

# **THE DEVELOPMENT OF OFFSHORE WIND POWER IN TAIWAN: CHALLENGES AND PROSPECTS**

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**SUMMARY:** This presentation is to introduce the development of offshore wind power in Taiwan with some challenges and prospects. To mitigate global warming and climate change, the offshore wind has become one of major renewable energy alternatives over the past years. In Taiwan, **The Incentive Program of Offshore Wind Power Demonstration System** was announced in 2012. Recently, the Taiwan government further announced the **Four-year Wind Power Promotion Plan** to boost the offshore wind power deployment. With the applied researches and developments under National Energy Program(NEP), the technical resources from academia, research institutes and offshore wind sectors are integrated to build up the learning curve of offshore wind power development in Taiwan. To adapt offshore wind turbines to local extreme external conditions as typhoons and earthquakes, integrated dynamic load analysis of offshore wind turbine and support structure combination is important and needs to be paid special attention. The technique has been developed at the INER which is a national laboratory in Taiwan. It will be helpful for adoption of international standards and increase of reliability with reasonable cost to facilitate the national offshore wind power project in Taiwan in the future.