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WHITE PAPER

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# Taiwan Offshore Wind Farm Projects: Updates to Guide Investors and Financiers through the Legal and Regulatory Framework

In recent years, the Taiwanese Government set aggressive renewable energy targets, with a particular focus on the development of its offshore wind power capabilities. This exciting new market presents great opportunities for foreign investors as well as local electricity market players. At the same time, it highlights the need for a local legal and regulatory framework in Taiwan that will foster the development of the market in an effective and efficient manner.

This Jones Day *White Paper* updates an earlier similar paper (published in February 2018) with the latest on the current legal and regulatory framework for offshore wind farm projects in Taiwan. For the sake of completeness, we have reiterated here ongoing relevant information on topics such as the general procurement process, environmental approval process, more recent developments regarding the grid allocation process, approvals/licensing regime, and other key considerations for offshore wind developers (i.e., foreign ownership limits, foreign exchange controls, etc.). The intention is to provide foreign investors with an ongoing checklist of what to consider when seeking to participate in the unfolding Taiwanese offshore wind energy project market.

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## OVERVIEW OF THE LEGAL AND REGULATORY FRAMEWORK

From a foreign investor's perspective, an informed understanding of the legal and regulatory framework (including the general procurement process, environmental approval process, approvals/licensing regime, foreign ownership restrictions, environmental requirements, and foreign exchange controls) will be critical before making any investment decision regarding the Taiwan offshore wind farm sector.

The primary legislative instruments for the renewable energy sector in Taiwan include:

**The Electricity Act ("EA")**: The EA covers the establishment of power plants and the transmission and distribution of electricity. The amendment of the EA on January 26, 2017, aims at liberalizing the power market by:

- Allowing the renewable energy generation industries to sell electricity through wholesale, wheeling, or direct sales;
- Allowing renewable energy companies to be operated by corporate forms other than limited companies (e.g., cooperatives);
- Fully releasing the users' power purchasing choices and allowing all users to choose either the electricity generated from renewable energy or from traditional energy sources; and
- Clearly stating the target of being nuclear-free by 2025.

Although the article stating the phaseout of nuclear energy by 2025 has been removed by the latest EA amendment on May 22, 2019, the rest of the amendments remain effective, and the governmental policy of proactively developing renewable energy stays unchanged.

**The Renewable Energy Development Act ("REDA")**: The REDA was introduced in July 2009 and amended in May 2019 as part of the Taiwanese Government's ("Government") aim to increase the installed renewable energy capacity in Taiwan.

The REDA covers a mixture of obligations and incentives, including:

- **Fund Establishment**: Financed by the Renewable Energy Fund with revenues collected from power generators using fossil fuels and nuclear energy.
- **Feed-In Tariff Rates and Tariff Setting Method**: The feed-in tariffs ("FiTs") regulated by REDA apply to solar, onshore/offshore wind, biomass, and hydro energy and are subject to annual review by a dedicated committee. When conducting its annual review, the dedicated committee will take into account any technology development, changes in costs, target accomplishment, and other relevant factors to determine the applicable FiTs.
- **Other**: Land-use requirements, demonstration/capital grants, mandatory grid connection, and power purchasing obligations (i.e., power purchase agreement).

In order to achieve the Government's aggressive renewable energy targets, the Taiwan Ministry of Economic Affairs ("MOEA") has promulgated amendments to the REDA, which provide that large consumers of electricity are required to pay a fee or purchase renewable energy vouchers for their consumption of nonrenewable energy. Alternatively, those large consumers of electricity may install renewable energy generators or energy storage facilities to generate/store power proportional to their consumption of nonrenewable energy. This amendment was approved by the Taiwan Cabinet on January 11, 2018, and released on December 31, 2020.

In addition to the EA and the REDA, there are various other legislative instruments that govern the development and implementation of offshore wind farm projects. These are set out in Annex 2.

## PROCUREMENT PROCESS FOR OFFSHORE WIND ENERGY PROJECTS

### Overview

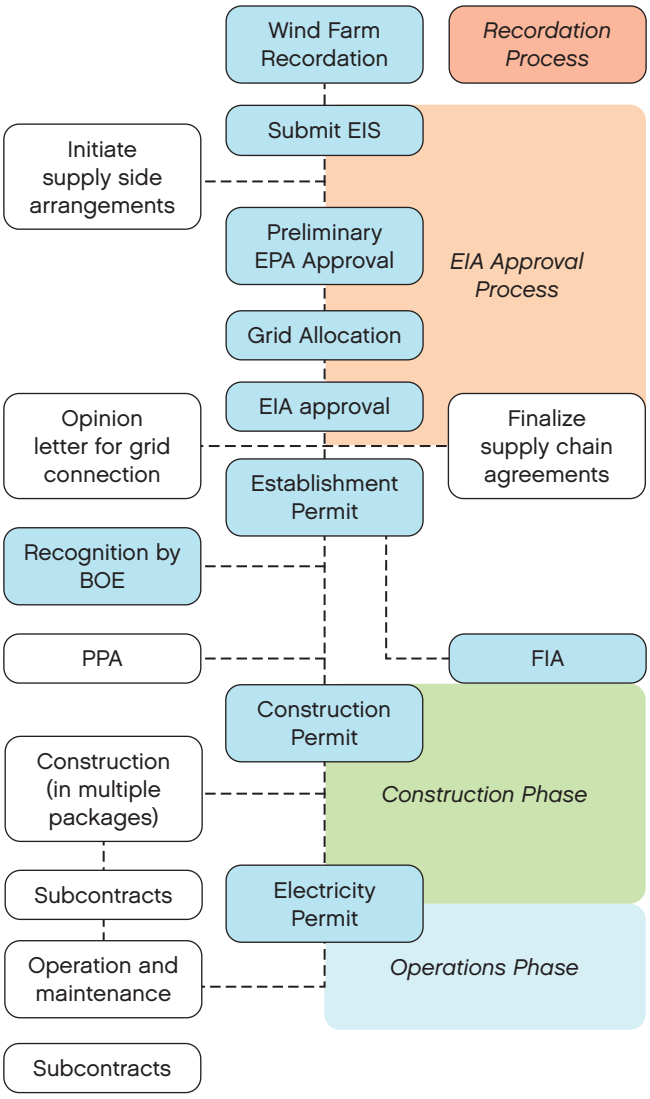
The process for implementing offshore wind energy projects in Taiwan is steadily progressing. Diagram 3 below provides a high-level overview of the procurement process. As further elaborated in Annex 1 and Annex 4, the Government's scheme for the development of offshore wind energy in Taiwan is divided into three phases: Demonstration Round, Transition

Round, and Zonal Development Round. In the Demonstration Round, the Government aimed to nurture 2 GW offshore wind projects by subsidizing their development costs and having them under a 20-year power purchase agreement ("PPA") with fixed feed-in tariff pricing. In the Transition Round, the Government released 36 zones for potential development of 5.5 GW commercial wind farms, where parts of projects were guaranteed at a fixed feed-in tariff price for 20 years, and the remainder went through a competitive auction to sell power at a lower price to Taiwan Power Company ("TPC").

In the Zonal Development Round, offshore wind project developers can select sites for wind farm planning themselves and bid for a total of 15 GW grid allocation for 2026–2035 in two stages. The first stage of 9 GW for 2026 to 2031 will be allocated in three periods of developer selection processes from 2022 to 2024, 3 GW in each period. At present, for 3 GW in the first period (2026 to 2027), the Government has recently announced the Guidelines for Wind Farm Planning on July 23, 2021, and a draft of Regime Planning for Developer Selection (expected to be finalized in 2021), specifying the rules for participating in the grid allocation tender to be held in June 2022.

The procurement process is considered in more detail in the following paragraphs of this section, with a particular focus on the processes currently being encountered by offshore wind energy developers—the wind farm planning process, the environmental approval process, and the grid allocation process.

**Diagram 3**



## Approval / Licensing Process

In the Zonal Development Round, instead of bidding for wind farms selected by the Government, offshore wind energy developers can now search for potential sites to propose offshore wind farm projects themselves. Based on the Guidelines for Wind Farm Planning published on July 23, 2021, developers are required to apply for recordation of their wind farm planning with the Bureau of Energy ("BOE"). Refer to "Wind Farm Planning" below for a detailed analysis of the process for obtaining the recordation of wind farm planning.

Further, to operate an offshore wind farm project, the project developer must obtain an electricity license. There are six main phases to be satisfied in order to obtain the electricity license:

1. **Environmental Impact Assessment ("EIA") Process:** The project developer is required to obtain the Environmental Protection Administration's ("EPA") final approval of the EIA in order to obtain the Establishment Permit. Moreover, before applying for Establishment Permit, a preliminary or conditional EPA approval is also necessary for the project developer to participate in the grid allocation process and covenant with the Government if the project developer is selected. Refer to "Environmental Framework" and "Grid Allocation Process" below for a detailed analysis of the process for obtaining the approval of the EIA and the applied grid capacity.

2. **Establishment Permit ("EP")**: The EP is issued by the BOE. It is a precondition to the EP that the final EIA approval has already been obtained. To obtain the EP, the applicant is required to obtain consent letters from various authorities, including the local government, the National Property Administration, and the Ministry of Transportation and Communications. Based on the practice in other sectors in Taiwan, the processing time for these consent letters varies and may be unpredictable. Further, the applicant also needs to provide the Consent Letter of Offshore Wind Power System Installation, which will be obtained as the applicant enters into an administrative contract with the BOE for its procurement of the allocated capacity via the grid allocation process.

   It is also necessary for the project developer to: (i) obtain an opinion letter for grid connection from TPC; and (ii) obtain letters of intent from financial institutions for the financing of the project.

   The EP is valid for a period of three years (and may be extended for a further two years).

   Annex 5 provides a detailed flowchart of the process for obtaining the EP.

3. **Recognition by the BOE**: After the project developer has obtained the EP, it is required to apply to the BOE for recognition that the project developer's energy facilities are renewable energy power facilities.

4. **PPA**: Within six months of obtaining its EP and the required recognition from the BOE, the project developer is required to enter into a PPA with TPC. TPC is a 97.13% government-owned power entity providing electricity to Taiwan.

   The standard form PPA for the offshore wind energy sector was published by TPC in July 2017. Refer to "Power Purchase Agreement" below for Jones Day's preliminary comments on the PPA.

5. **Construction Permit ("CP")**: The CP must be obtained from the BOE prior to the commencement of construction. An applicant may apply for an EP and CP in parallel; however, the CP may be granted only after the applicant has obtained the EP. The CP is valid for five years and is renewable.

6. **Electricity License ("EL")**: The EL must be obtained prior to the commencement of operations. Annex 5 provides a detailed flowchart of the process for obtaining the EL.

While it may vary, the time period for the BOE to issue the EP, the CP, and the EL usually takes two to three months from the time of application for each license / permit.

## Wind Farm Planning

**Timing**. A project developer for an offshore wind farm development should apply with the BOE for the recordation of wind farm planning before beginning the EIA process. The goal is to provide the BOE a general picture of the project at a preliminary stage before the EPA requests the BOE's opinions

in the EIA process. In practice, however, given that the draft Guidelines for Wind Farm Planning was not finalized until July 23, 2021, many project developers have taken a step ahead by sending an environmental impact statement for EIA application.

**Application**. The project developer should be an electricity enterprise obtaining an electricity license under EA or a preparatory office of an electricity enterprise, with at least 5% of anticipated capex, which is calculated based on the ratio of self-owned funds (equity funds) to the total investment of the application.[1]

**Standard**. The contemplated total installed capacity of a single application should be no less than 100 MW and 5 MW/km$^2$. While the proposed scope of sites should not overlap with the existing wind farms (and should remain more than 1,200 meters away from the border of the existing wind farms), the scope of site of each application is allowed to overlap with one another. Further, the proposed scope of sites should not overlap with the highly sensitive areas published along with the Guidelines for Wind Farm Planning, where current channels, abundant fisheries, telecommunications cable, and gas pipelines, etc., pass through or locate.

**Process**. The project developer should submit all the required documents to apply for the recordation, including supporting documents of electricity enterprise/preparatory office and 5% of anticipated capex, the scope of site and location plan of the wind farm, and the layout design of the wind turbine, etc. While reviewing the applications, MOEA may establish the committee consisting of various authorities in fields regarding aviation, radar, military control, ship security, aquatic organisms propagation and conservation zone, mining rights, and fishery rights. The recordation will become invalid if, among other factors, the project developer does not obtain a Consent Letter of Offshore Wind Power System Installation within six months from the deadline of recordation application (which is still pending) or one of the relevant authorities in the reviewing committee explicitly raises an unconditional objection. Refer to "Grid Allocation Process" below for further elaboration.

## Environmental Framework

**Regime**. The EPA is the agency responsible for the development of the environmental standards and coordinating action among the various other Governmental agencies. It has also been proactive in developing a legislative basis for environmental management in Taiwan.[2]

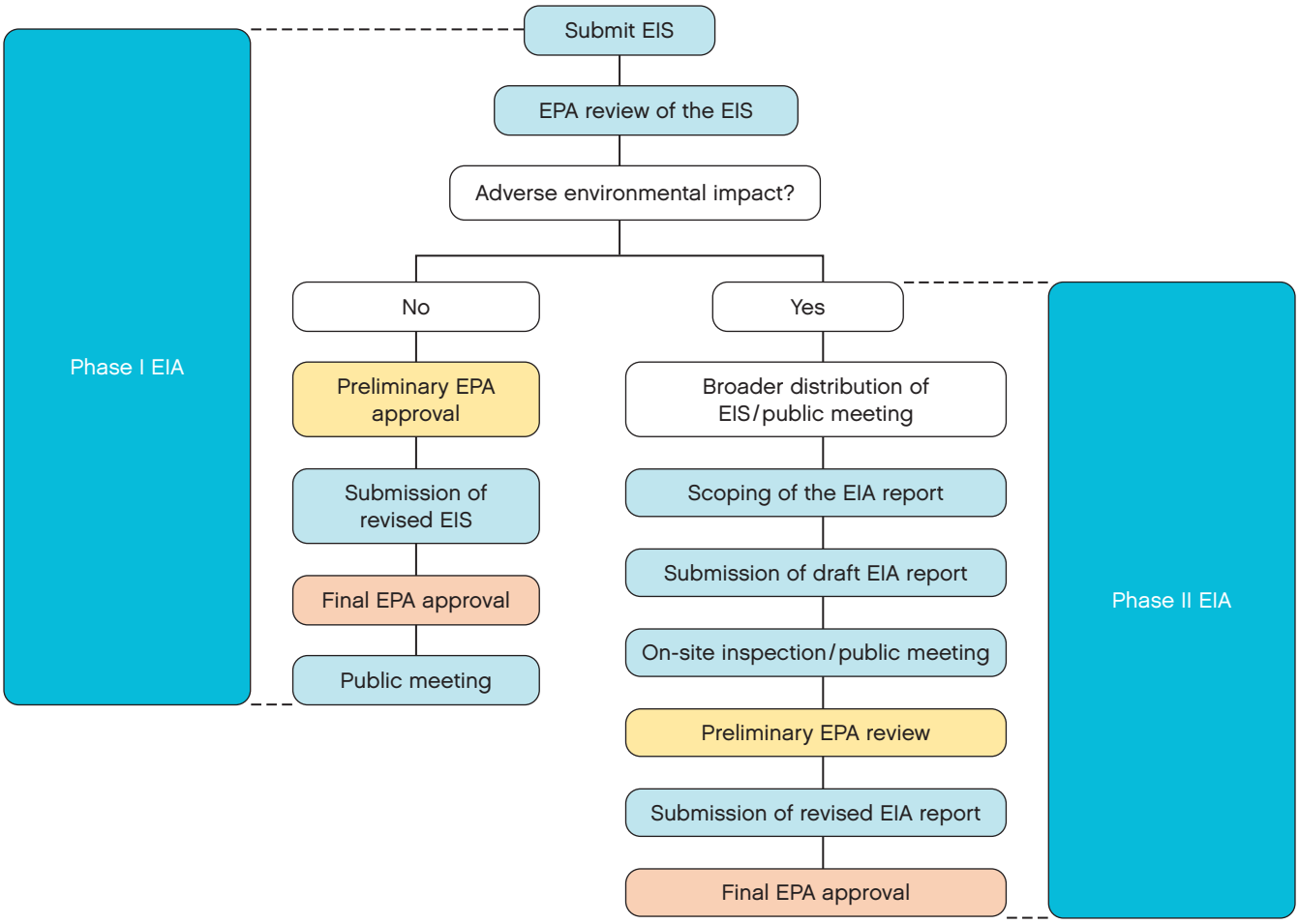
The Environmental Impact Assessment Act governs the EIA process. The EIA process is intended to prevent and mitigate adverse impacts of development activities (including pre-implementation planning, project implementation, and post-project facility use) to attain the goal of environmental protection.

**EIA Process**. A project developer for an offshore wind farm development is required to obtain the EPA's approval of the EIA in order to progress with the development of the project.

To date, the EIA process has proven to be a relatively challenging barrier for offshore wind power developers. The Taiwan Strait is a heavily trafficked waterway, and the EPA is closely scrutinizing how offshore wind development will affect the ecology.

The process for obtaining the requisite EPA approval is summarized below (and illustrated in Diagram 4). The process may vary (depending on whether the project developer is required to conduct a Phase II EIA) and may take an extended period of time to complete.

**Diagram 4**




***Phase I EIA***

The Phase I EIA process includes the following:

***Submission of Environmental Impact Statement ("EIS")***. The project developer submits an EIS to the MOEA. The MOEA will then provide the EIS to the EPA.

***EPA Review of the EIS***. As part of the EPA's review of the EIS, the EPA will determine whether the development activities are likely to have a significant adverse impact on the environment. If the answer to this question is:

- No, the project developer will obtain preliminary EPA approval and will follow the subsequent steps described in this paragraph to obtain the final EPA approval.
- Yes, the EPA may require that the project developer conduct a Phase II EIA (see "Phase II EIA" below).

***Submission of Revised EIS to the EPA***. The project developer will submit a revised EIS to the EPA, taking into consideration the EPA's conclusions communicated as part of the EPA's preliminary approval.

***On-Site Inspections***. The Environmental Impact Assessment Act expressly requires that on-site inspections be undertaken as part of the Phase II EIA process only. However, in practice, the EPA has also conducted on-site inspections as part of the Phase I EIA process. For example, the below diagram illustrates the on-site inspection that was conducted for the Hai Neng Offshore Wind Farm Project.[3]

***Final EPA Approval***. If the EPA considers that its requirements have been satisfied, the EPA will grant its final approval to the project developer.

***Public Meetings***. After the final EPA approval has been obtained, the project developer must hold a public meeting to explain its development activities. This public meeting must be held prior to the commencement of construction and, in practice, is usually held after the project developer has obtained all

**Diagram 5**


*Source: Taiwan EIA Inquiry System*

necessary approvals for the project development.

***Phase II EIA***

At this time, there are no examples of an offshore wind farm project being required to conduct a Phase II EIA. The Fuhai Demonstration Project was initially suggested for Phase II EIA but was able to remain in Phase I EIA after minor amendments to the EIS. There are several examples of thermal and hydro power plants entering into the Phase II EIA.

If the EPA determines that the development activities are likely to have a significant adverse impact on the environment, the project developer will be required to satisfy the following:

***Broader Distribution and Communication of the EIS/Public Meeting***. The project developer must:

- Distribute the EIS to the relevant government agencies;
- Display/disclose the EIS at an appropriate location close to the development site for a period of not less than 30 days; and
- Publish in the newspaper the details of the project and the location where the EIS (and review conclusions) may be reviewed.

Following the distribution and communication of the EIS, the project developer is required to hold a public meeting to explain the development activities.

***EPA Determines the Scope of the EIA Report***. The EPA will invite the MOEA, local authorities, interested nongovernmental groups, scholars and experts in relevant areas, and representatives of the local community for the purpose of determining the scope of the EIA report to be submitted by the project developer.[4] This includes the identification of feasible alternatives to the proposed development plan, identification of items to be considered in the EIA, and the identification of other matters related to the implementation of the EIA.

***Submission of Draft EIA Report***. The project developer must prepare the draft EIA report and submit it to the MOEA. The EIA report to be prepared by the project developer must take into consideration the comments received as part of the EPA's scoping exercise referred to above.

***On-Site Inspection and Public Meeting Held by EPA***. Within 30 days of the receipt of a draft EIA report, the EPA, in conjunction with the MOEA and other relevant agencies, will invite the relevant entities/persons mentioned above to conduct an on-site inspection and hold a public meeting. The scope of the on-site inspection will vary on a case-by-case basis depending on the specific environmental risks for the project.

***EPA to Review the Draft EIA Report***. The EPA will review the EIA report, the inspection record from the on-site inspection, and the minutes from the public meeting and advise of its conclusions. The project developer will then have an opportunity to revise the draft EIA report in accordance with the EPA's conclusions.

***Final Approval by the EPA of the EIA Report***. If the project developer satisfactorily addresses the EPA's review conclusions, it will obtain final approval by the EPA.

The approval of the EIS (if a Phase I EIA only is required) or the approval of the EIA report (if a Phase II EIA is required) is necessary for the project developer to proceed with the licensing/approval process described in "Approval/Licensing Process" below. If the EPA refuses to grant its approval, the project developer may file an administrative appeal

and subsequent administrative lawsuit to challenge such administrative decision.

There is no prescribed time period for the completion of the EIA process. Based on our experience, the completion of the EIA process will generally take a period of one year or more.

***Enforcement***. The Environmental Impact Assessment Act is administered by the EPA with support from the MOEA and in consultation with other relevant government agencies, non-governmental groups, scholars, experts, and representatives of local residents.

The project developer must faithfully implement the requirements of the EIS, the EIA, and the EPA's review conclusions during the performance of the development activities under the supervision and monitoring of the MOEA and the EPA. The MOEA and the EPA may periodically conduct on-site inspections and/or request documents to confirm the project developer's compliance with the approved EIS and EIA.

### Grid Allocation Process

As mentioned above and in Annex 4, the Government plans to allocate 1.5 GW capacity each year, for a total of 15 GW for 2026 to 2035, in this Zonal Development Round, which is divided into two stages. The first stage ranges from 2026 to 2031, with 9 GW allocated in three periods of developer selection processes during 2022 to 2024, 3 GW in each period. The application deadline for the first period is on June 30, 2022, and the result of developer selection will be announced by August 31, 2022.

**Application**. To participate in the first period and complete grid connection during 2026 to 2027, the project developer should obtain the preliminary EPA approval or conditional EPA approval and the valid recordation of wind farm planning. The project developer should also prepare its connection agreement with TPC, meeting minutes for preliminary or conditional EPA approvals, the location plan of the wind farm, and the layout design of the wind turbine.

**Process**. The selection process is separated into two phases. The first phase is the Qualification Review of developers' technical capability, financial capability, and industrial relevance (i.e., the local content requirement. Refer to "Industrial Relevance" for further details of this criteria). The second phase is the Price Comparison via a competitive auction.

**Phase 1: Qualification Review**. The following table provides a summary of the Qualification Review considerations that will be taken into account for each element. Project developers are required to score an average of 70 points in their technical and financial capabilities. They must also satisfy the basic criteria of industrial relevance, in which project developers localize 60% of the applied capacity of all these 26 critical development items, and score more than 10 points on other optional items.

| ELEMENT | BREAKDOWN OF THE ELEMENT | CONSIDERATIONS |
|---|---|---|
| Technical Capability (60%) | Construction Capacity (25%) | The composition of work team and the execution ability. |
| | Engineering Design (20%) | • Engineering design and procurement planning (detailed structure design, unit installation, turbine substructure design, etc.)<br>• Construction planning (construction supervision, vessel and machinery, safety management, etc.) |
| | Operations and Maintenance Plan (15%) | Operations and maintenance planning, and the development of local industries (personnel training, maintenance plan and safety management plan, etc.) |
| Financial Capability (40%) | Financial Integrity (25%) | • Financial plan (total investment costs, financing sources, prediction of power generation, financial feasibility, etc.)<br>• Risk management and insurance planning<br>• Feasibility of equity planning (list of potential investments, equity planning for project enactment period). |
| | Capital Capacity of Shareholders (15%) | Capital capacity (net assets audited by accountants, operating revenue and cash position). |
| Industrial Relevance | Refer to "Industrial Relevance" | Basic Criteria:<br>1. The implementation of all 26 critical development items must reach 60% of the applied capacity;<br>2. The developer must score more than 10 points for implementing the optional items. |

*Source: Document "Draft of Regime Planning for Developer Selection in Zonal Development Round" from BOE as of May 11, 2021*

**Phase 2: Price Comparison**. Only those project developers that score an average of 70 points in their technical and financial capabilities and satisfy the basic criteria of industrial relevance in Phase 1 are eligible to participate in the competitive auction in Phase 2. In a tender to be held by TPC in June 2022, the project developer proposing the lowest price will have the first priority to covenant with MOEA and acquire the allocated capacity; the second lowest will have the second priority, and so on. Project developers placing the same bid price will be evaluated based on their scores on the optional items of industrial relevance.

**Price Range**. The ceiling price for project developers is set as the TPC's avoided cost in the previous year of the developer selection tender, while the floor price is set as 0 TWD/kWh.

**Principle**. The BOE will approve and allocate the available grid capacity of the year published by TPC pursuant to the priorities and locations of the projects' point of interconnection ("POI"). Generally, the upper limit of allocation in each period for a single wind farm or project developer[5] is 0.5 GW. The BOE, however, may increase 100 MW capacity for each wind farm or project developer by considering the integrity of wind farm, development benefits, momentum of domestic industries, and grid capacity published by dealers of power transmission/distribution. If multiple project developers compete for the same wind farm, the developer with the first priority will wholly obtain the allocated capacity; developers with lower priorities will gain no capacity.

As of February 9, 2021, 23 offshore wind farm projects have engaged in the EIA process. Adding on the projects not selected and allocated (enough) capacity in the Transition Round, there may be 31 projects anticipated to compete in this Zonal Development Round. The following table identifies the maximum capacity and status of each offshore wind farm project.

| # | SPONSOR | PROJECT | MAXIMUM CAPACITY (MW) | STATUS (FEBRUARY 9, 2021) |
|---|---|---|---|---|
| i | Wpd | You De | 700 | Apply for EPA approvals |
| ii | | Da Tian | 700 | |
| iii | Swancor | Formosa 4-1 | 1360 | |
| iv | | Formosa 4-2 | 1358 | |
| v | | Formosa 4-3 | 1728 | |
| vi | InfraVest | Mei Sen | 8203 | |
| vii | | Zhong Mei | 3000 | |
| viii | | Zhong Qian | 580 | |
| ix | | He Er Bei | 2400 | |
| x | | He Er Nan | 2400 | |
| xi | | He Yi | 2600 | |
| xii | Ørsted | Xu Feng No.1 | 600 | |
| xiii | | Xu Feng No.2 | 750 | |
| xiv | | Xu Feng No.3 | 750 | |
| xv | Copenhagen Infrastructure Partners ("CIP") | Feng Miao | 1800 | |
| xvi | | Feng You | 600 | |
| xvii | | Feng Fan | 750 | |
| xviii | | Feng Cheng | 750 | |
| xix | | Feng Li | 1800 | |
| xx | Marubeni | Zhu Yang | 880 | |
| xxi | | Zhu Xin | 711 | |
| xxii | Northland Power | Bei Neng | 1200 | |
| xxiii | | Jia Neng | 600 | |
| xxiv | Jera, Macquarie & EnBW | Hai Ding I | 552 | Obtain EPA approvals |
| xxv | | Hai Ding II | 732 | |
| xxvi | | Hai Ding IIII | 720 | |
| xxvii | CIP | Fu Fang | 600 | |
| xxviii | Wpd/Lealea | Strait 28 | 600 | |
| xxix | Ørsted | Great Changhua North East | 570 | |
| xxx | Innogy/Asia Cement Corporation | Zhu Feng | 448 | |
| xxxi | Taiwan Generations Corporation ("TGC") | Fu Hai | 120 | |

*Source: Environmental Information Center Document (https://e-info.org.tw/node/229511); Bnext Media (https://www.bnext.com.tw/article/59388/taiwan-offshorewind-third); Focus News (https://eventsinfocus.org/issues/7146016)*

### Industrial Relevance (Local Content)

Comparing with the local content requirements in the Transition Round, the Industrial Development Bureau ("IDB") of MOEA now classifies the techniques difficult to be localized (such as the generator for wind turbine) as optional items of industrial relevance. It also provides a more flexible requirement of implementation: The developer needs to implement critical development items to 60% of the applied capacity, with the remaining 40% for the optional items. The tables below provide the details of the critical development items and the optional items showed in the MOEA draft of the Industrial Relevance Plan of May 11, 2021, and may be revised in the future.

**Critical Development Items: 26 Items Under 4 Categories***

| ITEM | POWER FACILITY | UNDERWATER FOUNDATION | WIND TURBINE COMPONENT | MARITIME ENGINEERING |
|---|---|---|---|---|
| **Critical Development Item** | 1. Onshore power facilities<br>• Transformer<br>• Switchgear<br>• Switchboard<br>• Onshore cables<br>2. Offshore substation<br>• Transformer<br>• Switchgear<br>• Switchboard<br>• Power conversion system (PCS) | Type 1: Monopile<br>• Main pipe<br>• Transition piece<br>Type 2: Jacket<br>• Main pipe<br>• Transition piece<br>• Pin pile | 1. Whole nacelle assembly and fasteners<br>2. Tower and fasteners<br>3. Transformer<br>4. Switchboard<br>5. Nose cone and nacelle housing<br>6. Cables<br>7. Casting of hub and bedplate<br>8. Power conversion system and uninterrupted power supply system<br>9. Rotor blades<br>10. Resin<br>11. Blade pitch system | 1. Survey vessel engineering services<br>2. Drillship engineering services<br>3. Underwater foundation installation vessel engineering services<br>4. Wind turbine installation vessel engineering services<br>5. Cable-laying vessel<br>6. Operation and maintenance vessel (crew transfer vessel (CTV), SOV, multipurpose vessel) |

*Source: Document "Draft of Industry Related Planning in Zonal Development Round" from IDB as of May 11, 2021*

** Black type: items adopted from the Transition Round; red type: new added items based on the industry's suggestion*

**Optional Items: 57 Items Under 5 Categories in 3 Groups**

| GROUP | TOTAL SCORE | CATEGORY | BREAKDOWN |
|---|---|---|---|
| **Key Benefit Group** | • 60 points<br>• 28 items (including 26 critical development items)<br>• 4 points each for generators and submarine cables; 2 points each for all other items | • Power facility (8 items)<br>• Underwater foundation (11 items)<br>• Wind turbine components (11 items)<br>• Maritime engineering/service (6 items) | Bonus scoring is awarded only for the quantity of the critical development items exceeding 60% of the total applied capacity<br>*Adding the type "floating" under the "underwater foundation" category as an optional item. |
| | | Power facility (1 item) | Submarine cables |
| | | Wind turbine component (1 item) | Wind turbine generators |
| **Sustainable Investment Group** | • 22 points<br>• 11 items<br>• 2 points for each | Manufacturing of (new) vessels (7 items) | 1. Hydrographic survey vessels<br>2. Seabed drill ships<br>3. Tugboats<br>4. Pile driving vessels<br>5. Support vessels<br>6. CTVs<br>7. Cable-laying vessels |
| | | Maritime engineering/service (4 items) | 1. Engineering design: related designs of turbine lower structure, wind turbine, submarine cable, and offshore substation<br>2. Engineering services related to inter-array cable-laying vessel<br>3. Operation and maintenance (O&M) services: turbine O&M, balance of plants (BoP) O&M<br>4. Environmental observation during operation: ecological monitoring and marine meteorological observation |

*continued on next page*

| GROUP | TOTAL SCORE | CATEGORY | BREAKDOWN |
|---|---|---|---|
| **Peripheral Extension Group** | • 18 points<br>• 18 items<br>• 1 point for each | Power facility (1 item) | Offshore substation steel structure |
| | | Underwater foundation (4 items) | 1. Grouting materials<br>2. Coating<br>3. Anti-corrosion systems: anode sacrifice or impressed current protection<br>4. Steel structure of frame plate for piling works |
| | | Wind turbine component (13 items) | 1. Tower-coating<br>2. Blades-fiberglass<br>3. Blades-carbon fiber and pultrusion<br>4. Blades-parting agent<br>5. Blades-tackifier<br>6. Blades-material processing<br>7. Blades-foam materials (PET or PVC)<br>8. Blades-hub plate<br>9. Blades-lightning protection system<br>10. Turbine-nacelle cooling system<br>11. Turbine-yaw system<br>12. Turbine-lubrication system<br>13. Turbine-casting of bearing seat and stationary shaft |

*Source: Document "Draft of Industry Related Planning in Zonal Development Round" from IDB as of May 11, 2021*

## OTHER LEGAL CONSIDERATIONS FOR OFFSHORE WIND ENERGY DEVELOPERS

### Overview

In this section, we have identified important legal considerations for offshore wind energy developers for the structuring of their investment in the Taiwan offshore wind energy sector.

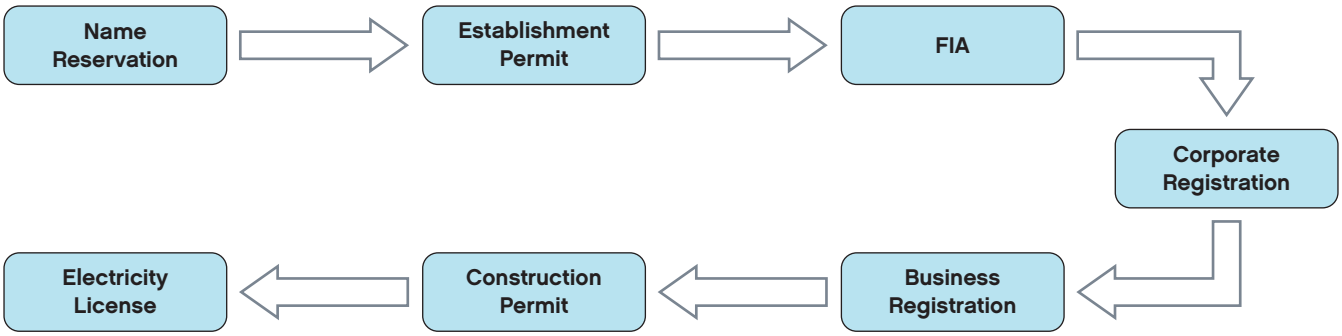
### Corporate Requirements

For foreign investors wishing to participate in the offshore wind power sector in Taiwan, the investors may either establish an SPV in Taiwan or acquire shares in an existing Taiwanese company. In practice, market participants are adopting an approach of establishing an SPV for each wind site.

Either the establishment of an SPV or acquiring shares in an existing Taiwanese company will require the foreign investor to apply for foreign investment approval ("FIA") from the Investment Commission ("IC") of the MOEA. Provided the foreign investor is not from Mainland China, the FIA should be issued as a formality.

The registration process for establishing an electricity enterprise in Taiwan is summarized in Diagram 6.

**Diagram 6**




### Dividend Distributions

An offshore wind developer is not permitted to distribute dividends until all taxes have been paid and 10% of profits have been set aside as a legal reserve.[6] With regard to the legal reserve:

- The requirement to set aside a legal reserve will cease to apply once the amount of the legal reserve is equal to the total authorized capital of the company;[7] and
- Where a company incurs no (accumulated) loss, it may, pursuant to a special resolution adopted by a shareholders' meeting, distribute its legal reserve to its shareholders by issuing new shares or by cash, but only to the extent the legal reserve exceeds 25% of the company's paid-in capital.[8]

Withholding tax of 21% is imposed on dividend distributions to foreign shareholders, which may be reduced to between 5% and 15% pursuant to bilateral tax treaties with certain jurisdictions.[9]

### Foreign Ownership Restrictions

In Taiwan, foreign-owned companies engaged in certain industries are subject to foreign ownership limits and/or additional approval requirements. Fortunately for the offshore wind farm market, there are no such foreign ownership limits/approval requirements applicable for the sector.

If an offshore entity establishes a 100% foreign-owned SPV company for the implementation of an offshore wind farm project, such entity will be treated as a resident corporation in Taiwan.

### Import/Export Restrictions

An import/export permit is required for transporting any items into or out of Taiwan. However, to promote the development of renewable energy projects in Taiwan, the importation of specified items[10] for the construction/operation of renewable energy power facilities is exempted from import tariffs, provided such items cannot be domestically manufactured or supplied.[11] For the development of offshore wind power projects, this will mean that the importation of turbines and other construction/operation machinery will be exempt from import tariffs.

### Foreign Exchange

The Government has in place foreign exchange controls to restrict the inward/outward remittance of funds. In general, any foreign investment into Taiwan, regardless of the amount, will require prior approval from the IC.

With regard to the outward remittance of funds:

- **Foreign Exchange Approval**: Any transfer in an aggregate amount in excess of US$50 million requires the prior approval of the Central Bank of Taiwan; and
- **Foreign Investment Approval**: Any single transaction in excess of US$50 million invested overseas requires prior approval from the IC.

On this latter point, the approval of the IC is required only if the transfer overseas is for the purpose of a foreign investment. In practice, the approval from the IC tends to be a formality, provided there is no security issue and the investment

is not into Mainland China. Where the approval of the IC has been obtained, such investment amount will not be included for the purposes of calculating the aggregate amount transferred overseas and requiring approval from the Central Bank of Taiwan.

The Central Bank of Taiwan has progressively relaxed its controls on foreign exchange transactions. The key points of note are:

- No restrictions on inward and outward remittances related to the foreign trade in goods and services;
- No restrictions on foreign direct and portfolio investments approved by the competent authorities; and
- Nonresidents may open NT$ bank accounts but may remit only up to US$100,000 per transaction.

In 2013, Taiwan launched a new foreign currency clearing platform, which currently handles domestic clearing and settlements for U.S. dollar, Chinese yuan, Japanese yen, Australian dollar, and euro transactions. This mechanism aims to improve settlement efficiency for the most traded foreign currencies in Taiwan.

## POWER PURCHASE AGREEMENT AND OTHER CONTRACT DOCUMENTS

### Power Purchase Agreement

As referred to above, the project developer is required to enter into a PPA with TPC. On December 1, 2017, TPC published a standard form PPA specifically for offshore wind farm projects. The PPA provides either a 20-year fixed feed-in tariff that is set on the PPA signing date, or a winning price of a competitive auction covenanted by and between the project developer and the Government. In the Transition Round, 10 projects selected and allocated 3.836 GW by the Government using some key considerations (refer to Annex 1) were guaranteed at a 20-year fixed feed-in tariff price announced by the MOEA; the developers of four projects selected via a competitive auction were entered into PPAs with TPC under their winning bid price for 20 years. Now, in the Zonal Development Round, project developers are to bid for the grid allocation via competitive auctions and enter into a PPA with a winning bid price; therefore, a fixed feed-in tariff will not apply.

The PPA revenue will be denominated in NT$. To mitigate against the risk of currency fluctuations, it will be important for developers to finance some of the capex in local currency—for example, from local banks—or to be able to hedge.

The BOE has stated that the form of PPA is not negotiable and that it must be signed in accordance with the published standard form. This is an important point because there are a number of key bankability concerns with the current form of PPA, including:

- The PPA does not include indexation of the feed-in tariff by way of the Consumer Price Index or any other provision to address inflation risks;
- TPC has the right to reduce the required electricity in circumstances beyond the control of the project developer, without any compensation or payment to the project developer;
- TPC is obliged to make payments only for the electricity received. There is no concept of deemed commissioning to allow for payments if TPC is unable to take the electricity produced;
- There is no right for the project developer to terminate for a TPC default;
- There is no provision for the payment of compensation on termination of the PPA;
- There is no form of government guarantee, assurance, or other support to enhance the creditworthiness of TPC as the sole offtaker/purchaser;
- There is no provision addressing the risk of force majeure; and
- The PPA does not contemplate lender consent/step-in rights.

We note that some of these concerns are addressed, to some extent, by the laws of Taiwan, including:

- The Taiwan Civil Code provides that the contractor will be relieved from the performance of its obligations to the extent it is affected by an event outside of the contractor's control (addressing the risk of a *force majeure*); and
- The Taiwan Civil Code provides a party with the right to terminate a contract when the other party defaults (addressing the lack of a contractual right to terminate for default).

While the form of PPA is not negotiable and, despite the issues in the TPC PPA template, in view of the needs of Taiwan offshore wind farm projects, almost all the offshore wind farm projects acquired financing through local/international banks, export credit agencies, and Taiwan insurance companies.

### Forms of Contract Documents

The form of contract used for construction contracts in Taiwan is typically determined by the owner. In our experience, variations of the FIDIC[12] forms are commonly being used. However, we have also seen the use of other industry standard contracts, such as the AIA[13] form of contract.

### Governing Law and Dispute Resolution

In theory, the parties to any contract with foreign elements can choose a foreign law as the contract's governing law, and such choice will generally be recognized by the courts in Taiwan. In practice, almost all contracts with Government or substantially Government-owned counterparties will be governed by Taiwanese law. This is not unusual in the renewable energy sector across the globe.

Foreign judgments and arbitral awards are also enforceable in Taiwan as long as certain requirements are met, including:

- The foreign court rendering the judgment has jurisdiction over the dispute in question according to Taiwanese law;
- The defendant responded to the action brought against him;
- The contents or litigation procedure of the foreign judgment is not contrary to Taiwan's public policy, morals, etc.;
- Judgments given by Taiwan courts are reciprocally recognized; and
- In the case of the recognition of an arbitral award, the arbitration agreement is valid.

In our experience, the choice of the governing law and the dispute resolution mechanism will depend on the counterparties to the relevant agreement:

- **Counterparty Includes a Government Entity/State-Owned Entity**: The contract will be governed by the laws of Taiwan. Typically, disputes will be resolved by litigation, while arbitration may be allowed, when both parties agree. Prior to a dispute being referred to litigation/arbitration, the contract often requires that the parties attempt a process of conciliation under the guidance of a committee or dispute review board.
- **Counterparties Include a Non-Government Related Taiwanese Entity and a Foreign-Owned Entity**: The governing law and dispute resolution mechanism will be determined by the parties and will be reflective of each party's respective bargaining power. In our experience, it is common for construction contracts to be governed by Taiwan law and for disputes to be resolved by arbitration (either domestic or international).
- **Both Parties are Foreign Entities, but the Works Are Being Undertaken in Taiwan**: Again, the governing law and dispute resolution mechanism will be determined by the parties and will be reflective of each party's respective bargaining power. As the place of performance is in Taiwan, we typically expect that the contract will be governed by the laws of Taiwan and that disputes will be resolved by arbitration (either domestic or international).

Where the contract provides for dispute resolution by domestic arbitration, the arbitration is commonly referred to the Chinese Arbitration Association, Taipei ("CAA"). The CAA may be conducted in the English language and heard by a foreign arbitrator, subject to the parties' agreement. Where international arbitration is used, ICC or HKIAC arbitration in Hong Kong or SIAC arbitration in Singapore are commonly used.

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## ANNEX 1: BACKGROUND INFORMATION

### Taiwan Profile

Taiwan is located in East Asia with Mainland China to the west, Japan to the northeast, and the Philippines to the south. It is referred to as one of the "Four Asian Tigers"[14] and is the seventh-largest economy in Asia. Taiwan is a member of the World Trade Organization ("WTO"), the Asia-Pacific Economic Cooperation ("APEC"), and International Chamber of Commerce ("ICC") and is an observer at the Organisation for Economic Co-Operation and Development ("OECD"). Taiwan's primary trade partners include Mainland China, Hong Kong, the United States, Japan, and Singapore. Annex 1 provides an overview of the legal framework in Taiwan.

**Diagram 1**


*Source: U.S Passport Service Guide*

### Taiwan Offshore Wind Farm Market

Taiwan is surrounded by sea. The geographic environment provides an abundance of wind energy to many areas along the coast of Taiwan and its offshore islands. On the west coast of Taiwan, where the majority of the offshore wind farm projects will be located, the average wind speed reaches up to approximately 11.24 meters per second (measured at 100 meters).[15] These wind speeds are far in excess of the neighboring coastal area of Hong Kong, which reaches only up to approximately 5.8 meters per second (measured at 105 meters).[16] The abundance of offshore wind resources in Taiwan presents a significant opportunity for investors in the offshore wind farm market.

The Government has set aggressive renewable energy targets, with a particular focus on the development of its offshore wind power capabilities. In 2020, electricity generated from renewable energy power plants accounted for 5.4% of the aggregate produced electricity and 16.5% of the aggregate installed capacity in Taiwan.[17] The policy of the Government is to progressively phase out nuclear power plants and have an energy mix containing 50% natural gas, 30% coal, and 20% renewable energy by 2025. The achievement of this renewable energy target will focus on the development of solar photovoltaic ("PV") generation and offshore wind power. Refer to Annex 3 for a summary of the Government's renewable energy targets by 2025.

To achieve the Government's renewable energy targets, the Government announced on July 3, 2012, the "Thousand Wind Turbines Project" ("Program"). The Program is divided into the following three phases: Demonstration Round, Transition Round, and Zonal Development Round. On August 16, 2017, the Government further announced the "four-year wind power promotion plan," refining the targets of wind energy capacity in each phase. Recently, it also published a draft "Regime Planning for Developer Selection," specifying the contemplated capacities to be released from 2026 to 2035.

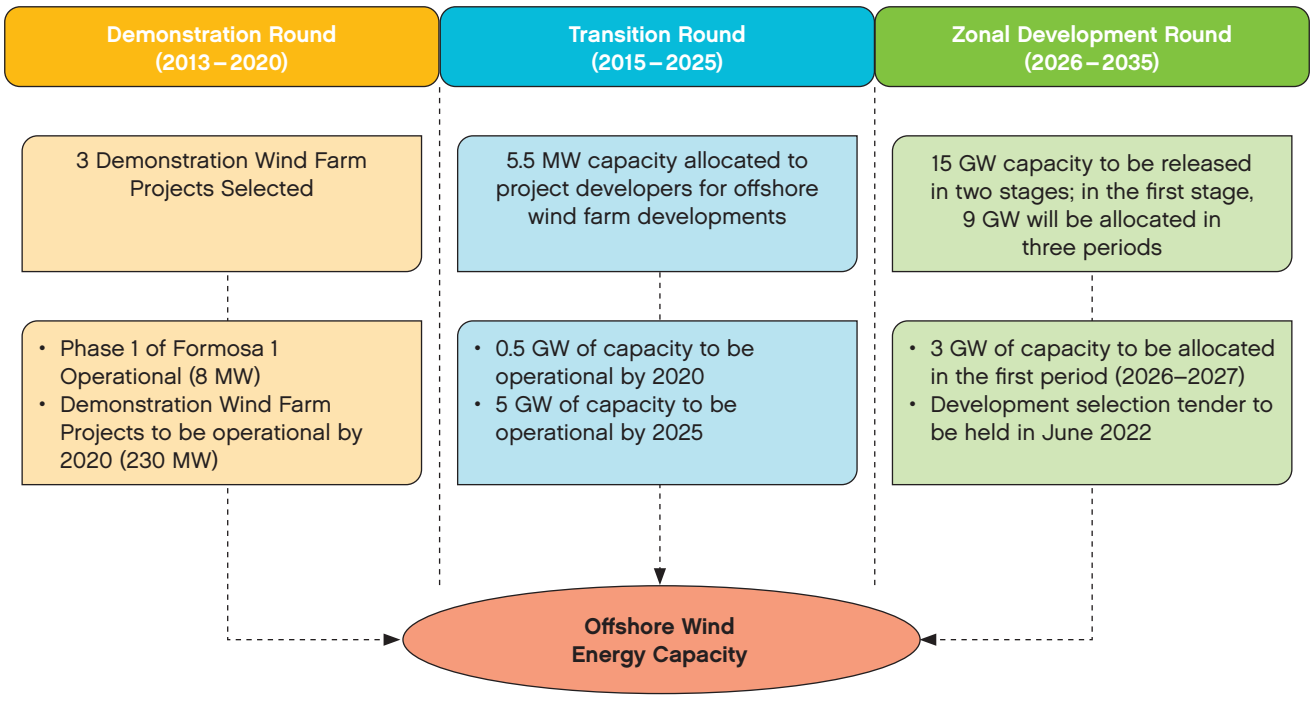
**Demonstration Round (2013–2020)**. Three projects were awarded contracts for the Demonstration Round with an aggregate capacity of approximately 360 MW. These projects include the Formosa Demonstration Project (aggregate capacity of 128 MW with 22 installed wind turbines), the Fuhai Demonstration Project (expected capacity of approximately 132 MW and 14-17 installed wind turbines), and the TPC Demonstration Project (expected capacity of 109.2 MW and 21 installed wind turbines). The intention is for each of these projects to be under a 20-year PPA with fixed feed-in tariff pricing. The Formosa Phase I Project (aggregate capacity of 8 MW) has been operational since April 28, 2017; the Formosa Phase II Project (aggregate capacity of 120 MW) has been operational since December 27, 2019; and the TPC Demonstration Project is expected to be operational by the end of August 2021. Although the application for the EPA approval for the Fuhai Demonstration Project was once rejected on March 26, 2018, it was accepted again on March 14, 2019, when Fuhai Wind Farm Corp Ltd., the developer of the Fuhai Demonstration Project,

filed the administrative appeal to the Executive Yuan of Taiwan, and the latter revoked EPA's decision. On March 20, 2019, the Fuhai Demonstration Project obtained the EPA approval (see Annex 4 for further details).

**Transition Round (2015–2025)**. In July 2015, the BOE released 36 zones for potential development of future commercial wind farms. Those developers that have received preliminary approval of their EIA may apply for developing the relevant zone. In October 2017, the BOE increased the offshore wind energy target for the Transition Round from 3 GW to 5.5 GW.[18] The BOE guaranteed 3.836 GW of projects at a fixed feed-in tariff price for 20 years. The remainder of the projects went through a competitive auction to sell power at a lower price in a tender held by TPC. Of the 5.5 GW of targeted capacity, the Government expected to have approximately 500 MW (with FiTs) operational by 2020[19] and plans to make the remaining ready by 2025.

**Zonal Development Round (2026–2035)**. Pursuant to the draft "Regime Planning for Developer Selection" published by the BOE on May 11, 2021, the Government intends to release 15 GW capacity for 2026 to 2035, with 1.5 GW in each year. The first stage of 9 GW will be allocated in the developer selection processes conducted in three periods. The first period releasing 3 GW for 2026 to 2027 will be held on June 30, 2022, and the result of developer selection tender will be announced by August 31, 2022. Project developers wining the selection tender will enter into a PPA with TPC under their 20-year winning bid price via the competitive auction.

**Diagram 2**



### Lessons Learned from the Taiwan Onshore Wind Farm Market

Since 2000, the Government, including the BOE and the MOEA, has actively promoted the development and application of onshore wind power development through resource exploration, technical guidance, research survey, and, particularly, by providing subsidies for the purchase of equipment.

While the Taiwan onshore wind farm market is reasonably developed, it is not without its challenges, including:

- Projects located on government-owned land are given a nine-year lease, which may be renewed provided certain requirements are satisfied. This raises a bankability issue for any proposed limited or non-recourse financing for a period longer than the lease term;
- Stringent environmental requirements are creating a complicated and prolonged application and approval process; and
- Onshore wind farms are saturated due to limited land space. Most onshore wind energy resources have been constructed or planned.

Some of the same issues will also be challenges for the development of the offshore wind farm sector in Taiwan. For instance:

- Developers are already experiencing challenges with regard to the environmental application process; and
- As the revenues will be denominated in NT$, it will be important for developers to obtain financing from local financial institutions. The need to obtain domestic financing is also included as a key consideration in the qualification review for grid allocation (see "Grid Allocation Process" above).

With regard to the necessary site leases for offshore wind energy projects, the National Property Administration has released a regulatory letter, specifically permitting the lease for an offshore wind farm project to extend beyond the nine-year limit placed on onshore wind farm projects on government-owned land and to instead remain effective for the period of the electricity license. Upon the expiry of the electricity license, the lease will remain effective with the consent of the Government.[20]

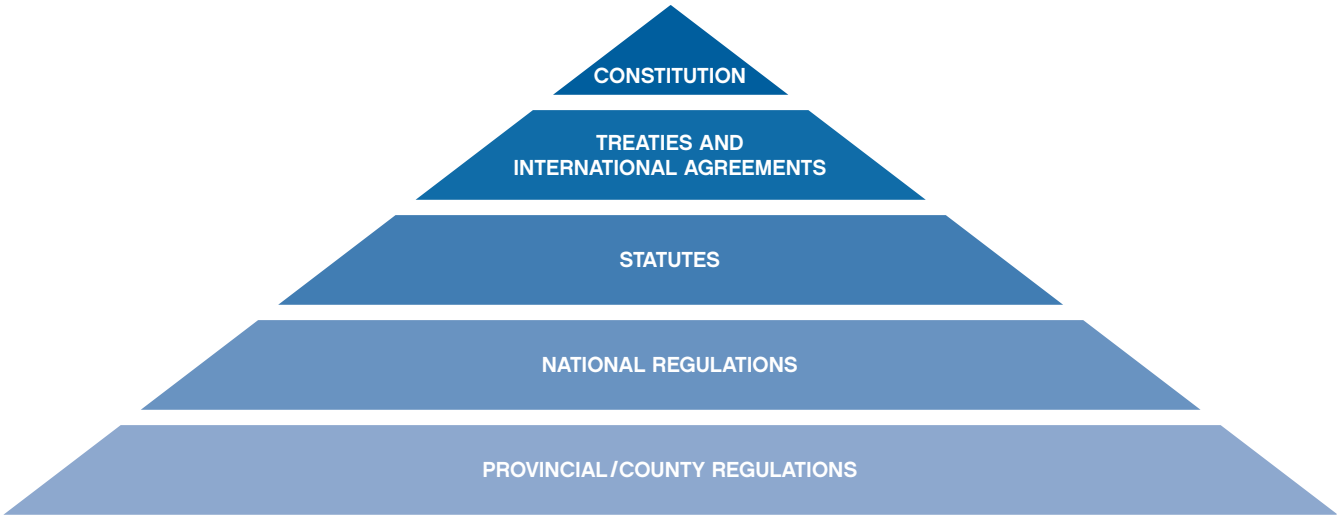
## ANNEX 2: BRIEF OVERVIEW OF THE LEGAL FRAMEWORK

### Civil Law System

The legal regime in Taiwan is based on the civil law system, and all of the rules are generally codified. Following the Japanese terminology, the main legislation is referred to as the "Six Codes," including the Constitution, the Civil Code, the Code of Civil Procedure, the Criminal Code, the Code of Criminal Procedure, and the Administrative Laws. Only the Constitutional Court and the Judicial Yuan have the power to interpret the Constitution or unify interpretations of statute and regulations.

The courts in Taiwan, when making a decision, will first apply the relevant Codes. However, the relevant Code will be applied only to the extent it does not violate the Constitution. Diagram 7 below illustrates the order of priority of the legal and regulatory instruments in Taiwan.

**Diagram 7**




As a civil law jurisdiction, Taiwan does not accord formal binding authority to all judicial decisions in subsequent cases. Instead, Supreme Court decisions are subject to a screening process, in which certain decisions are selected as "precedent" for guiding future cases. Taiwan also recognizes, to varying degrees, other sources of law, including emergency orders, court decisions and orders and interpretations by government agencies, customs, treaties, and legal principles.

### Government

Taiwan has a multiparty democratic political system, with government administration divided into central, provincial, and county levels, each with well-defined roles and powers. Central government power is divided among the Office of the President and five independent "Yuans" (i.e., Departments)—the Executive Yuan, the Legislative Yuan, the Judicial Yuan, the Examination Yuan, and the Control Yuan.

In recent years, the Government has adopted a policy of deregulation to increase the transparency of laws related to foreign investment.

### Legislative Instruments for the Renewable Energy Sector in Taiwan

The primary legislative instruments for the renewable energy sector in Taiwan are the Electricity Act and the Renewable Energy Development Act.

**Electricity Act ("EA")**. The EA covers the establishment of power plants and the transmission and distribution of electricity. An electricity enterprise is required to be a company limited by shares and to have at least two independent directors, which constitutes no less than one-fifth of the directorship. A Government approval is required when the electricity enterprise intends to terminate or suspend its business or to undertake any merger or acquisition activity. An electricity-generating enterprise must obtain an establishment permit and a construction permit to start building or expanding its infrastructure facilities. Depending on the scope of the electricity enterprise's business, such application may require an EPA approval.

The EA was amended on January 26, 2017, with the aim of liberalizing the power market by, among other things, allowing renewable energy providers to directly sell electricity to users.

**Renewable Energy Development Act ("REDA")**. The REDA covers the power purchase agreement and government subsidies in connection with the renewable energy sector. Under the REDA, if a power developer installs any self-usage power generation equipment that reaches a certain level of capacity, it must pay a certain amount into a fund every year according to the nonrenewable energy portion of its total power generation. The fund is used by the Government to support other renewable energy projects.

The power utility, which operates power grids at the location of the renewable power generation equipment, must provide grid integration, power purchase, and back-up electricity during any maintenance period or other outages of the renewable power generation equipment. Without the MOEA's permission, the power utility cannot refuse to provide the above support, unless the cost is unreasonable and without economic justification. The tariff under such power purchase must be the same as the FiTs publicized by the MOEA, or lower under some special circumstances (e.g., the equipment has been operated for more than 20 years).

Further, REDA authorized MOEA to promulgate amendments to the REDA on December 31, 2020, which obligates large consumers of electricity to pay a fee or purchase renewable energy vouchers for their consumption of nonrenewable energy. Alternatively, those large consumers of electricity may install renewable energy generators or energy storage facilities to generate/store power proportional to their consumption of nonrenewable energy.

**Other Relevant Legislative Instruments**. In addition to the EA and the REDA, there are various other legislative instruments that govern the implementation of offshore wind farm projects. These are set out in the table below.

| COVERAGE | LEGISLATIVE INSTRUMENT |
|---|---|
| **Wind power generation (general)** | • Regulations for Installation and Management of Renewable Energy Generator<br>• Electricity Enterprise Registration Rules<br>• Guidelines for Reservation of Offshore Wind Power Generation Site<br>• Guidelines for Taiwan Power Company's Purchasing of Renewable Energy<br>• Regulation Governing Power Generation Equipment |
| **Subsidies for wind power** | • Regulations for Application of Supporting Documents for Tariff Exemption and Installments of Renewable Energy<br>• Regulations for Rewards of Offshore Wind Power Demonstration Generation Site System |
| **Electricity transmission** | • Guidelines for Distribution of Capacity of Offshore Wind Power Generation Site<br>• Guidelines for Taiwan Power Company's Parallel Renewable Energy on Power Generation |

*continued on next page*

| COVERAGE | LEGISLATIVE INSTRUMENT |
|---|---|
| **Environmental requirements** | • Environmental Impact Assessment Act<br>• Standards for Determining Specific Items and Scope of Environmental Impact Assessments for Development Activities<br>• Environmental Impact Assessment Enforcement Rules<br>• Guideline of Environmental Impact Assessments for Development Activities<br>• Guidelines for Reservation of Offshore Wind Power Generation Site |
| **Building Code requirement** | • Standards for Renewable Energy Facility Installation's Exemption Certificate for Miscellaneous |

### Enforcement of Contracts in Taiwan

Contracts in Taiwan can generally be enforced by the courts in accordance with their respective terms. In circumstances of breach of contract, the available remedies to the nondefaulting party include:

- Compensation for the injury suffered;
- Rescission;
- Restoration of the parties to their position had the breach not occurred;
- Return (double amount) of the earnest money; and
- Penalties or liquidated damages.

As part of the court's consideration of a claim for breach of contract, the court may take into account:

- Whether there has been a change in circumstances that could not have been foreseen at the time of entering into the contract;
- Whether the performance of the original obligations under the original contract will become obviously unfair;
- Whether the original contract is for the purpose of injuring any person; and/or
- Whether the performance of the original obligations under the original contract will harm the public interest.

### Dispute Resolution

If disputes are brought to the court, the courts are obliged to follow the codified rules and render a reasoned judgement. The cases are heard and presided by judges.

Taiwan has a three-tiered court system, comprising (in order of authority):

- The Supreme Court;
- The High Court; and
- The District Court.

Arbitration, as a dispute resolution mechanism, is available under the Taiwan Arbitration Act, which was enacted by reference to the UNCITRAL Model Law. All foreign arbitral awards must seek recognition by the Taiwan court before the enforcement may take place in Taiwan. It should be noted that Taiwan is neither a signatory to the "ICSID Convention" nor a signatory to the "New York Convention." Notwithstanding the above, foreign arbitral awards rendered by major international arbitration institutions, such as the International Chamber of Commerce, Hong Kong International Arbitration Centre, or Singapore International Arbitration Centre, will, in general, be recognized by a Taiwan court, subject to a few regulatory exceptions and the typical New York Convention-style requirements (e.g., public policy and reciprocity).

## ANNEX 3: RENEWABLE ENERGY TARGETS

### Renewable Energy Targets

| TYPE | POWER CAPACITY (MW) | | | ELECTRICITY GENERATION (TWh) | | |
|---|---|---|---|---|---|---|
| | 2020 | 2021 | 2025 | 2020 | 2021 | 2025 |
| **Solar PV** | 5,817 | 8,750 | 20,000 | 6.1 | 8.9 | 22.7 |
| **Onshore Wind** | 726 | 787 | 886 | 1.8 | 1.8 | 2.2 |
| **Offshore Wind** | 128 | 557 | 5,617 | 6.7 | 6.1 | 14.4 |
| **Geothermal** | 0.3 | 1 | 20 | 0.02 | 0.02 | 1.02 |
| **Biomass** | 718 | 711 | 778 | 3.76 | 3.8 | 4.1 |
| **Hydropower** | 2,093 | 2,093 | 2,122 | 3 | 5 | 5 |
| **Fuel Cell** | - | 1 | 1 | 0 | 0.0004 | 0.0009 |
| **TOTAL** | **9,482** | **12,900** | **29,424** | **15.3** | **20.1** | **48.5** |

*Source: "Policy for the Development of Taiwan Renewable Energy" Bureau of Energy, Taiwan, July 1, 2021.*

### Wind Energy Targets

| TARGET | EXISTING CAPACITY (2020) | LONG-TERM (2025) |
|---|---|---|
| **Onshore Capacity (MW)** | 726 MW | 1,200 MW |
| | Number of installed turbines | 569 turbines |
| **Offshore Capacity (MW)** | 128 MW | 5,667 MW |
| | Number of installed turbines | More than 600 turbines |
| **Total Capacity** | | **6,867 MW** |
| **Total Installed Turbines** | | **More than 1,050 turbines** |

*Source: "Policy for the Development of Taiwan Renewable Energy " Bureau of Energy, Taiwan, July 1, 2021.*

## ANNEX 4: POLICIES ON OFFSHORE WIND FARM

### Overview

Announced on July 3, 2012, the "Thousand Wind Turbines Project" ("Program") is intended to encourage the industry to build offshore demonstration wind farms through the provision of Government subsidies. The Program is divided into three phases: Demonstration Round, Transition Round, and Zonal Development Round. The Government further announced the "four-year wind power promotion plan" on August 16, 2017, and published a draft "Regime Planning for Developer Selection" on May 11, 2021, refining the targets of wind energy capacity in each phase, especially specifying the contemplated capacities to be released from 2026 to 2035.

### Phase 1: Demonstration Round (2013–2020)

The objective of Phase 1 of the Program was to have two demonstration turbines commissioned by 2016 and three demonstration offshore wind farms completed by 2020. See below for further details on these demonstration projects.

Under the Program, the Government provides subsidies for both the equipment and development processes:

- Incentive Fee for Demonstration Wind Turbines: The Government subsidizes up to 50% of the installation expenditures (feed-in tariff advances/interest-free loan).
- Incentive Fees for Demonstration Wind Farm: The Government subsidizes up to NT$ 250 million (US$ 8.33 million) for capital expenditure of the two pilot turbines.

On December 27, 2019, 20 turbines (Formosa 1, Phase 1 and Phase 2) with an aggregate capacity of 128 MW were commissioned and are currently operational. Three demonstration offshore wind farms (set out below) are under development with an aggregate capacity of approximately 360 MW. One of the three projects, the Fuhai Demonstration Project, failed once but now has successively received the final EPA approval.

### Selected Demonstration Wind Farm Projects

#### Formosa Demonstration Project

| | |
|---|---|
| ***Location:*** | Off the coast of Zhunan Township, Miaoli County |
| ***Offshore:*** | 1–5 kilometers, water depth: 15–30 meters |
| ***Wind Turbines:*** | 32 installed wind turbines |
| ***Capacity:*** | Expected to grow to 120 MW by 2019 |
| ***Sponsors*:** | Ørsted (35%), Macquarie Capital (50%), Swancor (15%) |
| ***Phases:*** | Phase I (8 MW) and Phase II (120 MW) |
| ***Status:*** | Phase I has been fully commissioned. On April 28, 2017, Phase I of the Project (two 4 MW wind turbines) obtained the first commercial operating license for an offshore wind farm project in Taiwan. However, delays have been experienced as a result of the failure to obtain the necessary environmental permits. According to the Taiwan EIA Inquiry System, the Formosa Demonstration Project (both Phase I and Phase II) has received the final EPA approval.<br><br>On December 12, 2017, a PPA with TPC was signed for Phase II of this Project, which is expected to be completed by 2019. On November 10, 2017, Swancor issued a request for proposal to banks (including Société Générale, Cathay United Bank, CTBC Bank, BNP Paribas, EnTie Commercial Bank, and Crédit Agricole) for the financing of Phase II of the Project. In February 2018, it was confirmed that financing for Phase II of this Project amounted to NT$16 billion (US$538 million), provided by Société Générale, ANZ, Mitsubishi UFJ, BNP Paribas, Crédit Agricole, DBS, Deutsche Bank, ING, EnTie Commercial Bank, KGI Bank, Fubon Financial Holding, and Cathay Financial Holding. On December 27, 2019, Phase II of the Project obtained the electricity license, and both Phase I and Phase II, consisting of 22 wind turbines and an aggregate capacity of 128 MW, have been fully commissioned. |

### Fuhai Demonstration Project

| | |
|---|---|
| ***Location:*** | Off the coast of Fangyuan Township, Changhua County |
| ***Offshore:*** | 8–12 kilometers, water depth: 20–45 meters |
| ***Wind Turbines:*** | 30 installed wind turbines |
| ***Capacity:*** | Approximately 120 MW |
| ***Initial Sponsors*:** | Fuhai Wind Farm Corp Ltd., a subsidiary of TGC |
| ***Status:*** | Construction of the Project is delayed due to environmental concerns.<br>The environmental impact assessment for the Project was submitted to the EPA in August 2017. Various environmental protection groups protested because the location of the Project is close to a dolphin habitat and protected reefs. The EPA requested that Fuhai Wind Farm Corp Ltd. provide additional data on the Project and the environmental impact assessment. On January 3, 2018, the EIA Review Committee recommended that the Project should not be developed on the basis that: (i) the delays in the development of the Project; (ii) the insufficiency of the expected economic benefits of the Project; and (iii) no communication had been made with the potentially affected fishermen. Fuhai Wind Farm Corp Ltd. filed an administrative appeal to the Execution Yuan of Taiwan. The latter considered that reasons (i) and (iii) were not related to environmental factors. In addition, no information such as specific evaluation method could be referred to assess economic benefits; therefore, reason (ii) was not justified either. The Execution Yuan then revoked EIC's decision. On March 20, 2019, the Project finally obtained the final EIA approval. |

### TPC Demonstration Project

| | |
|---|---|
| ***Location:*** | West side sea area of Fangyuan Township, Changhua County |
| ***Offshore:*** | 5–8 kilometers, water depth: 15–25 meters |
| ***Wind Turbines:*** | 22–36 installed wind turbines |
| ***Capacity:*** | Approximately 108 MW |
| ***Initial Sponsors*:** | TPC |
| ***Status:*** | Construction of the Project is delayed due to fisheries compensation issues.<br>The EPA requested TPC to provide additional data on the Project and the environmental impact assessment. On February 9, 2018, this Project received the EPA's final approval of the EIA.<br>The tender for construction has failed a few times, and the most recent tender was announced January 8, 2018. It was confirmed by the MOEA's report on March 22, 2018, that on February 13, 2018, a contractor for this Project was selected.<br>On December 8, 2017, TPC received the Establishment Permit for this Project. |

### Phase 2: Transition Round (2015–2025)

In July 2015, the Bureau of Energy released 36 zones of potential ("ZoP") for development of future commercial wind farms. Interested wind farm developers ("Applicants") were required to submit an EIA to the BOE. The objective of this Phase 2 was for the Applicants to have obtained their preliminary EIA approval by December 31, 2017, and establishment permit by the end of 2019.

As announced in the "four-year wind power promotion plan," the offshore wind energy target for the Transition Round is 5.5 GW. This is far less than projects seeking to participate in the Transition Round (approximately 10.5 GW). The BOE proposed to address this discrepancy in development capacity (relative to available capacity) by allocating the capacity to competing developers as set out below.

**1: Allocation of Capacity using the Selection Criteria**. Project developers were allocated 3.836 GW of capacity with a fixed feed-in tariff using the Guidelines for Grid Allocation published by the BOE on January 18, 2018 ("Selection Criteria"). The Selection Criteria comprised the following key considerations: construction capability, engineering design capability, operations and maintenance capability, and financial capability. The BOE made it clear that an emphasis would be placed on the promotion of local content. The below table provides a summary of the local content considerations that were to be taken into account for each element of the Selection Criteria.

| SELECTION ITEM | LOCAL CONTENT CONSIDERATIONS |
|---|---|
| Construction Capability (25%) | No applicable local content considerations. |
| Engineering Design Capability (20%) | Local cooperation in engineering design, construction, and installation. |
| Operations and Maintenance Capability (15%) | Local industry development plan.<br>Local cooperation in operations and maintenance. |
| Financial Capability (40%) | 10 points awarded if 20% of funding is allocated to local financial institutions. |

The results of the grid allocation using the selection criteria were announced on April 30, 2018. There are 10 projects sponsored by seven developers (five international, two local) selected. The selected projects are expected to be completed respectively by 2020, 2021, 2023, and 2024. The table below sets out the details.

| # | SPONSORS | PROJECT | CAPACITY (MW) | APPROVED CAPACITY (MW) | FINANCING |
|---|---|---|---|---|---|
| i | wpd (German) | Liwei | 363 | 350 (2021) | NT$130 billion (US$4.4 billion) (Bank of Taiwan, Cathay United, Fubon, China CITIC, E.SUN, KGI, Hua Nan) |
| | | Yunneng | 708 | 360 (2020)<br>348 (2021) | |
| ii | Ørsted (Denmark) | Southwest Greater Changhua | 631.9 | 294.8 (2021) | NT$190 billion (US$6.4 billion) |
| | | Southwest Greater Changhua | 605.2 | 605.2 (2021) | |
| iii | Swancor (Taiwan) and Macquarie (Australia) | Hai Neng | 378 | 378 (2020) | NT$62.4 billion (US$2.25 billion) (Taiwan Life Insurance, EnTie, E.SUN, Fubon, KGI, Cathay United, and 14 foreign banks) |

*continued on next page*

| | | | | | |
|---|---|---|---|---|---|
| iv | NPI (Canada) and Yushan (Singapore) | Hai Long II | 532 | 300 (2024) | NT$85 billion (US$2.9 billion) (Cathay United and 14 insurance companies) |
| v | CIP (Denmark) | Changfang | 552 | 100 (2021)<br>452 (2023) | NT$180 billion (US$6.1 billion) (CTBC, Taiwan Life Insurance) |
| | | Xidao | 400 | 48 (2024) | |
| vi | CSC (Taiwan) | Power Generation | 480 | 300 (2024) | More than NT$40 billion (US$1.44 billion) (financial advisory bank: CTBC, detail to be determined) |
| vii | TPC (Taiwan) | TPC II | 720 | 300 (2024) | |

** Red type: projects delayed and expected to be operational by 2021; green type: project terminating the administrative contract with the Government due to the difficulty of solving aviation issue.*

**2: Allocation of Capacity by Competitive Auction**. The remaining 1.664 GW of capacity were allocated based on a competitive auction to sell power at a lower price in a tender held by TPC. There is no local content requirement as part of this competitive auction. Only those project developers that applied as part of Phase 1 above and scored a minimum of 60 points will be eligible to participate in Phase 2. The table below specifies the result of competitive auction.

| SPONSORS | PROJECT | CAPACITY (MW) |
|---|---|---|
| Ørsted (Denmark) | Southwest Greater Changhua | 337.1 (2021–2025) |
| | Northwest Greater Changhua | 582.9 (2021–2025) |
| NPI (Canada) and Yushan (Singapore) | Hai Long II | 232 (2021–2025) |
| | Hai Long III | 512 (2021–2025) |

### Phase 3: Zonal Development Round (2026–2035)

Pursuant to the draft "Regime Planning for Developer Selection" published by the BOE on May 11, 2021, the Government plans to allocate 1.5 GW capacity each year, for a total of 15 GW for 2026 to 2035, in this Zonal Development Round, which is divided into two stages. The first stage ranges from 2026 to 2031, with three periods of developer selection processes to be conducted from 2022 to 2024, releasing 3 GW in each period. The first period of developer selection process, allocating 3 GW for 2026 to 2027, will be held on June 30, 2022, and the result of developer selection will be announced by August 31, 2022. The developer selection process is separated into two phases. The first phase is the Qualification Review of developers' technical capability, financial capability, and industrial relevance (local content); the second phase is the Price Comparison via a competitive auction.

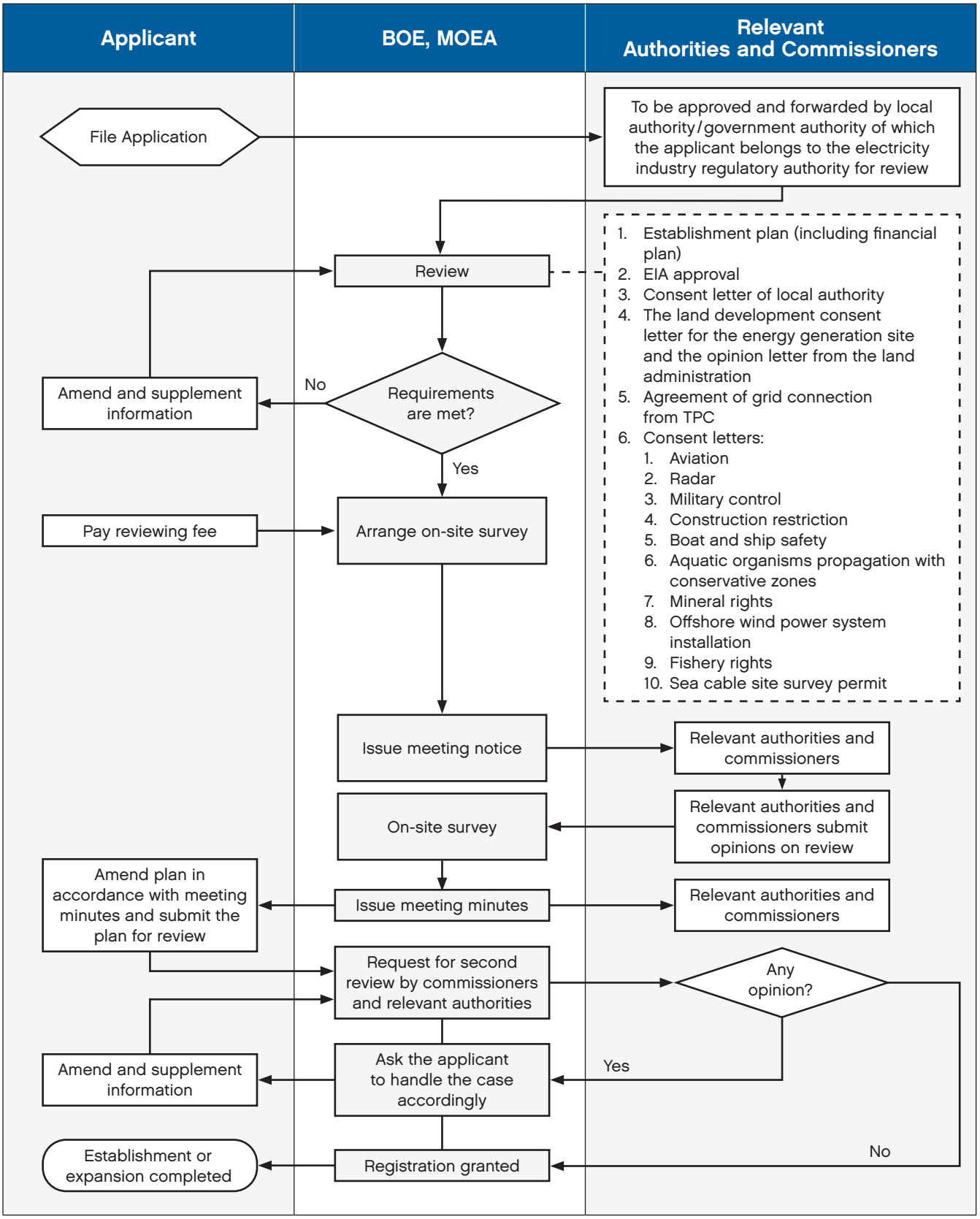
**Incentives**. There are a number of incentives intended to drive the growth of Taiwanese renewable energy projects and foster the achievement of the Government's renewable energy targets, including:

**Dispatch Priority, Direct Sales**. The Electricity Act provides:

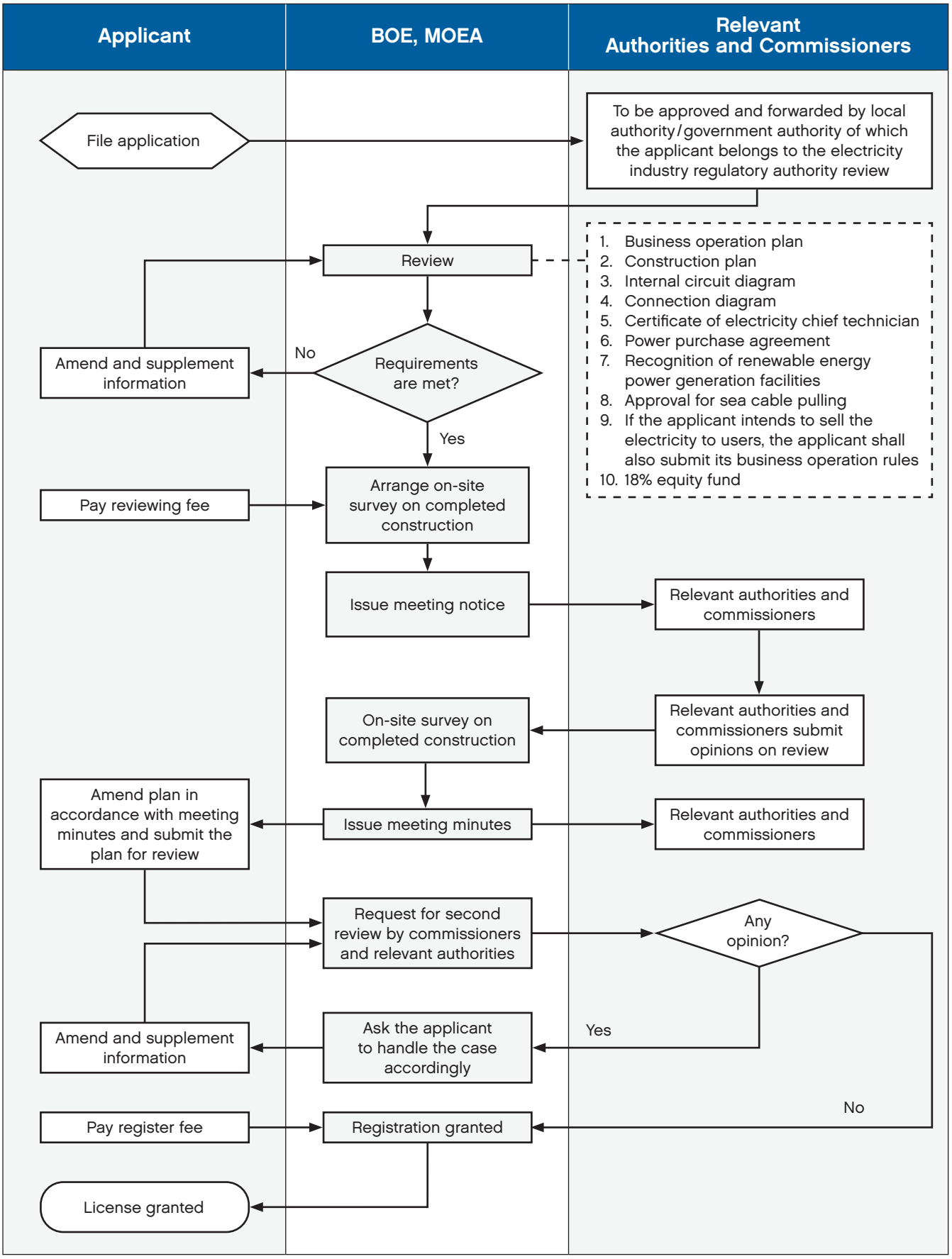
- Direct Sales: Nonrenewable energy generators are unable to sell electricity directly to end users. Instead, they may sell electricity only to retailers or the grid operator (TPC). However, renewable energy generators are allowed to sell power directly to end users, either through their own transmission and distribution lines or through the TPC grid.
- Dispatch Priority: The grid operator (TPC) must prioritize the connection and distribution of renewable energy, subject to ensuring safety and stability of the power system.

## ANNEX 5: PROCEDURE OF APPLICATION AND REVIEW FOR RENEWABLE ENERGY POWER GENERATION (OFFSHORE WIND POWER)[21]

### Flowchart of Establishment or Expansion Review Process



**Flowchart of Electricity License Review Process**



## ENDNOTES

1 The "total investment of the application" is determined by the initial cost of installed capacity per kW from the FiTs announced in the year of the application multiplied by the total installed capacity of the application.

2 Taiwan has enacted and implemented more than 400 environmental laws and regulations, including the Basic Law of the Environment, the Air Pollution Control Act, and the Environmental Impact Assessment Act.

3 The sponsors for this project are Swancor and Macquarie.

4 The entities that are invited to discuss the scope of the EIA report depend on the nature of the development project. As an offshore wind project normally involves matters of fishery and sailing, the EPA would invite the Fisheries Bureau and the Maritime Port Bureau.

5 The definition of "a single project developer" is the applications consisting of: (i) the same preparatory office/company or one of the same initiators/representatives; or (ii) one of the same legal persons/general partners of funds among their shareholders. The initiator/legal person under this definition means the party directly or indirectly holds no less than 20% equity interest in an application.

6 The Company Act.

7 Article 237 of The Company Act.

8 Article 241 of The Company Act.

9 Currently, Taiwan has bilateral tax treaties with Germany, Luxembourg, Malaysia, Netherlands, Singapore, Belgium, Switzerland, and the United Kingdom, among others.

10 Items include construction or operation machinery, equipment, special means of transport for construction use, training materials, and other required components.

11 Article 16, Renewable Energy Development Act.

12 Fédération Internationale Des Ingénieurs-Conseils.

13 The American Institute of Architects.

14 Singapore, Hong Kong, and South Korea are the other three.

15 Pei-Chi Chang, Ray-Yeng Yang, and Chi-Ming Lai, "Potential of Offshore Wind Energy and Extreme Wind Speed Forecasting on the West Coast of Taiwan," *Energies* (published February 27, 2015).

16 Id.

17 *Supply and Demand Report of 2019–2020 National Power Resources*, Bureau of Energy, Ministry of Economic Affairs.

18 Project Finance International, "AP: Taiwan—New wind energy target for 2025," January 16, 2018.

19 The 378 MW Hai Neng wind farm and the 360 MW Yunneng wind farm composing this 500 MW have encountered delays and are expected to be operational by 2021.

20 Generally, the Government will consent to the lease remaining effective provided the conditions that were satisfied in the project obtaining the electricity license remain effective.

21 Based on the flowchart released by BOE.