4.2.1 Stage 1 – exclusive survey rights

### 4.2.1.1 Summary of the model proposed

The design of the competitive selection process for the first stage, the award of exclusive survey rights, is presented in Table 4-1. This is informed by the diagnosis of the state of the OFW market in Vietnam, and the review of international experiences including lessons learnt. The specifics of the competitive selection process will need to be agreed with the industry through market dialogues.

The application process and approach should be designed to accommodate future rounds, but the objectives should be reviewed after each round and lessons learnt incorporated.

**Table 4-1. Proposal for competitive award of exclusive survey rights in Vietnam (Stage 1)**

| Design Element | Description |
|---|---|
| Technology Selection | Competitive selection of OFW projects only, independent from other energy or infrastructure procurement programs. The preparation of the competitive selection would require extensive work and close engagement with investors that should not be conditioned or bundled with other procurement initiatives. |
| Site Selection | OFW investors to freely define site boundaries within larger areas identified by the MONRE through the NMSP Implementation Plan. The implications of this proposal against the alternatives are explained in Section 4.2.1.2. |
| Term of exclusive survey rights | The competitive process should award exclusive survey rights [93] lasting at least 10 years, with clear criteria for extensions for a set number of years (e.g. 5-year extensions). Extensions would be subject to demonstrating progress on project development activities (seabed surveys, metocean measurement campaigns, environmental surveys and submission of the EIA). In later stages, OFW investors would apply for sea area allocation, subject to obtaining the required permits and other requirements to proceed constructing the projects. |
| Award Criteria | A multi-criteria competitive selection process is proposed excluding price criteria. The award criteria are designed to ensure the delivery of the projects, focusing on understanding the local context, project feasibility, risk identification and the capability and experience to develop and build the projects. The criteria are organised into the seven categories listed below, with grades and score cards to be released when the competitive process is formally launched.<br>1. Project concept<br>2. Project plans<br>3. Risk registers<br>4. Early cost estimations<br>5. Capability and experience<br>6. Socio-economic benefits<br>7. Sustainability<br>More details on the proposed sub-criterion per category are provided in Section 4.2.1.4.1. The principles for the evaluation of applications are enounced in Section 4.2.1.5. |
| Pricing Rule | Not applicable, award criteria exclude bid price |
| Price Limits | Not applicable, award criteria exclude bid price. |
| Bidding Process | Sealed bid. This is justified to simplify the execution of the competitive selection process, facilitate the entry of smaller bidders and reduce the risk of collusion. |

[93] The award of exclusive survey rights should be a pre-requisite for sea area allocation rights, learned from the example of Australia. See Section 3.2.4 for more details.

| Design Element | Description |
|---|---|
| Area / capacity awarded per a pplication | Since installed capacity will be influenced by information discovered during site development activities and other energy system considerations, it is suggested that applications are expressed in terms of area (km2), with the project capacity (MW) provided as informative data.<br>To ensure competition, a maximum area per individual application would be set, alongside minimum project area and minimum seabed density to ensure efficient use of the seabed. |
| Auction quantity | The competitive selection process should award a large capacity over multiple projects to establish a pipeline, create a diverse and competitive market, and account for potential attrition and cancellations. Recommendations on the auction quantity are discussed in Section 4.2.1.3. |
| Bid and Performance Bonds | Realisation safeguards are important to ensure the completion of survey and development activity, to prevent excessive delays and speculative bids. Both bid and performance bonds are recommended at Stage 1.<br>A bid bond would be retained if a bidder is awarded survey rights but withdraws before signing the contract. Similarly, performance bonds would be retained if a developer obtains the survey rights but fails to complete the survey and development activity within the 10-year term.<br>Section 4.2.1.6 discusses these realisation safeguards in greater detail. |
| Key Eligibility Criteria | The eligibility criteria shall include technical, financial and legal criteria. The specific criteria proposed is presented in Section 4.2.1.7. |
| Seller Concentration Rules | The capacity awarded per bidder should be capped to ensure competition in the market. Capacity caps could apply on a pro-rata basis considering the equity share in any consortia. |

#### 4.2.1.2 Site selection

It is proposed that OFW investors freely define OFW site boundaries within larger areas identified by the MONRE through the NMSP Implementation Plan. Placing this responsibility on OFW investors is deemed to ease and accelerate the preparation of the competitive selection process, since they are more experienced conducting site screening activities. This would allow investors to define feasible project concepts with the risk profile desired.

Alternatively, a competitive selection for specific blocks defined through NMSP could be arranged in the medium to long term when there is better understanding of site conditions, socio-environmental impacts, and business cases for OFW projects in Vietnam. As the OFW market matures, factors such as seabed use efficiency or projects standardisation may become more important, potentially justifying a more centralised approach to seabed leasing.

#### 4.2.1.3 Auction quantity

The principles to define the auction quantity are detailed below.

- The regulators should decide the total seabed area for which survey rights should be awarded to meet Vietnam's long-term OFW and climate targets. These areas could then be split over a number of rounds in different years ramping up capacity over time.

- Coordination between regions is advised, particularly between the north, central and south areas. Competitive selection rounds might be alternated between these regions to ensure balanced development.

- The first rounds should award a large capacity over multiple projects to create a diverse and competitive pipeline, accounting for potential attrition and cancellations of projects. The auction quantity should consider socio-environmental impacts, energy systems planning, and regional infrastructure assessments to avoid bottlenecks on grid connections, port infrastructure, supply chain or securing the offtake.

- As a reference, the capacity awarded in Stage 1 could be two to three times the amount targeted for the first round of competitive award of offtake contracts (Stage 2) to foster competition.

- Subsequent rounds should help establish a steady pipeline of projects over a number of years, supporting industry development and growth.

- A period of two years or less between rounds, as seen in Japan and Taiwan, is recommended to maintain a strong project pipeline whilst mitigating the risk of bottlenecks.

#### 4.2.1.4 Award criteria

##### 4.2.1.4.1 Non-price criteria proposed

The award criteria proposed is structured into the categories and sub-criterion below, with specific weights to be determined through industry dialogues. Non-price criteria should be as objective, transparent, reasonable, measurable and non-discriminatory as possible. Ongoing market dialogues with key stakeholders should continue to refine and update the non-price criteria proposed. The weighting of each criterion would reflect its importance to achieving the objectives of the competitive selection process.

(1) **Project concept** – applicants should demonstrate project feasibility has been adequately considered in Vietnam's context.

a. Desktop feasibility study.
b. Project design envelope.
c. Preferred project concept.

(2) **Project plans** – applicants should outline the process for developing the project, from the initial concept to obtaining the necessary consents for financing and construction.

a. Project development plans up to securing the offtake.
b. Project development plans from securing the offtake to FID.
c. Finance plan.
d. Route to market plan.

(3) **Risk registers** – applicants should demonstrate their understanding of the project's complexity, risk and uncertainties, ensuring these factors are captured in the design envelope, project plans and early cost estimations.

a. Technical.
b. Socio-environmental.
c. Legal and regulatory.
d. Macroeconomic.

(4) **Early cost estimations** – project plans should be supported by appropriate budgets and the estimation of the range of costs for construction and operations.

a. Development budgets up to securing the offtake (matching (2)(a)).
b. Development budgets from securing the offtake to FID (matching (2)(b)).
c. Early estimation of construction and operations costs for the preferred project concept.

(5) **Capability and experience** – applicants must demonstrate satisfactory technical competence and financial strength to realise the projects.

a. Track record in OFW, offshore engineering, offshore O&G, large scale renewables and renewables projects.
b. Technical competence.
c. Resourcing plan.
d. Financial strength.

(6) **Socio-economic benefits** – applicants should explore the positive ripple effects that OFW could provide to Vietnam.

a. Competence development of local industries and personnel.
b. Review of national supply chains and proposed engagement.
c. Estimation of contributions to the national and local economies.

(7) **Sustainability** – the development of the projects should take place in a sustainable manner, taking into existing uses of the sea space and potential socio-environmental impacts and proposed mitigations.

a. Co-existence with other uses of the areas.
b. Consideration of socio-environmental impacts and proposed mitigations to enhance social acceptance.

##### 4.2.1.4.2 A price-based investor selection is not recommended for Vietnam

Due to the high development risk, a price-only selection would likely reduce interest, as any high bids would seek to recover these through higher electricity tariffs later.

Financial bids require an estimate of the economic value of a site, factoring in project costs, financing conditions, revenues and operational timelines. These factors are highly uncertain in early-stage markets like Vietnam, where financial close might happen 8 to 10 years after the award of survey rights. As a result, financial bids would be highly speculative, potentially creating a winner's curse situation, where bidders who have underestimated the costs and / or overestimated revenues the most are the ones who win the competitive selection, hindering project realisation.

A capped price-only selection is not a viable remedy to the underlying problem. A low cap would result in no differentiation between bids, necessitating additional non-price criteria, while a high cap would essentially function as an uncapped competitive selection.

#### 4.2.1.5 Application evaluation

The principles for the evaluation of applications are outlined below.

- Grades and detailed scorecards are suggested as scoring methods. A detailed marking system would be created, potentially with independent experts and in consultation with industry, to evaluate application responses and support the ranking process.

- It is recommended that the review and scoring of bids are conducted together with independent experts to ensure responses, including complex information, are evaluated appropriately and thoroughly.

- A balanced approach to transparency in the review of applications is recommended:
  - Be fully transparent about what will result in a failure, especially around eligibility checks.
  - Be transparent about which sections are measured as pass/fail versus which sections use a scored/ranked approach.
  - Be transparent about the overall objectives and those specific to each question, providing an overview of what the regulator is seeking. However, avoid directly disclosing the marking scheme, as this could lead to uniform responses from applicants, making it difficult to differentiate between bids.
  - Be transparent about section weightings.
  - Be transparent about scoring and ranking methodologies.
  - Provide feedback post application on the applicant's ranking per section, and any major fail points.

#### 4.2.1.6 Tracking and enforcing commitments

The principles for tracking and enforcing commitments are outlined below.

- Enforcement measures should be incorporated but these need to be cognizant of external factors, such as excessive delays in IPD approval and investor selection, planning and permitting processes. Specific exclusions would depend on the exact commitments that OFW investors need to make as part of the competitive award of survey rights.

- A performance bond is proposed at this stage to ensure the credibility and robustness of the competitive selection process for survey rights and to incentivise faster development timelines. Performance bonds should be capped at a reasonable level, considering the early stage of the projects and the great uncertainties in Vietnam's OFW market. Otherwise, OFW investors might not participate in the competitive selection process.

- Any commitments should be tracked by official deliverables including number of surveys, quality of survey work, or stakeholder and community engagement, among others.

#### 4.2.1.7 Overall ranking and offer of survey rights to applicants

##### 4.2.1.7.1 Hierarchy of projects and clearing of the competitive selection process

As part of the evaluation process the applicants would be ranked from highest to lowest. The assignment of site boundaries would begin by offering the 1st placed applicant their choice of project boundary. The 2nd placed applicant would then be offered their choice project boundary, unless this overlaps with the 1st placed project boundary. Two alternative options to deal with this situation are suggested, others might be considered after consultation with industry:

(1) The application with a lower score is automatically rejected. This is the simplest approach and avoids triggering changes in other applications. This was the approach taken in ScotWind.

(2) If the overlap between applications is relatively small, e.g. if the boundary of the 2nd placed applicant overlaps less than 30% that of the 1st, the 2nd applicant could slightly tweak their site boundary and submit it again. The 2nd placed applicant would reduce the project area but maintain the project capacity (i.e. increase seabed density) and/or extend into the surrounding area if available, and with appropriate characteristics in terms of water depth (i.e. broadly matching their original proposal for the site). Thereby, investors are meant to slightly tweak the boundary of their sites, not screen a new area.

A short but sufficient time window would be provided to submit the new boundary, the specific duration should be agreed with the industry. The period to clear the competitive selection process and solve overlaps should be the shortest possible, ideally less than a couple of months. Investors would not be allowed to contact each other to guarantee the integrity of the process.

#### 4.2.1.7.2 Dealing with overlapping applications of equal merit

Two alternative ways to solve overlapping applications of equal merit are proposed, others might be considered after consultation with industry:

(1) A random number allocation at the registration of each application, so that a higher number is ranked higher. This was the last step considered in ScotWind to solve ties, as discussed in Table 3-1.

(2) A clearing process where selected applicants would be allowed to initiate discussions to solve the overlap. Applicants would then be required to resubmit their application after resolving the overlap.

To minimise the occurrence of this process the award criteria need to allow differentiation between bidders, avoiding that the majority of applicants achieved the same scores.

#### 4.2.1.8 Eligibility criteria

These criteria help maintain the integrity of the competitive selection process, minimise the risk of project delays or failures, and ultimately contribute to the successful implementation of projects in line with policy objectives. To ensure a fair and transparent process, the minimum bidder requirements should be clearly defined, non-discriminatory, and made publicly available well in advance.

The eligibility criteria proposed aims to strike a balance between maintaining high competition and filtering only capable bidders. The main categories that should be considered for Vietnam are discussed below, note the list is not exhaustive.

(1) Financial requirements: revenue ratio, operating profit margin, net assets balance, credit rating, and demonstrated access to financing, among others.

(2) Track record: number or capacity of projects completed in onshore renewables, offshore oil and gas, or marine / coastal engineering.

(3) Legal requirements: compliance with environmental, tax, anti-bribery, anti-fraud, and health and safety regulations.

#### 4.2.1.9 Future competitive selection rounds

While the first round could focus on a specific region or large zone, investor confidence would be enhanced by a coordinated approach outlining a suite of competitive awards of survey rights over other regions in Vietnam. This should include high-level timelines.

### 4.2.2 Stage 2 – securing a PPA with EVN

The design of the competitive selection process for the second stage, the competitive award of the offtake with EVN, are presented in Table 4-2. This is informed by the diagnosis of the state of the OFW market in Vietnam, and the review of international experiences including lessons learnt. This proposal has been socialised with the industry. The specifics of the competitive selection process should be agreed with the industry through market dialogue.

## Table 4-2. Proposal for competitive award of offtake contracts with EVN in Vietnam (Stage 2)

| Design Element | Description |
|---|---|
| Technology Selection | Technology-specific competitive selection for OFW projects. This is a new asset class in Vietnam, presenting major technical, financial, planning and cost differences against onshore renewables, hence it could not compete in a technology neutral process in the short and medium terms. A technology-specific competitive selection is also justified to allow price discovery, identify cost structures and challenges, enable technology learning and supply chain development. |
| Site Selection | Each investor would bid their own site. |
| Award Criteria | A price-only competitive selection is proposed for the offtake. This allows a simpler and more objective preparation of the tender and evaluation of bids and would deliver cost-effective tariffs for OFW projects, which is assumed as a primary objective of the process. |
| Pricing Rule | Pay-as-bid. This is assumed to minimise the winner's curse risk as no rational bidder is expected to bid below its true costs. The pay-as-bid pricing rule is the most common to procure renewable energy worldwide. Competition to minimise support payments would be induced by adjusting the capacity awarded and the price limits. |
| Remuneration Model | Type: PPA with EVN.<br>Duration: 20 years.<br>Indexation: tariff denominated in VND or USD and indexed to a relevant industry benchmark. If the tariff was denominated and paid in VND without any foreign exchange indexation, the investor would be exposed to the risk of depreciation of the VND currency during the contract period. This might impact the bankability of the PPA.<br>Caps (on remuneration received / electricity production): no caps. |
| Bidding Process | Sealed bid, to simplify the competitive selection process. |
| Capacity awarded | A first competitive award of the offtake of at least 4 GW is suggested to help achieving the 6 GW by 2030 OFW target. A timeline of regular multi-gigawatt competitive selections should be established to provide visibility and confidence on future opportunities to secure offtake agreements. This confidence is needed to fund the expensive development activities required to compete for the offtake (surveys, permitting, engineering and design, procurement). |
| Price Limits | A price ceiling would be set pursuant to a Decision of the MOIT and made public, allowing OFW investors to structure their bids and prevent the rejection of numerous qualifying projects. The methodology to determine the ceiling price should be developed in consultation with OFW investors and should account for factors such as the changing cost of technologies, site conditions, regulatory frameworks, tax regimes, financing conditions, macroeconomic factors and market risk premiums.<br>Setting a floor price is not recommended for OFW projects in Vietnam, as it is not standard practice in renewable energy procurement. |
| Bid and Performance Bonds | Realisation safeguards are important to ensure project completion after awarding the offtake and to prevent implementation delays and speculative bids.<br>A bid bond might be retained when a bidder is awarded the offtake but then withdraws before signing the contract. Performance bonds, on the other hand, could be retained if a developer has signed an agreement but then fails to complete the project within the agreed time frame.<br>Bid and performance bonds should be balanced and capped, otherwise OFW investors will increase their bids or skip the competitive selection. Clear rules should be established behind the execution of bonds with explicit exclusions for reasons outside of the control of OFW investors, such as grid connection delays. Exclusions related to the negotiation of the PPA with EVN and the signing process are anticipated to be the most contentious.<br>Specific bid and performance bonds should be agreed with investors through market dialogues. |
| Key Eligibility Criteria | The eligibility criteria shall include technical, financial and legal criteria, similar to that of the competitive selection for the seabed lease discussed in Section 4.2.1.7. Additionally, material pre-qualifications are proposed to ensure project maturity, which may include EIA approval, grid connection agreements and the approval of the FS. |
| Seller Concentration Rules | At least for the first competitive selection rounds, seller concentration rules are not recommended for the competitive offtake award, given the early stage of the market and the focus on cost reduction. |

## 4.3 DPPA

The DPPA mechanism is an alternative regime to an offtake under a PPA with EVN. On 3 July 2024, the Government issued Decree 80/2024/ND-CP to officially introduce this approach to the market. The contractual basis covers:

- Physical DPPA: contract for the purchase of power between a renewable energy generator and a large electricity user with a direct connection to the renewable energy project via power lines developed by the renewable energy generator. This is also permitted under Article 47.1(b) of the Electricity Law.

- Virtual DPPA: grid-connected renewable power plants join the VWEM on a direct basis and enter into a virtual PPA in the form of a CfD with large electricity users or an Authorised Electricity Retailer. The electricity price is determined on a market basis, subject to any cap provided under the VWEM operation rules. The current VWEM operation rules (Circular 45/2018/TT-BCT) allow OFW power plants with an installed capacity of more than 30 MW to decide to participate, whether directly or indirectly (Article 4). The other two contractual agreements under the virtual DPPA regime include (i) a PPA between EVN and a renewable energy generator; (ii) PPA between a large-scale customer or an Authorised Electricity Retailer and a PC under EVN, under which the PC sells electricity to the large-scale customer or the Authorised Electricity Retailer.

Whichever option is chosen, OFW investors would have an option not to engage in any future competitive award of the offtake with EVN. The competitive allocation of the exclusive survey rights, the first stage (see Section 4.2.1), and relevant procedures to obtain project permits would remain the same, subject to any designation or supplementary regulation which may apply to OFW projects which elect to be DPPA-only projects.

However, whilst DPPAs could be a route to market for OFW projects in the future, these are likely unfeasible now. The long-term prospects of DPPAs as a route to market of OFW projects are highly uncertain and would depend on, among other factors, long-term power price expectations and the delta between these and tariffs sought by OFW projects; any government interventions in the power market and changes in energy policies; the cost competitiveness of OFW projects against onshore renewables; and the availability of creditworthy offtakers and the visibility they had on their long-term electricity demand (10 to 20 years).

## 4.4 Legal framework analysis

Implementation of the two-stage competitive selection process detailed in Section 4.2 **(Proposed Model)** would require legislative and regulatory change to address the divergences between the Proposed Model and the situation both under law and in practice in Vietnam.

Section 4.4.1 identifies the key practical, legal and regulatory challenges that would need to be addressed in order to introduce the Proposed Model.[94]

Section 4.4.2 outlines the options for competitive selection for OFW projects within the current legal framework and in the absence of legal and regulatory reform.

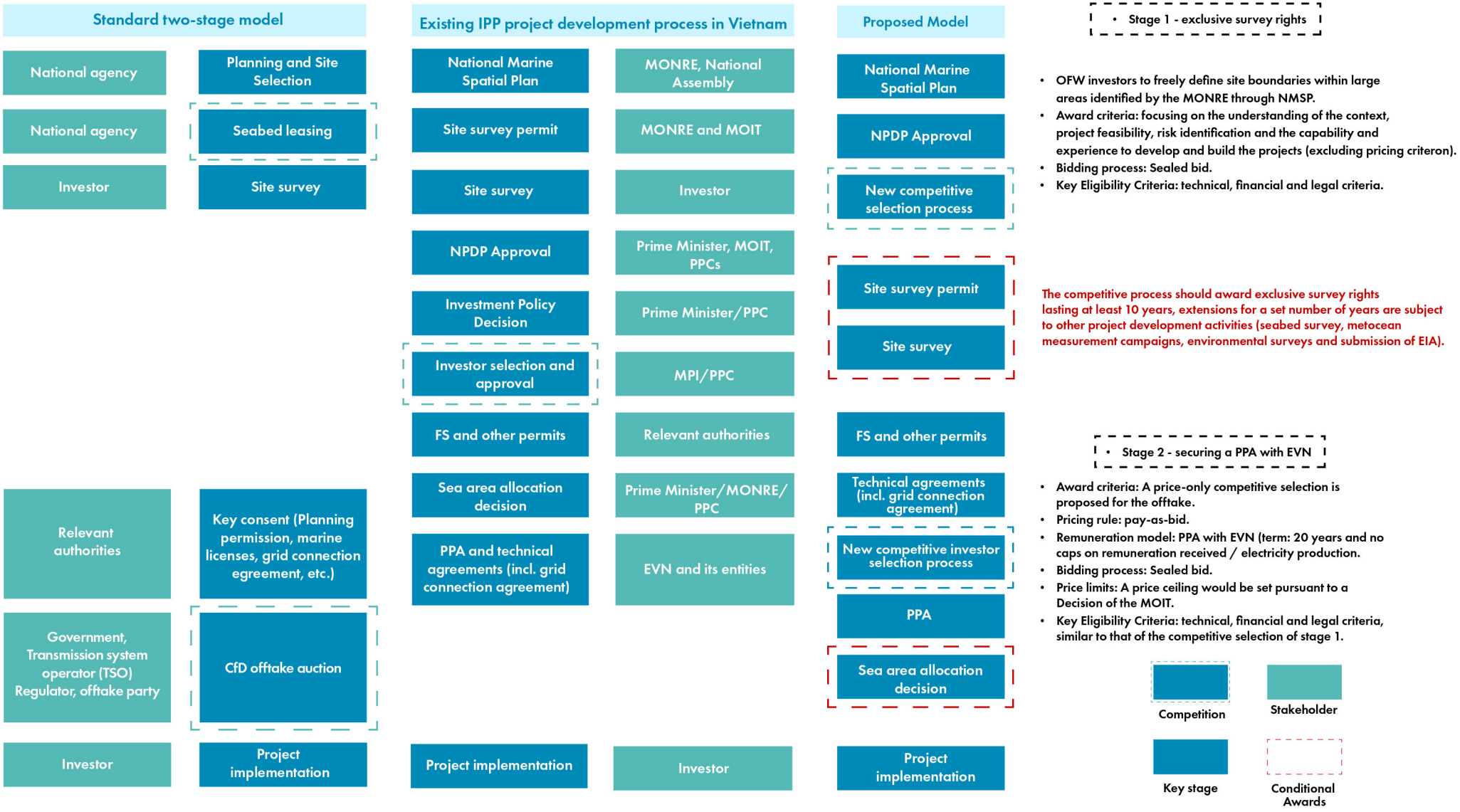
Analysis in this section is with respect to development of an IPP project only. Key divergences with respect to development under the PPP framework are noted in footnotes for further discussion and consultation.

[94] This report does not undertake an analysis of the substantive and specific legal and regulatory reform required for the introduction of the Proposed Model.

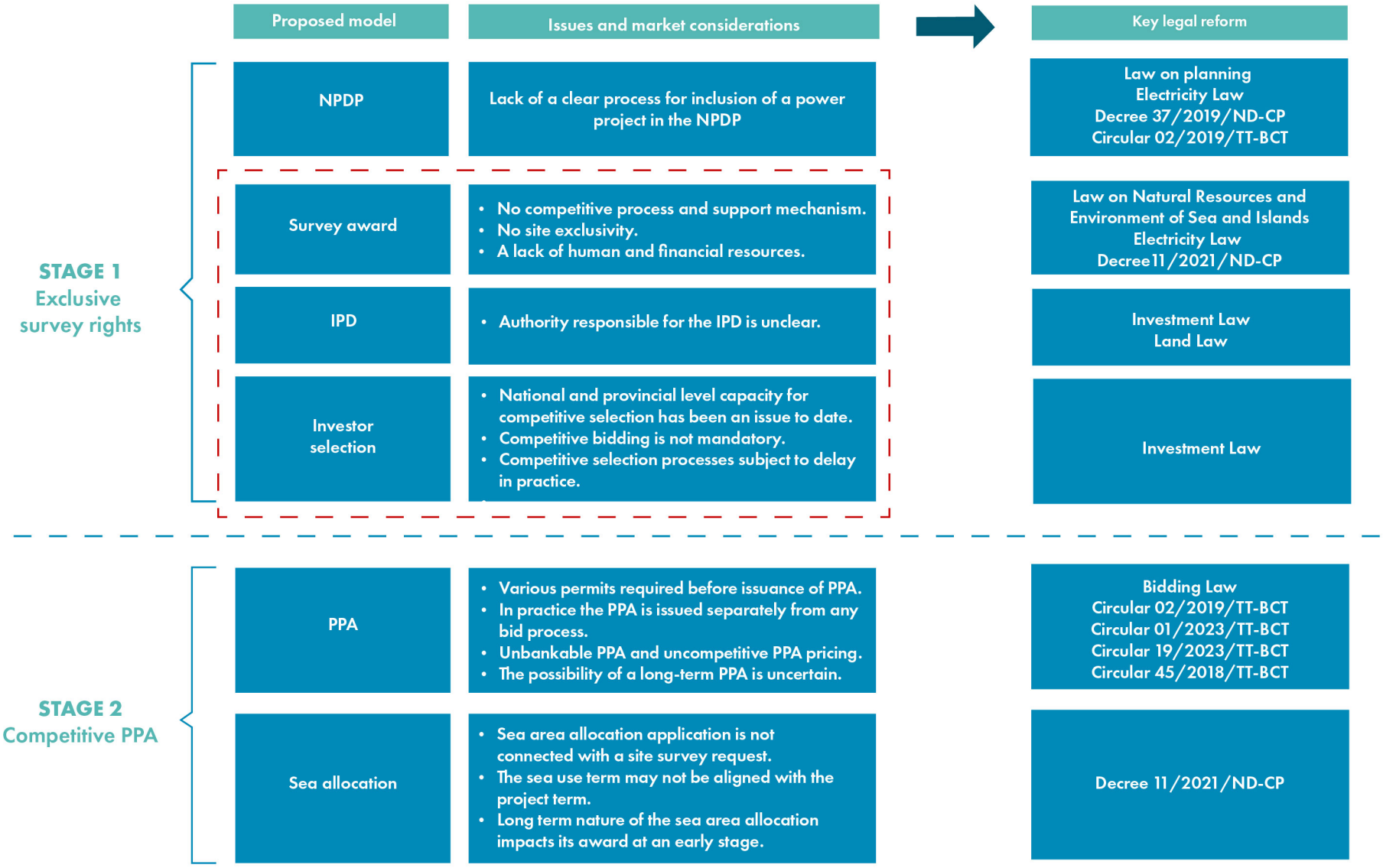
### 4.4.1 Introduction of the Proposed Model – challenges and reform required

The Proposed Model envisages the introduction of two stages of competitive selection (i) Stage 1 for the award of exclusive survey rights; and (ii) Stage 2 for a PPA award with EVN.

## Figure 4-1. Proposed Model - Indicative structure



## Figure 4-2. Key issues in implementing the Proposed Motel



#### 4.4.1.1 Stage 1 - award of exclusive site survey rights

Whilst site survey rights are not currently awarded on a competitive basis in Vietnam a new procedure for this purpose could be introduced subject to necessary legal reform.

Key issues which would need to be addressed prior to the introduction of competitive selection for survey awards include:

- Issuance of an NMSP Implementation Plan to facilitate site identification, selection and approval.
- Approval for site survey rights to be granted on an exclusive basis and for a fixed period.
- Existing or new authorities assigned responsibility for administration of the competitive selection process and allocated state budget, capacity and resources for this purpose.
- Assessment of whether the competitive selection process for the site survey application should or could form part of the IPD application and approval process for OFW projects. This would likely require a consolidation or annexing of the two applications and awards on a non-price sensitive basis.[95]
- Acceptance that sea area allocation rights (surface and subsea) would not be granted until after Stage 2, or an amendment of existing legislation to facilitate the earlier award of sea area allocation rights.

Specific issues and legislation are considered further in Table 4-3 below.

[95] This study has not undertaken a review of the legal basis or legal reform required for consolidating or combining the site survey application and award with an IPD process which involves bidding. Further and separate legal and regulatory analysis is required with respect to this issue. As such this report is limited to stating that an assessment of the issue is required as opposed to making a recommendation or providing a conclusion.

## Table 4-3. Stage 1(A) – Site survey

| Key stage | Issues, practical and market specific considerations | Changes required to establish the Proposed Model in Vietnam | Current legislation relevant to the proposed changes | Stakeholders to be consulted[96] |
|---|---|---|---|---|
| **Stage 1 – Site survey and key consents** | | | | |
| **Stage 1(A) Site survey – sites proposed by investors within areas designated for OFW are awarded a site survey pursuant to a non-price sensitive competitive selection process** | | | | |
| **Site identification and approval** | • The NMSP has not included a map of specific sea areas designated for OFW development, among other materials.<br>• Process for investors to propose projects to be included in the NPDP is subject to clarification. (recession of Article 4, Circular 02). | Complete the NMSP Implementation Plan and related support materials, including a map of sea areas. | Resolution 139/2024/QH15. | MONRE. |
| **Site survey exclusivity** | • Site exclusivity during the survey period is not currently granted.<br>• Survey rights may need to be conditional, subject to a time limit. | • Grant an exclusive survey right for a period sufficient for project development, 10 years is suggested with an option for extension.<br>• Extensions would be subject to demonstrating progress on project development activities. | • Law on Natural Resources and Environment of Sea and Islands.<br>• Decree 11. | MONRE. |
| **Site survey approval and scope[97]** | • Site survey and sea area allocation approvals are not subject to competitive selection.<br>• The current process for applying for an IPD and investor selection does not provide favourable conditions for investors holding survey rights.<br>• There is no existing mechanism (e.g. cost recovery) to incentivize the private sector to support state led survey work. | • The sea area allocation award will follow the PPA award. Therefore, there should be a consultation process to determine the scope of "critical survey rights" required and an assessment of how this will be impacted by the absence of sea area allocation rights.<br>• The survey right should cover not only wind and metocean measurement rights but also the rights to conduct necessary technical activities with respect to the seabed on the basis of ensuring marine security and minimising negative environmental impacts. Further favourable rights should also be considered.<br>• Introduce a mechanism to protect investors rights and property (esp. when they do not succeed in subsequent steps). | • Electricity Law<br>• Decree 11. | MOIT, MONRE. |
| **Bid process administration** | • A lack of national and provincial level capacity has been an issue in competitive selection processes to date.<br>• State budget and resources have to date not been allocated for this purpose.<br>• Existing ministries or a new agency are required to be authorised for administering the process. | • Develop capacity building programmes.<br>• Define the administration of competitive site survey awards as an activity entitled to state budget allocation.<br>• Identify the ministry in charge of organising the competitive process or lay the legal foundation for establishing a new agency.<br>• Assess combining the site survey and IPD application processes. | Investment Law, Electricity Law, Law on Natural Resources and Environment of Sea and Islands. | MONRE, MOIT, MPI, MOF. |
| | | | Electricity Law, Law on Natural Resources and Environment of Sea and Islands. | MPI, MOIT. |
| | | | Decree 11. | MONRE, MOIT, MPI. |

[96] Including ministerial level authorities only.
[97] The site survey approval would not include seabed leasing rights which would be granted subsequently.

#### 4.4.1.2 Stage 1(B) – key consents

Under a conventional two stage model, following the award of survey rights the investor is required to obtain key consents in advance of progressing the second stage of competitive selection for a PPA award.

Within this context a key issue to address with respect to the Proposed Model in Vietnam is determining when, and the basis on which, the IPD for the relevant project is issued.

##### 4.4.1.2.1 Combining the site survey and IPD processes

To avoid two sequential competitive selection processes, it could be further assessed how the site survey award is issued following issuance of the IPD and the applicable investor selection approval.

For this purpose, one option would be to undertake a review of the basis on which the award criteria detailed in Section 4.2.1.4.1 could form part of the IPD application criteria for an OFW project which is subject to bidding. This would be for the purpose of facilitating a site survey award following issuance of the relevant IPDA and/or Investor Approval Decision.

It would also be necessary to review legislation governing the award of site survey rights.[98] This analysis would need to assess if legislation could be amended such that an award of site survey rights, for an OFW project which is subject to bidding, is subject to an applicable IPD and investor selection approval process.[99]

The relevant form of competitive selection would need to be determined with two options currently available for OFW (i) competitive selection or (ii) open bid. Recent legislative proposals indicate that the open bid process may be preferred going forward.

For a competitive selection process, it would be necessary to determine (i) the authority responsible for OFW IPDs; and (ii) applicable investor selection requirements.

For an open bid process, it is anticipated that this would (i) be designed by a state committee with input from international experts; (ii) administered on a national or project specific basis; and (iii) accompanied by capacity and resource allocation both nationally and provincially.

##### 4.4.1.2.2 Bid process administration and capacity

National and provincial level capacity will need to be developed with respect to the administration and delivery of the competitive selection process.

Without such reform a competitive selection process for the OFW sector can be expected to face administrative delay due to issues which have prevented the success of competitive processes in respect of power projects in Vietnam to date.

Specific issues and legislation with respect to key consents are considered further in Table 4-4 below.

[98] Item 1 of Official Dispatch 9286/VPCP-NN dated 24 November 2023 has put the legislation governing the site survey award (including authority, documents, and procedures for site survey approval) on hold while the Draft Decree amending Decree 11 is completed. Consequently, legislation is cited on a general basis as the future Amended Decree 11 will not cover this subject

[99] This study has not undertaken an analysis of the specific legal and regulatory change required to implement this option.

## Table 4-4. Stage 1 (B) – Key consents

| Key stage | Issues, practical and market specific considerations | Changes required to establish the Proposed Model in Vietnam | Current legislation relevant to the proposed changes | Stakeholders to be consulted |
|---|---|---|---|---|
| **Stage 1 – Site survey and key consents** | | | | |
| **Stage 1 (B) – Key consents – Investors granted site survey rights are responsible for obtaining key planning and project approvals** | | | | |
| **NPDP** | An investor is required to propose inclusion of the planned projects into the NPDP if such projects have not already been identified. The process for investors to propose their projects to be included in the NPDP is subject to clarification following the recession of Article 4, Circular 02. | Introduce requirements and a uniform process for OFW projects to be included in the NPDP. | Law on Planning, Decree 37/2019/ND-CP, Electricity Law, Circular 02 | MOIT, MPI. |
| **IPD** | • The authority responsible for issuing the IPD to OFW projects is subject to review.[100] | • Identify the authority(ies) responsible for issuing OFW IPDs.<br>• Review pre FS costs responsibility and mechanism for OFW. | Investment Law | MPI, MOIT. |
| | | | Investment Law, Land Law | MPI, MOIT, MONRE |
| **Investor selection - IPP** | • Under the current legal framework, the process for the selection of investors for OFW projects requires clarification.<br>• IPP projects selecting investors through the bidding process under the Investment Law are delayed.[101]<br>• Issuance of the IPD, IRC and ERC are required before negotiation of a PPA and issuance of a sea use area allocation decision.<br>• National and provincial level capacity has been an issue in competitive selection processes to date.<br>• Tender RFP documents and process to be designed and national capacity built for delivery. | • Assess substantive legal reform and process design for different options including:<br>◦ Linking the site survey and IPD application and award process es under a new competitive selection process.<br>◦ Open bid RFP tender process for OFW.<br>• Permit investors of OFW projects to be directly appointed [102] pursuant to the competitive process and criteria of the site survey award stage, subject to the form of stage 1 competitive selection, site survey reports and IPD requirements. | Investment Law | MPI. |

[100] The same issue is posed for PPP projects. Furthermore, as a PPP project is subject to appraisal by a PPP project council, there is a need for guidelines on members of such a council for OFW projects.
[101] With regards to PPP projects, there have been no PPP projects successfully developed or operational since the enactment of the PPP Law.
[102] A bidding process according to the PPP Law is mandatory for PPP projects, except (i) projects that need to ensure requirements for national defense, national security, and protection of state secrets; and (ii) projects that require immediate selection of a replacement investor to ensure continuity during project implementation (Article 39, PPP Law). Enabling the direct appointment within the context of the Proposed Model may create material changes to the PPP Law and careful study and consultation is required.

#### 4.4.1.3 Stage 2 – PPA award

Introduction of the second stage of competitive selection for the purpose of an award of the PPA will need to address the following key issues.

##### 4.4.1.3.1 Bidding for the PPA

- Investor selection and PPA awards are separate processes. Before the issuance of a PPA it is necessary for the IPD and various permits to be issued. This process constitutes the eligibility criteria for approving investors.
- The price under the PPA is not currently determined pursuant to a competitive process.
- Electricity tariffs are determined following negotiation and agreement with EVN, subject to any applicable mandatory tariff range.
- The current process for negotiation and execution of PPAs with EVN is not considered a bidding process under Vietnamese legislation and the application of the Bidding Law is not mandated.[103] Whilst the PPP Law is silent on the application of a bidding process for the purchase of electricity. Therefore, the legal basis for applying the Bidding Law or the PPP Law to this process is currently uncertain.

  This issue was assessed by the MOIT in 2022 for transitional projects. At that time, a bidding mechanism was proposed but ultimately not implemented.[104] The proposal contemplated bidding on project capacity with bid prices subject to the statutory tariff range provided by the MOIT.

##### 4.4.1.3.2 PPA negotiation and award

The Proposed Model contemplates that the PPA would be issued as an outcome of the PPA competitive selection process. However, it is assessed that this would be problematic in practice.

###### 4.4.1.3.2.1 Practical and legal challenges

In Vietnam the PPA negotiation process for large scale power projects commonly takes a significant period of time, sometimes years. This is due to the fact that the consideration and approval for the PPA will be based on a number of different factors and not only the price and capacity of the project.[105]

Specific legal barriers which may impact a competitive PPA award, include potential pricing restrictions and regulations impacting revenue flow.

A final Decision on any applicable OFW price range is currently pending following Circular 19. However, when the price range is enacted, the electricity price of the projects will be capped at the prescribed ceiling price, thereby impacting the basis and competitiveness for PPA bidding at Stage 2.

Related legal regulations on dispatch may also impact the revenue of the project.

PPA negotiation challenges could be addressed by the development of a bankable template PPA for large scale OFW projects. The PPA bidding process could in turn be accompanied by a scoring mechanism which penalised bids for divergences from the template PPA.

###### 4.4.1.3.2.2 Technology

There is not a currently a comprehensive basis for technology specific PPA bids.

Under the current legal framework, EVN considers the technical aspects of a project when it assesses the proposed electricity price and negotiates with the developer. This results in the determination of the agreed electricity price factoring for technological characteristics. However, under Vietnamese law within the context of a competitive bid, it is necessary to specify the basis for technology specific bids, in order to ensure fair assessment and reasonable pricing.

Therefore, EVN may include a technology requirement into its RFP documents, subject to a legal basis which mitigates this being assessed as detrimental to other technologies. This is because the final product offered is the same (i.e. electricity).

[103] Article 2, Article 4.17, Bidding Law.
[104] Prior to Circular 15/2022/TT-BCT which provides the rules for developing tariff ranges for transitional projects, the MOIT studied and proposed a bidding mechanism for these projects, which supports a 3-year period between bidding rounds (Proposal Letter 1513/TTr-BCT dated 24 March 2022 (PL 1513)).
[105] The capacity release of renewable energy projects with signed PPAs and the progress of related grid projects will inform EVN's assessment (Article 9.2(b). The process for negotiation, execution and implementation of PPAs is regulated under Decision 1431/QD-EVN). Article 2, Article 4.17, Bidding Law.

#### 4.4.1.3.2.3 Timing

Due to the context and project development process in Vietnam the negotiation and finalisation of a PPA award would in practice follow any applicable competitive bid process.

As noted, the negotiation of a PPA for a large-scale power project is time consuming and in practice is not expected to be completed within the timeline of an open bidding process.

#### 4.4.1.3.2.3 Bankability

There is no revenue support mechanism, wider state support or contractual protection for OFW in Vietnam following the end of the FIT mechanism.

The appetite of EVN to engage in a long-term restricted pricing structure is yet to be determined. The clause on a 20-year term has been removed from the PPA template since the issuance of Circular 01/2023/TT-BCT, though the statutory term remains 20 years according to Decision 37/2011/QD-TTg (Article 11.2(a)). The MOIT previously recommended a 3-year PPA term.[106]

The existing PPA template for wind power projects is not assessed as suitable for the OFW sector and not meeting international standards. Outstanding issues include, among others, grid delay, commissioning risk, curtailment risk, compensation mechanisms, change-in-law risk, dispute resolution mechanism.[107]

[106] PL 1513.
[107] GWEC. Vietnam's future transition to OFW auctions – international best practices and lessons learned. Global Wind Energy Council, Brussels, 2021.



## Table 4-5. Stage 2 – PPA award

| Key stage | Issues, practical and market specific considerations | Changes required to establish the Proposed Model in Vietnam | Current legislation relevant to the proposed changes | Stakeholders to be consulted |
|---|---|---|---|---|
| **Stage 2 – Securing a competitive PPA with EVN** | | | | |
| **PPA** [108] | • Investor selection and PPA awards are separate processes, an IPD, followed by various permits, is required before issuance of a PPA.<br>• There is no revenue support mechanism, wider state support or contractual protection for OFW in Vietnam following the end of the FIT mechanism.<br>• The price under the PPA is not determined pursuant to a competitive process.<br>• Unbankable PPA template.<br>• Appetite of EVN to engage in long term restricted pricing structure. | **i. Bidding for the PPA**<br>• Develop a price-based competitive selection process for selection of electricity sellers engaging in long-term PPAs with EVN.<br>• Develop an OFW power pricing mechanism.<br>**ii. PPA negotiation and award**<br>• Devise a basis for technology specific bids.<br>• Address practical and timing issues with respect to PPA negotiation<br>**iii. Bankability**<br>• Develop a new support mechanism for OFW power.<br>• Develop a revised OFW PPA template. | Bidding Law<br>Circular 02<br>Circular 01/2023/TT-BCT | MOIT, MPI. |
| | In countries with liberalised power markets investors can participate in the competitive electricity market to seek a market-based pricing mechanism. | Revise and update the VWEM rules to allow alternative routes to market for OFW projects, following the issuance of Decree 80/2024/ND-CP on DPPA. | Circular 45/2018/TT-BCT | MOIT |
| **Sea area allocation** | • Sea area allocation is subject to completion of an EIA which follows the IPD and separate from the survey right. An application for sea area allocation is not connected with a site survey request.<br>• Sea area allocation awards are granted for up to 30 years. Projects with an IRC may be granted a more than 30-year sea area allocation, not exceeding the project term but this is not automatic and still subject to the competent authority's consideration. As such the sea use term may not be aligned with the project term.<br>• Long term nature of the sea area allocation impacts its award at an early stage. | • Grant investors with a PPA award the right to preferential/automatic sea area allocation rights, subject to obtaining required permits and other applicable requirements.<br>• The sea use term should be aligned with the project duration without requiring an extension application for during the term of project operation. | Decree 11 | MONRE |
| | The rights of the investors (and the lenders when exercising the step in right) with respect to the right to use the sea area as allocated and the assets constructed within such area should be clearly regulated and protected during the project term. The current regulations are not clear on this. | An Acknowledgement and Consent issued by MONRE in favour of lenders (in case of IPP) or by MONRE (on behalf of the Government, in case of PPP) should be provided. | | |

[108] PPP projects are subject to the regulations on PPP project contract under the PPP Law in addition to the template PPA under Circular 02. Guidelines on PPP project contract for power projects remains unavailable.

### 4.4.2 Pathway to reform

#### 4.4.2.1 Competitive awards within the current legal framework

In the absence of substantive legal and regulatory reform competitive awards are envisaged for (i) the site survey award; and (ii) for the IPD and investor selection application.

Subject to supplementary guidance, the IPD and investor selection process could be pursuant to a (i) an open bid RFP tender; or (ii) competitive selection. Open bid may be preferred for the OFW sector going forward, following recent changes to investor selection processes applicable to wider power projects.

However, whilst price would be a criterion of these processes it would not be fixed at this stage. This is because, in the absence of reform, the price under the PPA is not currently determined pursuant to a competitive process. Instead, price and electricity tariffs are determined following negotiation and agreement with EVN.

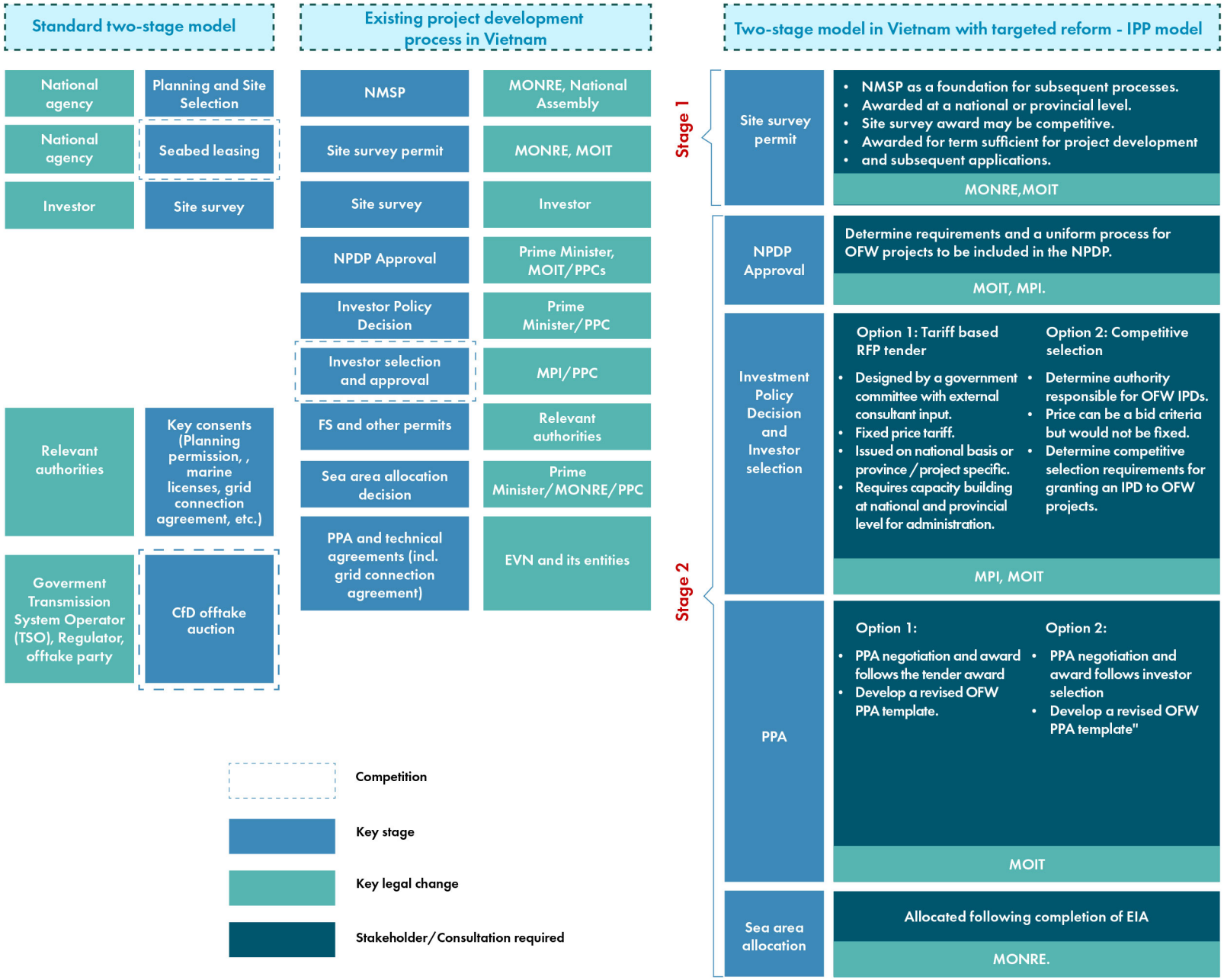
The negotiation and execution of PPAs with EVN is not considered a bidding process under Vietnamese legislation. Therefore, the legal basis for applying the Bidding Law or the PPP Law to this process is also uncertain.

The practical and project development issues in Vietnam which are detailed in Section 4.4.1.3 also present challenges to the PPA to be awarded concurrently with a bid process for this purpose.

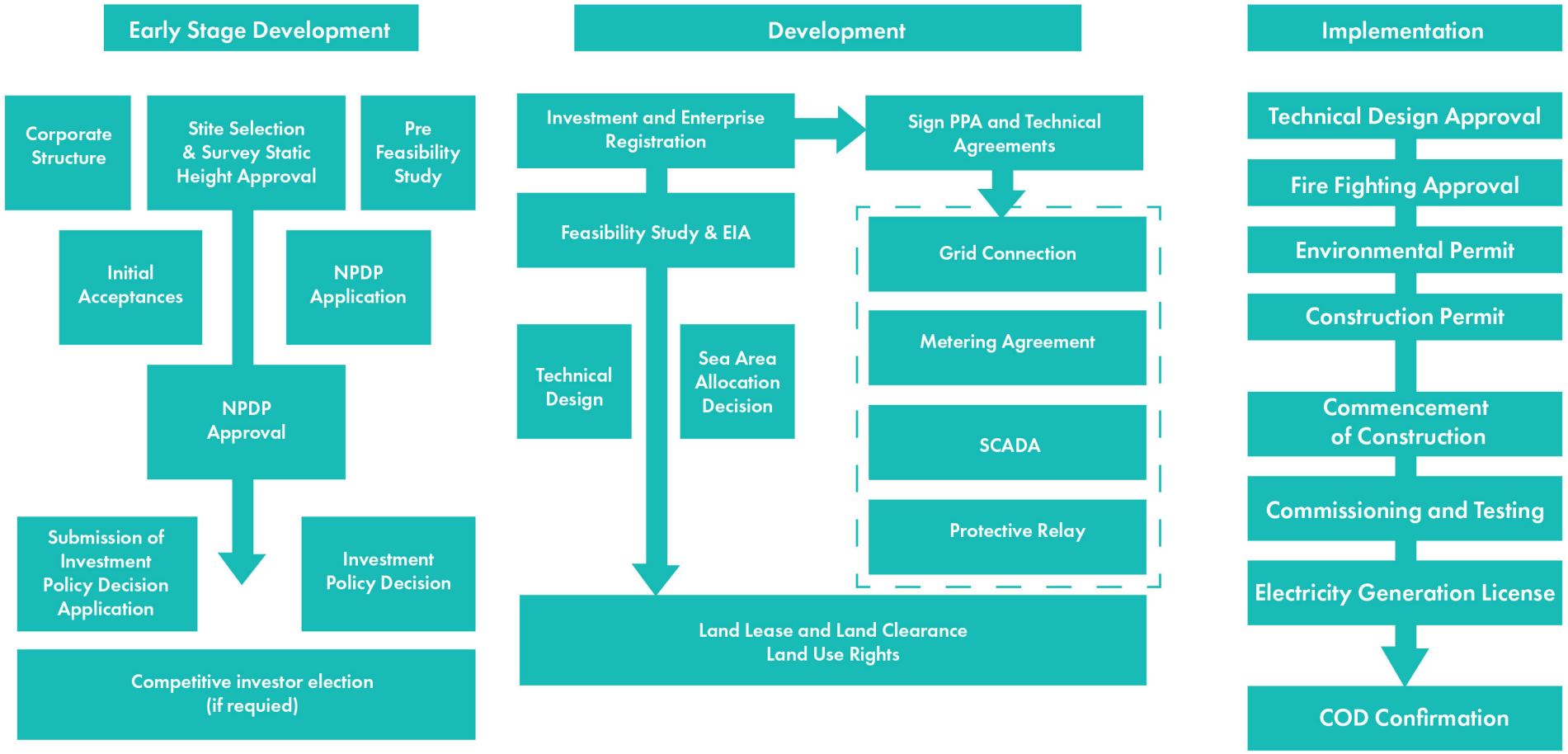
Consequently, negotiation and award of the PPA would follow the applicable IPD and investor selection process.

This option is illustrated in Figure 4-3 below.

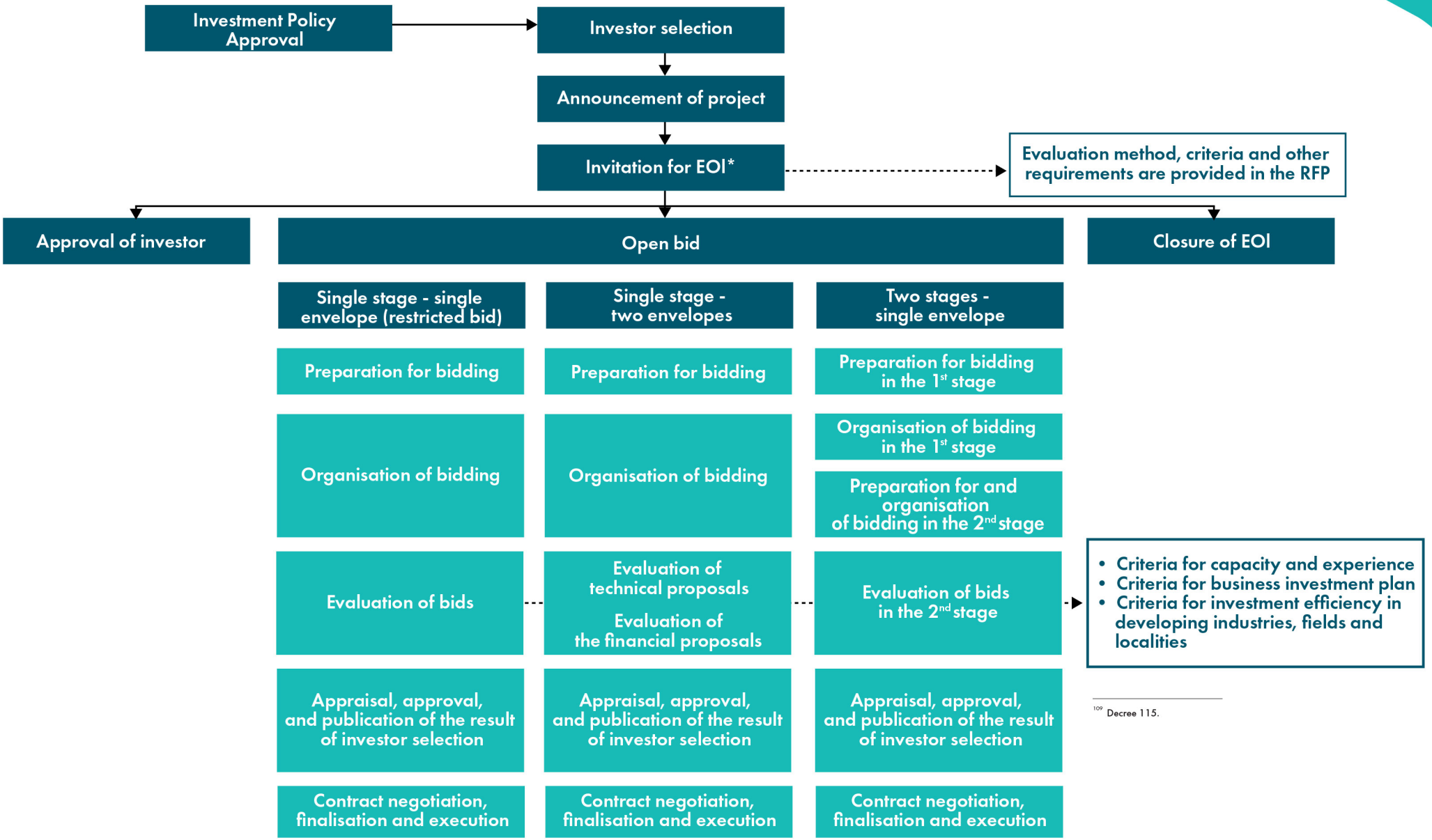
## Figure 4-3. The Proposed Model in relation to the current framework



## Appendix A – Vietnam's current OFW development process – IPP framework



## Appendix B – Bidding process for power project (excluding OFW and certain technologies) [109]




(*) Applicable to projects with a need for determining the number of interested investors.

[109] Decree 115.