



經濟部能源局

BUREAU OF ENERGY, MINISTRY OF ECONOMIC AFFAIRS



The Development and Prospect of Offshore Wind Energy in Taiwan

Yu Cheng-Wei, Director-General

Bureau of Energy, MOEA

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- **Taiwan Offshore Wind Potential**
- **Promotion Policy of Offshore Wind**
- **Phase 1: Demo Incentive Program**
- **Phase 2: Zones of Potential**
- **Phase 3: Zonal Development**
- **Outlook of 2035**



Shallow Water

Depth: 5-20 m

Area: 1,779.2 km²

Potential: 9 GW

Feasible: 1.2 GW



Deep Water

Depth: 20-50 m

Area: 6,547 km²

Potential: 48 GW

Feasible: 10 GW



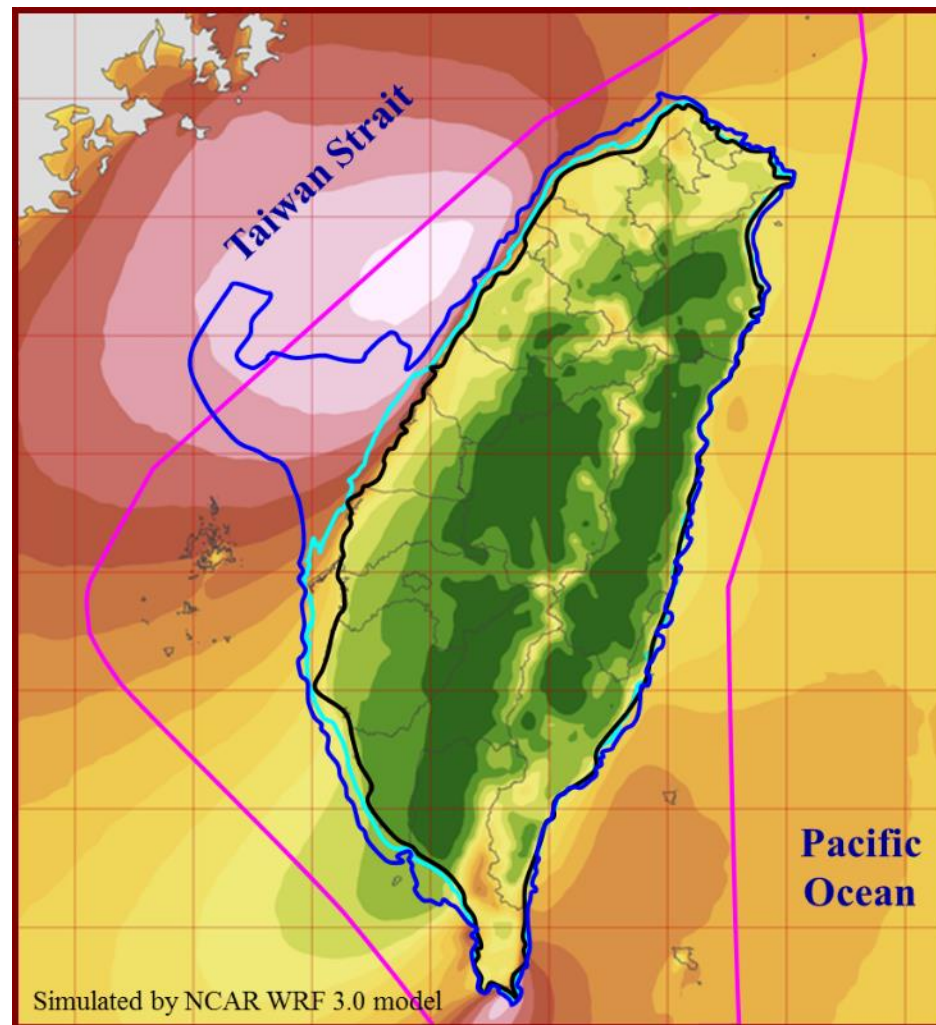
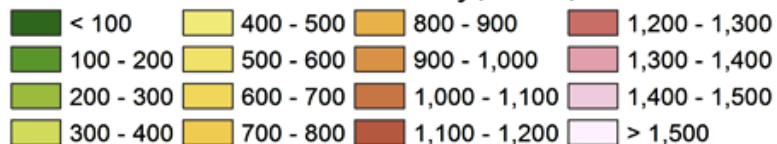
Deeper Water

Depth: > 50 m

Potential: 90 GW

Feasible: > 10 GW

Wind Power Density(W/m²)



Ref. "Wind Resource Assessment Handbook," ITRI, 2011

Promotion Policy of Offshore Wind



Phase 1: Demonstration Incentive Program (DIP)

- ✓ **2019: Formosa 1**
@Miaoli
(**128 MW** commissioned)
- ✓ **2021: Taipower 1**
@Changhua
(**109.2 MW** grid-
connected in August)



Phase 2: Zones of Potential

- ✓ **2018: Completed**
capacity allocation
 - By Selection: **3.8 GW**
 - By Auction: **1.7 GW**
- ✓ **2025: 5.5 GW** will be in
commercial operation.

Phase 3: Zonal Development

- ✓ **2026 - 2035:**
1.5 GW to be developed
every year.
 - Directions of site
planning was announced.
 - 2-stage selection:
 - **Capability** Review
 - **Bidding Process**
 - **Industrial Relevance**
Plan will be included as
well.



■ Demonstration Projects of Offshore Wind

- MOEA provides subsidies for both turbines & wind farms to encourage pioneers
- To confirm **feasibility** in terms of **administration, technology** and **finance**

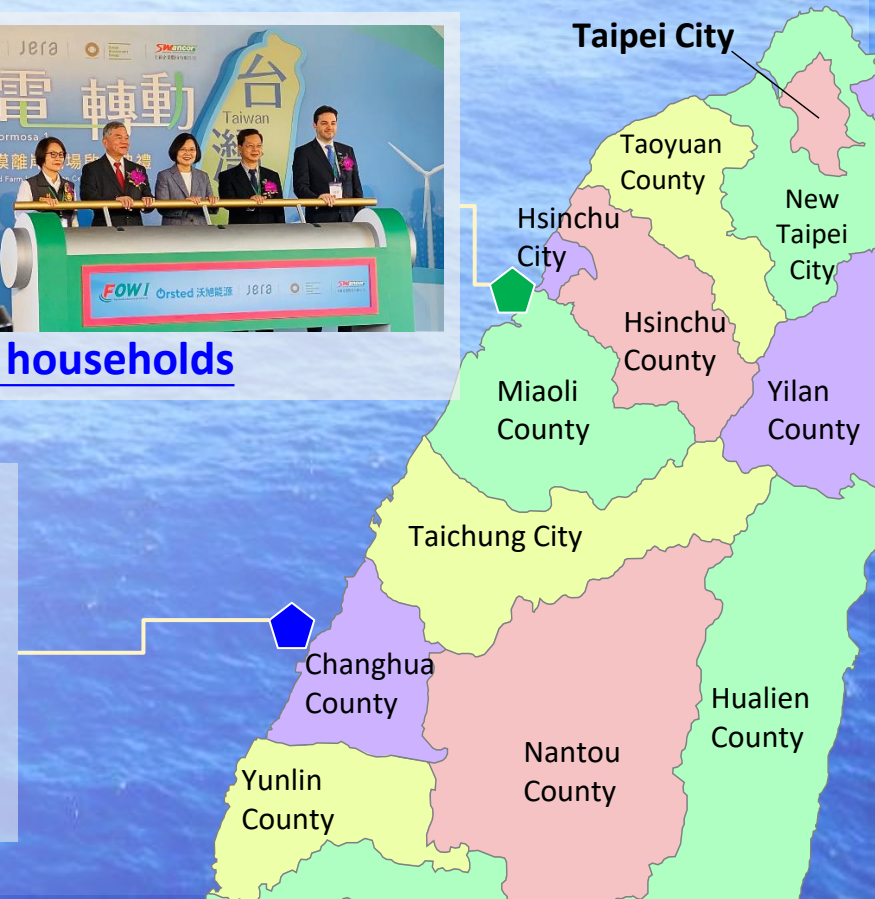
Formosa Demonstration Wind Farm

- Total capacity 128 MW
(including demonstration turbines)
- Construction initiated on 18th May 2018
- **Commissioned** by the end of 2019
- Annual production 480 GWh, supplying 128,000 households



Taipower Demonstration Wind Farm

- Total capacity 109.2 MW
- Construction completed on 27th August 2021
- Annual production 410 GWh, supplying 94,000 households



Phase 1: Demo Incentive Program(2/2)



Formosa I Wind Farm
Total capacity 128 MW
(4MW x2 , 6MWx20)

Demonstration Projects of Offshore Wind in Taiwan
In total the capacity is around 238 MW

Taipower Wind Farm
Total capacity
109.2MW (5.2MWx21)





Phase 2: Zones of Potential (1/2)

Selection
3,836 MW
(2020 ~ 2024)

Total 5.5 GW

Auction
1,664 MW
(2025)

Formosa II (Swancor + Macquarie+JERA) #5-6
2020 **378 MW**

Taipower Phase II #26
2024 **300 MW**

Greater Changhua SE (Ørsted) #15
2021 **605.2 MW**

Chang-Fang (CIP) #27
2021 **100 MW**
2023 **452 MW**

Greater Changhua SW (Ørsted) #14
2021 **294.8 MW**

Xi-Dao (CIP)
2024 **48 MW**

Hai-Long 2 (NPI + Yushan) #19
2024 **300 MW**

Chung-Neng (CSC+CIP) #29
2024 **300 MW**

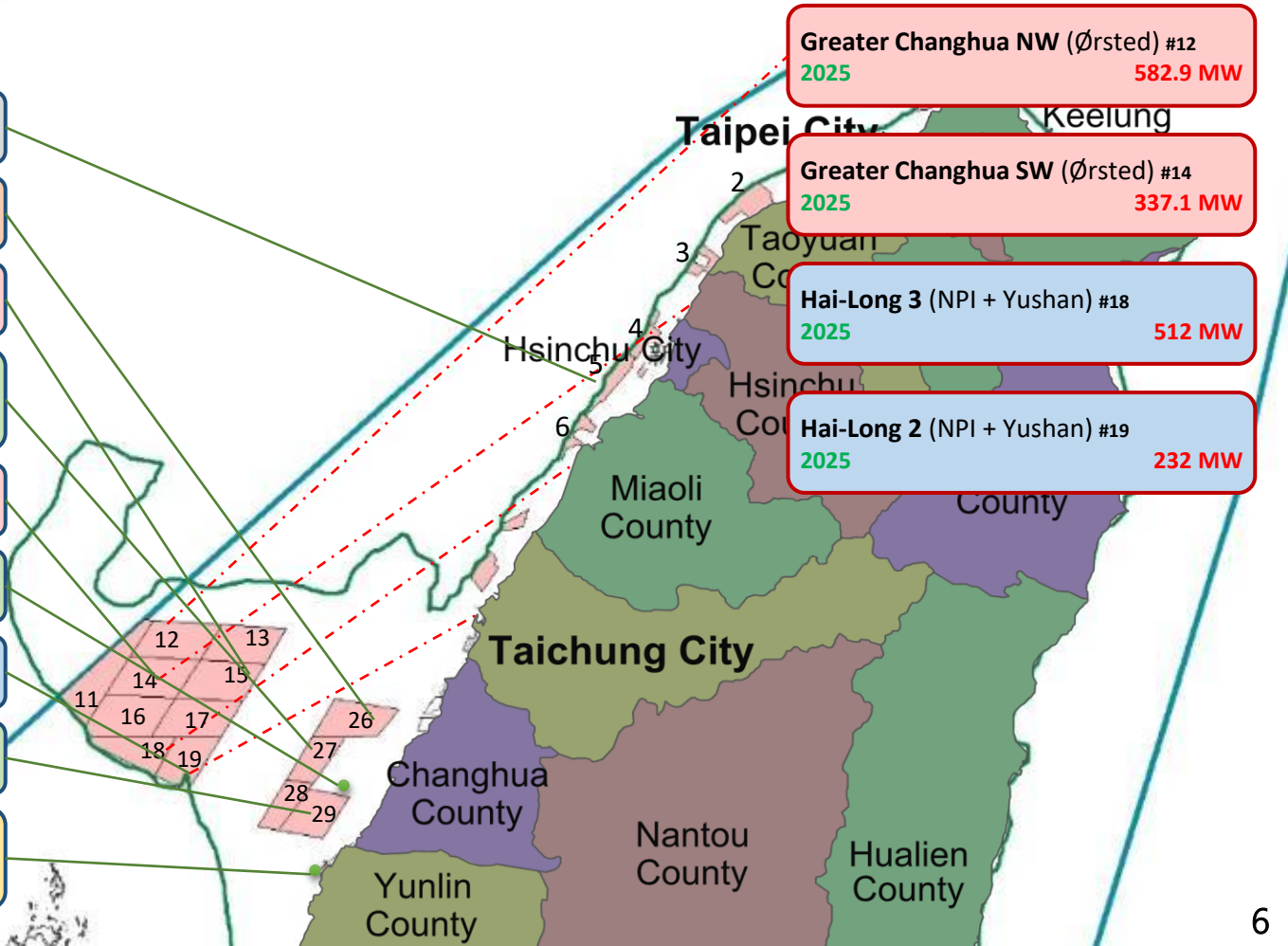
Yun-Neng (wpd)
2020 **360 MW**
2021 **348 MW**

Greater Changhua NW (Ørsted) #12
2025 **582.9 MW**

Greater Changhua SW (Ørsted) #14
2025 **337.1 MW**

Hai-Long 3 (NPI + Yushan) #18
2025 **512 MW**

Hai-Long 2 (NPI + Yushan) #19
2025 **232 MW**



Phase 2: Zones of Potential (2/2)

Taiwan's Phase 2 offshore wind farms are currently under construction.



Ørsted- Greater Changhua Wind Farm



wpd-Yunlin Offshore Wind Farm



Image Source: Ørsted



Image Source: wpd \ SGRE

The main scheme of Zonal Development

To Enlarge Capacity

- **2026 - 2035: 1.5 GW** to be developed every year



Flexible IRP Options

- **Item** Flexibility
- **Quantity** Flexibility
- **Optional** Collaboration



2-stage Selection Process

- Stage 1: **Capability Review**
- Stage 2: **Bidding Process**



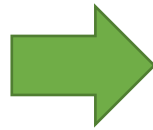
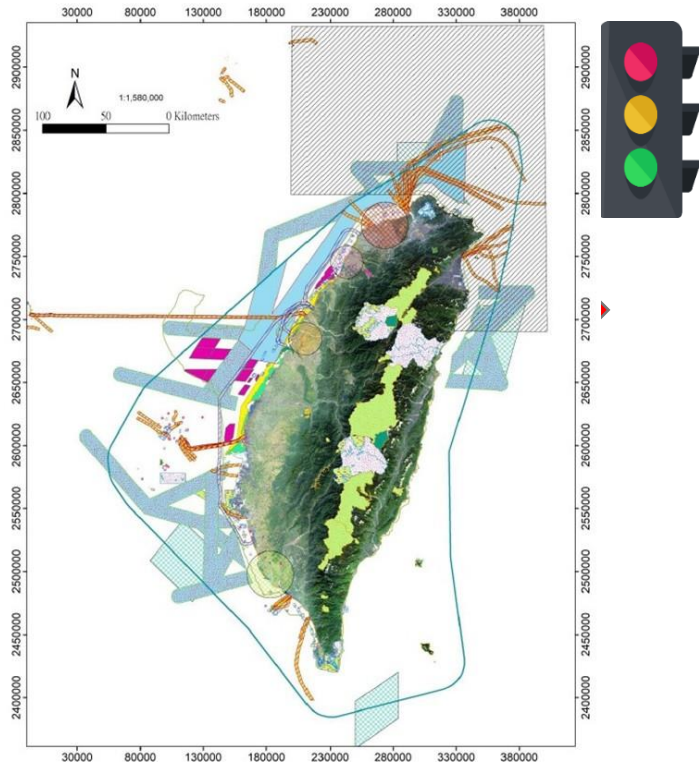
To Enhance Competitiveness

- The upper limit of capacity allocation for the same developer or a single wind farm is **0.5 GW**
- To enhance **competitiveness & diversity**.



Mechanism of Application and Joint Review

MOEA releases the “Sensitive Sea Areas” and guidance of site planning areas



MOEA holds joint review mechanism





Phase 3: Zonal Development (3/3)

2026 - 2035 Total capacity 15 GW (1.5 GW / yr)

Capability Review & Bidding Process

2026 - 2031
Release capacity: 9 GW

2032 - 2035
Release capacity: 6 GW

First Stage

<u>Round 1</u>	<u>Round 2</u>	<u>Round 3</u>
• 2026 - 2027	• 2028 - 2029	• 2030 - 2031
• Alloc.: 3 GW	• Alloc.: 3 GW	• Alloc.: 3 GW

• MOEA might adjust the selection mechanism of Round 2 & 3 based on the result of Round 1

Second Stage

- Depending on previous development in First Stage.
- International technology development will also be considered.

Outlook of 2035



In 2035, the annual electricity production of offshore wind is **77.3 TWh**, and annual carbon reduction is **38.8 million tons**.



The accumulated number of job opportunities in 2035 is estimated to exceed **74,000**.



The foreign and domestic investment is estimated to approach **NTD 3.2 Trillion** (€99.2 Billion).

**Thank You for
Your Attention**

