

# ROCMU's views on Promoting Sustainable Industrial Policy

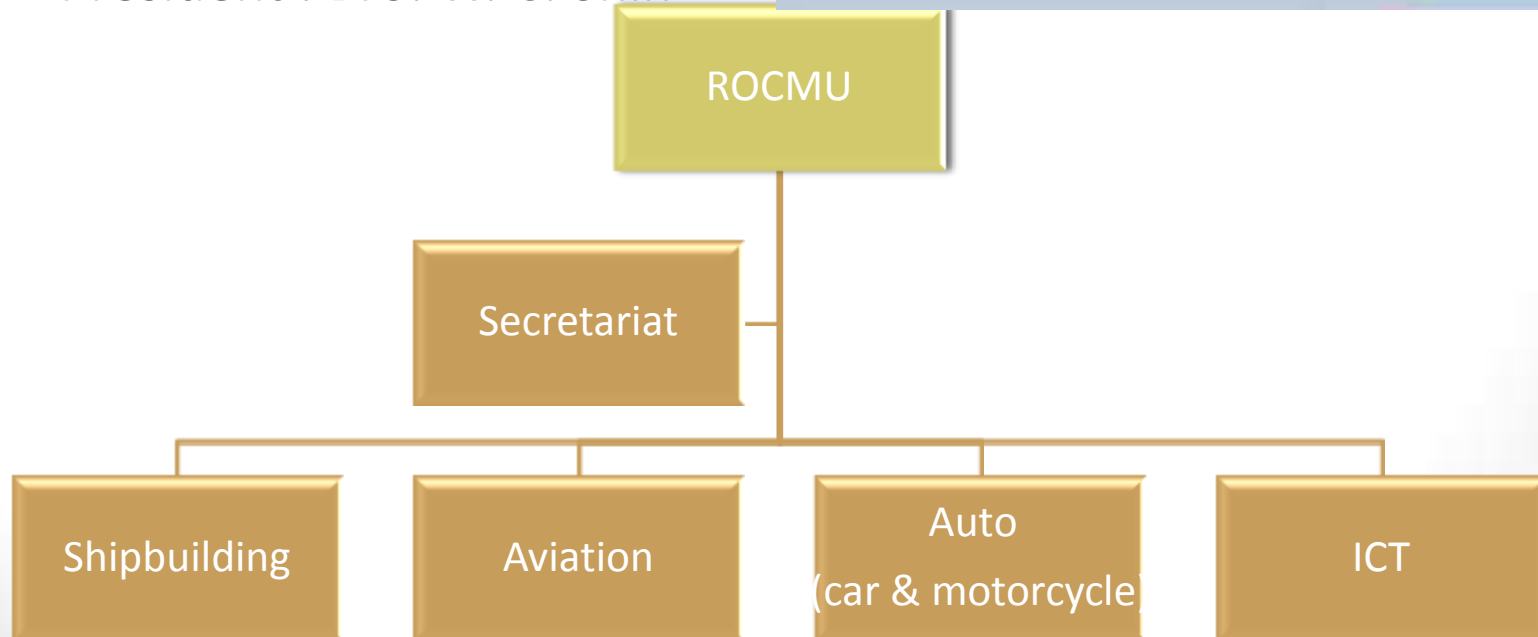
Republic of China Metal Workers' Union  
(ROCMU)

中華民國金屬工會聯合總會

2014.11.11

# *Introduction to Republic of China Metal Workers' Union (ROCMU)*

- Locate in Taiwan, Republic of China (ROCMU)
- About 11,000 members
- Cover Shipbuilding, Aviation, ICT, Auto industries
- President : Bro. W. C. Shih



# *Issues and challenges to promote sustainable industry*

- Shipbuilding and shipbreaking industries are changing rapidly from an labor-oriented industry to the risk, capital, technology and labor oriented industry.
- Challenges are:
  - Fast change
  - Shipbuilding bases moved from Europe to Asia in the past decades
  - Labors need to be well trained
  - Automatic machines will replace part of the workers
  - Low wage for young generation
  - Dust, Dangerous and Dirty working environment
  - Overcapacity and outsourcing

# *Sustainable industry for shipbuilding workers - The development of Renewable Energy in Taiwan*



Offshore Wind  
Energy



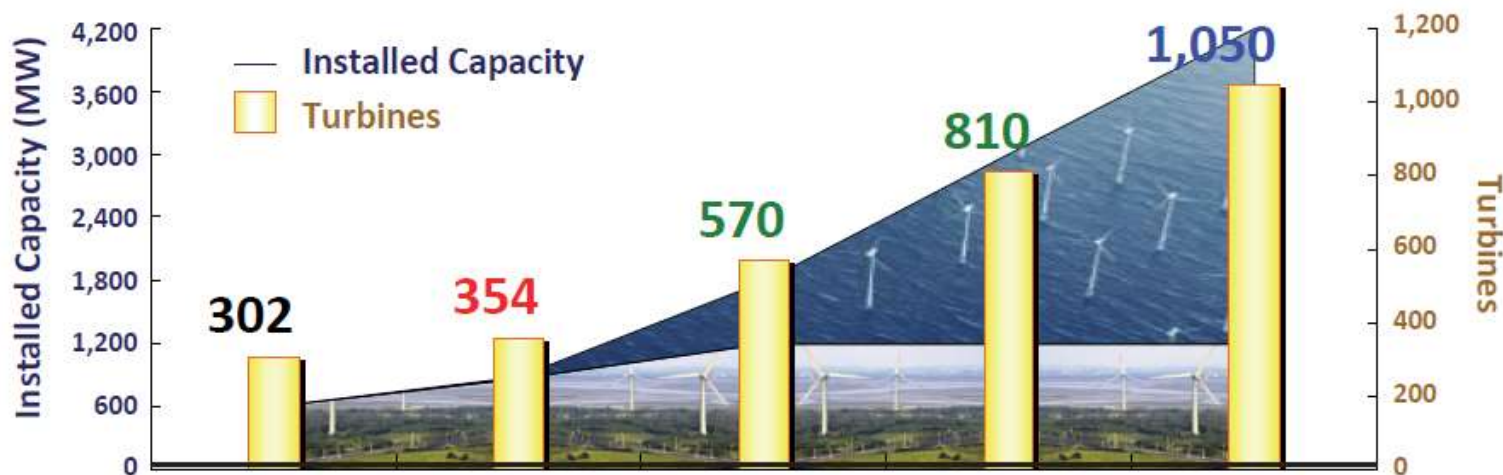
Wave Energy

# Government's Policy

## Promotion Target for Wind Energy

### ■ Thousand Wind Turbines Project

- **Short-term Target:** 4-6 demonstration offshore wind turbines by 2015.
- **Mid-term Target:** Offshore 600 MW, total 1,800 MW by 2020.
- **Long-term Target:** Offshore 3,000 MW, total 4,200 MW by 2030.



Year	2012		2015		2020		2025		2030	
	MW	WTs	MW	WTs	MW	WTs	MW	WTs	MW	WTs
Onshore	596	302	866	350	1,200	450	1,200	450	1,200	450
Offshore	0	0	15	4	600	120	1,800	360	3,000	600
Total	596	302	881	354	1,800	570	3,000	810	4,200	1,050

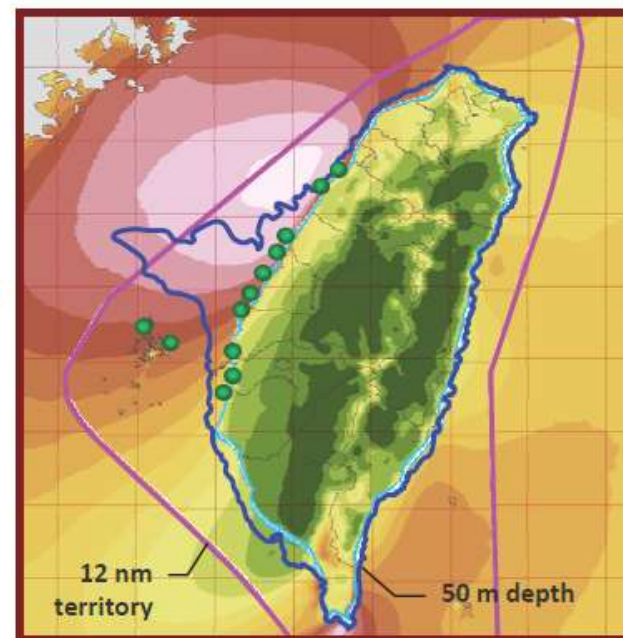
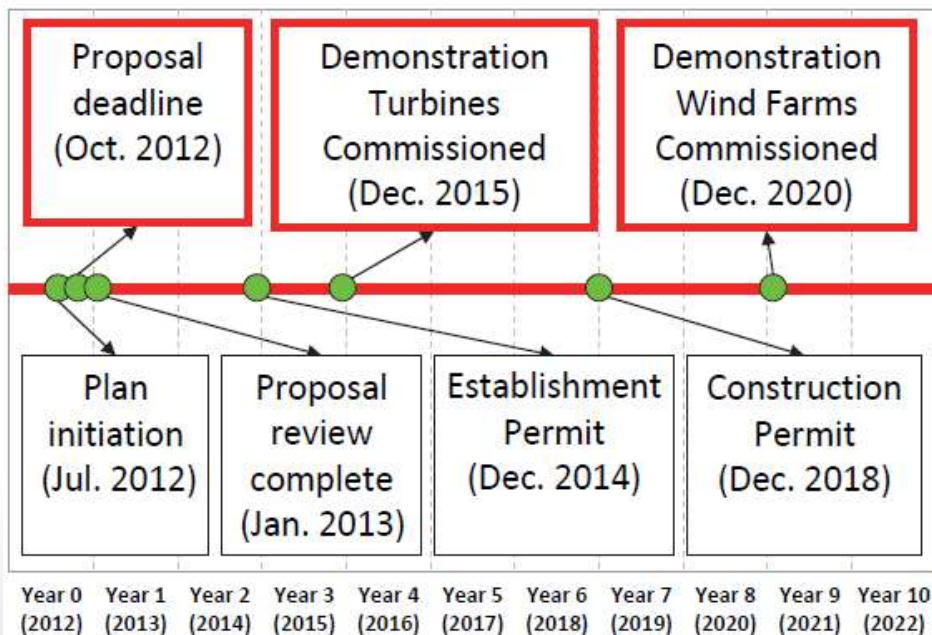


# Government's Incentive Program

## Offshore Demonstration Incentive Program

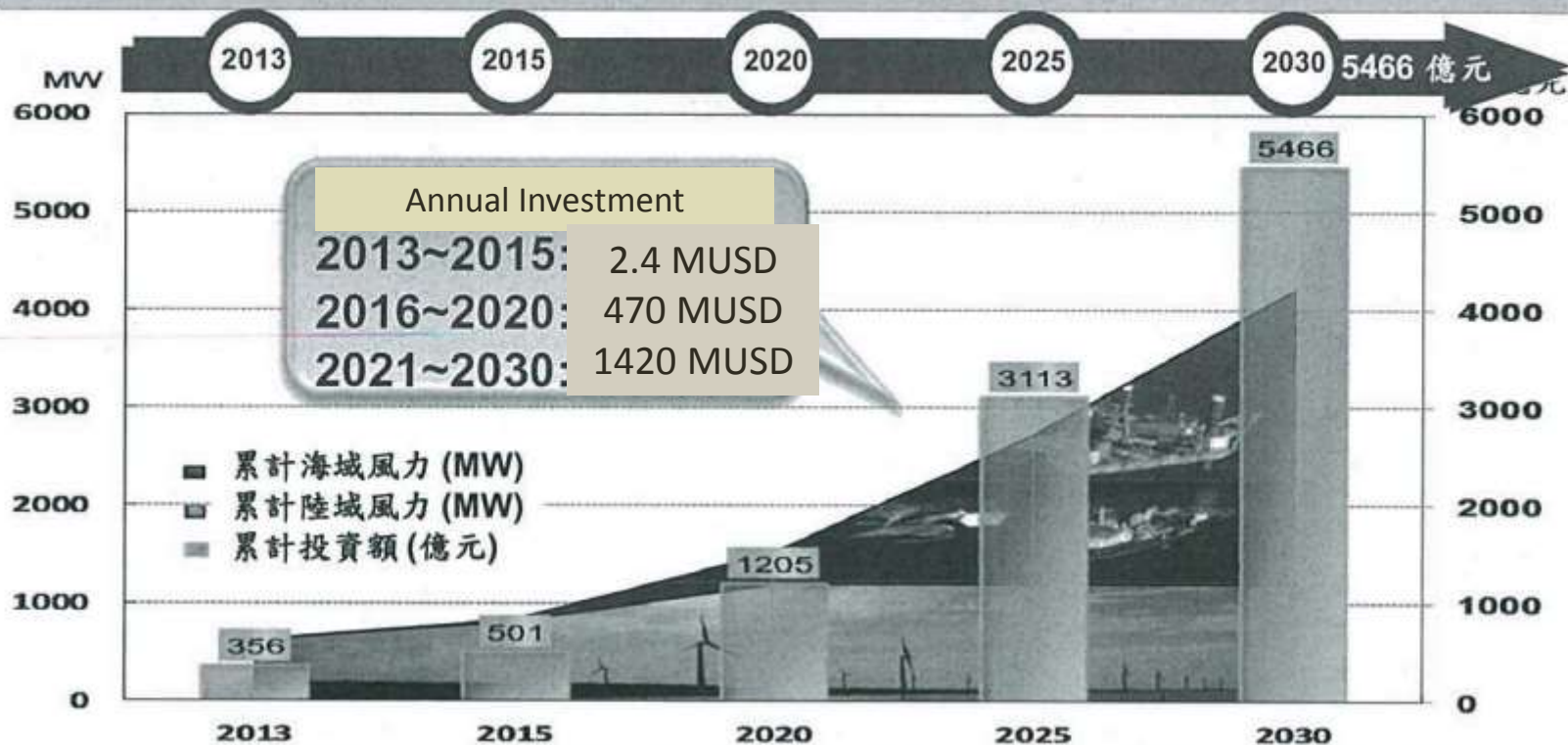
### ■ 3 Demonstration Wind Farms

- Only qualified projects can get the incentives (not first-come-first-served)
- Subsidize 50 % cost of the Demonstration Turbines (FIT advances/interest-free loan)
- Subsidize TWD250M for preparatory (wind mast, EIA, etc.) expense



# Government's Investment Target

- 以政策鼓勵發電業：政策創造市場，帶動總投資額達新台幣 5,466億元 以上 (離岸約占 4,800 億元)
- 發電業引領服務業：短中程帶動海事工程及運維服務業、水下基礎及塔架製造業
- 服務業帶動製造業：中長程帶動電纜及風力機系統設備製造業



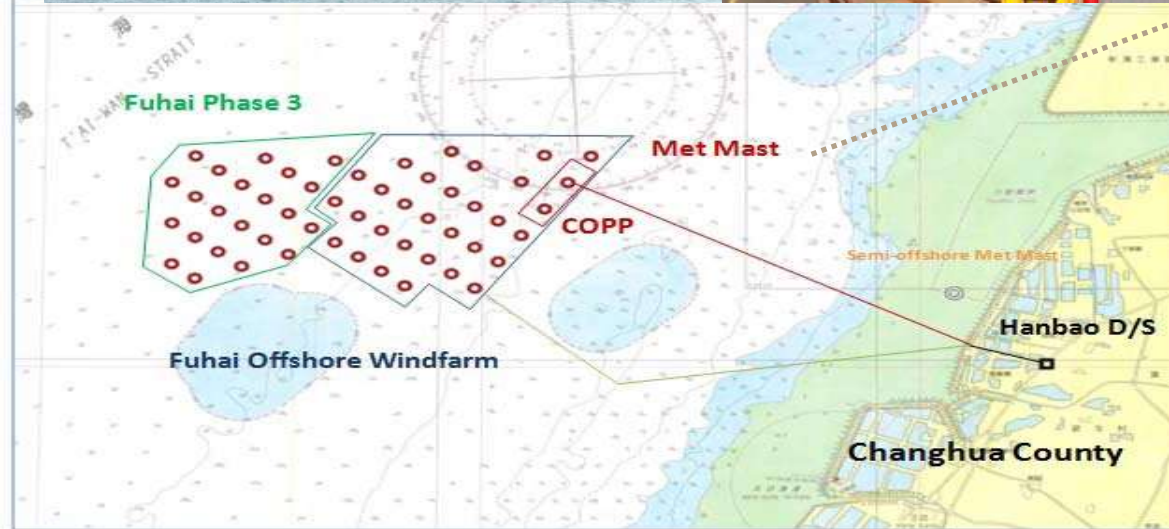
(以期初設置成本離岸1.59億元/MW、陸域0.58億元/MW估算)

資料來源：工研院整理 (2014/03)



# *Shipyard's Activity in Offshore Wind Energy*

## *~Transportation of the Met Mast for Offshore Windfarm*





# *Shipyard's Activity in Offshore Wind Energy*

## *~Transportation of the Met Mast for Offshore Windfarm*



Met mast



Pile: 331 Tons, 68m long  
Pile Saddle: 36 Tons (4 sets)  
TP: 120 Tons, 17m height  
TP Support: 110 Tons  
Tower 1: 26.7 Tons, 24.4m  
Tower 2: 19.1 Tons, 20.05m  
Tower 3: 16.9 Tons, 29.8m  
Transport Barge: 50x18x3.5m

# Shipyard's Activity in Wave Energy

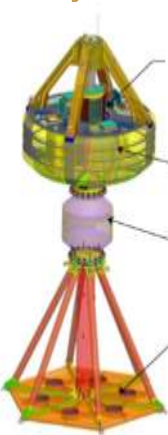
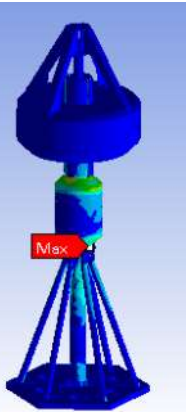
~20KW Wave Generator

Engineering

Procurement

Construction

Installation



- ★ Total Length: 17.9 m
- ★ Upper bob (diameter): 6m
- ★ Total Weight: 63.7 Tons



# *Conclusive Remarks*

- Worker's unions should ask governments and shipyards to move to sustainable industries (ex. offshore wind & ocean energy)
- Provide necessary training to shipbuilding workers
- Upgrade OHS regulation to meet offshore working standards
- Establish supply chain locally and internationally to create jobs
- International cooperation between industries and worker's unions



*Thank you for your  
attention*

團結！ 團結！ 團結！