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# Taiwan offshore wind policy update

August 2021



資誠

# Taiwan offshore wind policy



## Taiwan has to date completed 5.5 GW offshore wind tenders

### Phase 1 Offshore demonstration incentive programme

237 MW allocated to two demonstration wind farms:

- Formosa 1: Commissioned in 2019
- Taipower 1: Scheduled to be commissioned in 2021
- Fuhai: Suspended due to failure to obtain EIA approval in time



### Phase 2 Offshore zone application for planning

- 5.5 GW allocated to offshore wind projects through two rounds of a selection process (3.8 GW) and a price auction (1.7 GW)
- These projects are expected to be commissioned by 2025

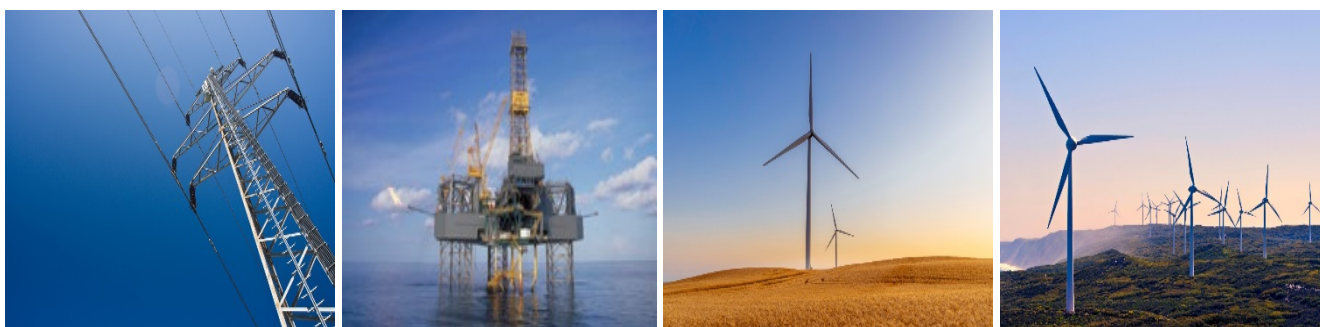


### Phase 3 Offshore wind energy zonal development plan

**Capacity offered:** 1.5 GW per year from 2026 to 2035 (15 GW in total)

- **Selection process:** Qualification evaluation and competitive price tender
- Local content commitment in proposals will be an important consideration

Source: Bureau of Energy, MOEA; Inframation.



# Phase 3 offshore wind zonal development plan



## 01 Zonal development application

The official application guidelines for the Phase 3 offshore wind zonal development plan were announced by the Ministry of Economic Affairs (MOEA) on 23 July 2021, effective immediately. All project applicants must follow the set process and submit the following:

### 1. Proof of funds

Applicants must provide proof of funds equivalent to at least 5% of the total proposed investment amount. This is calculated by multiplying the construction cost per kilowatt for offshore wind projects, as set by the Bureau of Energy (BoE), in the year of the application, by the total capacity applied for. For projects over 1.5 GW, the total applied capacity is set at 1.5 GW for calculating the required 5% of the total investment amount.

#### Example

**Capacity applied for:** 500 MW

**Initial construction cost per kilowatt (if submitted in 2021):** NT\$154,100

**5% of total investment amount required:**

$\text{NT\$}154,100 \times 500,000 \text{ KW} \times 5\% = \text{NT\$}3,852 \text{ million (around US\$140 million)}$



### 2. Detailed project development plans

The application should include a project overview and descriptions, including the background and experience of the development team, a project development plan, and the project ownership structure (including all sponsors and their shareholder structures).

### 3. Project site selection should avoid sensitive locations

The guidelines indicate the high-sensitive locations that offshore wind project applications should avoid. These were determined based on information provided by the authorities.

The BoE will arrange a cross-ministry panel — which will include the MOEA, Ministry of Transportation and Communications, Ocean Affairs Council, Ministry of National Defense, Council of Agriculture, Ministry of Culture, and the Ministry of Interior — to review each project from various perspectives, such as aviation, radar, maritime safety, military, prohibited areas, aquatic animals and plants protection, and fishing and mining rights.

Source: Bureau of Energy, MOEA

# Phase 3 offshore wind zonal development plan



## 01

### Zonal development application (*continued*)

#### 4. Reviewed applications subject to EIA approval

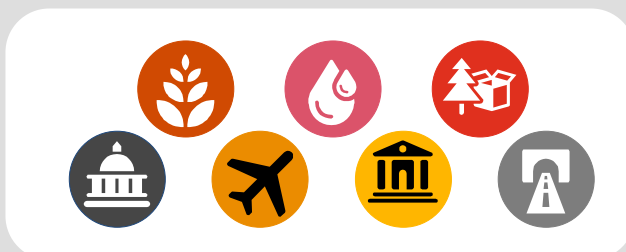
Applications that pass the review stage will receive an unconditional no objections letter. These applicants must then undertake an environmental impact assessment (EIA) and submit it to the Environmental Protection Administration (EPA) for review and approval.

Source: Bureau of Energy, MOEA

#### Our observations

In Phase 2 offshore wind zone application for planning, the BoE released certain zones for the potential development of commercial wind farms. For Phase 3, the BoE has indicated the sensitive locations that developers should avoid. However, these still have to be confirmed, first by the cross-ministry panel, and then by the EIA Committee. The final offshore areas allotted for development are usually smaller than applied for.

In Phase 2, once a project was registered with the BoE, the developer had to obtain consents from each relevant ministry one by one, while at the same time submitting their EIA application in parallel to the EPA, which proved cumbersome. For Phase 3, the BoE will be the single contact window and organize a cross-ministry panel to review all applications and issue unconditional no objections letters to qualifying projects. Only then will a project application be transferred to the EPA for EIA review.



# Phase 3 offshore wind tender policy



## Phase 3 plan announced

### 02 15 GW capacity set for 2026 - 2035

In May 2021, the BoE increased the amount of capacity for the upcoming Phase 3 offshore wind zonal development process to 15 GW from the previous planned target of 10 GW.

The capacity will be allocated in two stages:

- **First stage, for projects commissioned between 2026 and 2031**  
A total of 9 GW will be awarded under three tenders
- **Second stage, for projects commissioned between 2032 and 2035**  
The detailed rules and timeline for the second stage will be determined later.

### Stage 1 : 9 GW capacity to be allocated in 2026-2031

#### 1st tender

- Capacity to be awarded: 3 GW
- Estimated tender schedule: Applications due on 31 August 2022
- Preliminary results due to be announced in 3Q 2022
- Time of grid connection: 2026-2027

#### 2nd tender

- Capacity to be awarded: 3 GW
- Estimated tender schedule: 2Q 2023
- Time of grid connection: 2028-2029

#### 3rd tender

- Capacity to be awarded: 3 GW
- Estimated tender schedule: 2Q 2024
- Time of grid connection: 2030-2031



Note: The rules and schedule for the second and third tenders may be revised based on the outcome of the first tender.  
Source: Bureau of Energy, MOEA

## Phase 3 offshore wind tender policy

### 03

### Tender process

The tender process for Phase 3 offshore zonal development includes two rounds. To be eligible to participate, projects must have obtained an unconditional no objections letter from the BoE, as outlined earlier, as well as conditional approval, or a recommendation of approval, from the Environmental Impact Assessment and Review Committee.

#### First round: Qualification evaluation

Applicants will be evaluated based on their technical and financial capabilities as well as their local content commitment, which will be required to account for at least 60% of the 29 key development items as listed by the Industrial Development Bureau (IDB). Project proposals that score 70 points or more may proceed to the next round of the process.



**Technical abilities  
(60%)**



**Financial abilities  
(40%)**

(Disclosure of equity partnership plan is required)



**Commitment to local  
supply chain**

#### Second round: Price auction

Applicants who qualify from the first review round will then participate in a competitive price tender, with those projects submitting the lowest tariff bid being awarded grid capacity first.

The ceiling price for the first tender in 2022 has been set at NT\$2.49/kWh. The ceiling price for the subsequent tender will be the capacity weighted average price of the previous tender. The floor price for the price auction has been set at NT\$0/kWh. In the event of a tie, the BoE will score the bidding projects based on their proposed local content commitment.

The tariff rate to be included in the power purchase agreement (PPA) executed between the awarded project and Taipower will be the tender price submitted in the price auction.

The maximum amount of capacity awarded to a single developer and a single project in each tender may not exceed 600 MW. Projects with the same legal representatives or sponsors (with more than a 20% stake) are deemed from the same developers, and the total capacity awarded to any developer will be limited to the thresholds indicated above.

Source: Bureau of Energy, MOEA



## Phase 3 offshore wind Tender Policy

### 03 Tender process (*continued*)

#### Our observations

In the Phase 2 offshore wind zone application for planning, over 3 GW capacity received EIA approval but did not secure grid connection. These projects have to resubmit their applications to the BoE for review by the cross-ministry panel, but the process should be shorter this time, as they obtained all ministry consents in 2018.

Generally, it takes around 9 to 15 months for a project to obtain conditional approval or a recommendation of approval from the EIA Committee. We expect that qualifying projects for the 1st tender in Phase 3 will mostly be ones that applied during Phase 2, as the schedule for new projects qualifying for the 2022 tender is challenging.

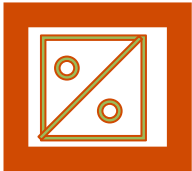
The tender scheme discourages large developers from dominating the market with cross-shareholdings. Because of the capacity allocation cap for single developers, we expect that around 5-6 developers and projects will be awarded in each tender.

The capital investment required for a 500 MW offshore wind project is significant and needs to be supported not only by deep-pocket equity investors but also by banks. To make a project bankable, developers may need to enter into long-term bilateral agreements and sell part of their capacity to wholesalers or corporates.

Amendments to the Electricity Act in 2017 liberalized renewable power generation and trading in Taiwan. And recent revisions to the Renewable Energy Development Act imposed a 10% renewable portfolio standard requirement on heavy electricity users. Consequently, most Taiwanese companies, both big or small, are exploring green power options. It's never too early to start finding your customers and partners.

# PwC Taiwan's New Energy Services

## Carbon management and green power procurement strategy



### General issues at this stage:

- Estimate carbon emission and reduction amount and determine emissions reduction targets
- Procure renewable energy and certificate
- Comply with ESG requirement

### Solutions we offer:

- Green power procurement strategy
- Carbon verification and quantification advisory services/SBTi assessment
- Corporate CSR and ESG guidelines

## Green power trading



### General issues at this stage

- Determine the type of renewable energy and volume to procure
- CPPA structure
- Comply with the compulsory green power procurement

### Solutions we offer

- Benefit and cost analysis on green power procurement
- CPPA contract advisory services
- Tax advisory services
- Financial reporting and accounting advisory services
- TREC application

## Searching for investment targets and partners in Taiwan's renewable energy sector



### General issues at this stage:

- Assessment of local energy policies and regulations
- Assessment of energy project economics and project development
- Investment structure and capital structure

### Solutions we offer:

- Taiwan electricity market and regulatory assessment
- M&A and J&V advisory services
- Tax structuring and advisory services

## Construction of power plants or renewable energy facilities



### General issues at this stage:

- Tender preparation
- Financing options
- Tax, legal, and audit compliance
- ESG compliance

### Solutions we offer:

- Tender strategy and document support
- Financial modelling and debt advisory
- M&A and J&V advisory services
- Accounting and tax advisory services
- Sustainability strategy management

# PwC Taiwan's New Energy Services

## Operations management



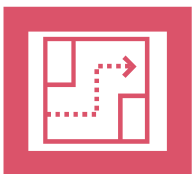
### General issues at this stage:

- Audit compliance, financial reporting and tax compliance and management
- Refinancing and Profit repatriation
- Climate change management and application
- Governance structure and compliance

### Solutions we offer:

- Accounting and financial reporting compliance
- Internal control systems
- Asset valuation services
- Debt advisory services
- Tax compliance and advisory services
- ESG advisory services

## Additional investment and disposal



### General issues at this stage:

- Strategic review: modification, expansion or reduction of business
- Exit strategy / tax on disposal and accounting and financial reporting

### Solutions we offer:

- Exit options and M&A services
- Tax advisory services. registration compliance, and tax treaty application
- Accounting and financial reporting compliance
- Legal advisory services

## To know more about Taiwan's offshore wind market and our services, please contact:

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