



WIND

# Offshore Wind Energy with wpd

EU – Japan Energy Business Seminar  
24<sup>th</sup> April 2019, Hans-Christoph Brumberg



# wpd Group Overview



## wpd Group



### Global Project Developer & Independent Renewable Power Producer (IRPP)

- **4,450 MW (2,200 WTG)** installed
- **IRPP with 1,525 MW** own capacity
- **654** employees
- **36** Offices in **21** countries
- **Onshore, Offshore, PV**
- **Pipelines of 8 GW+ onshore, 7 GW offshore, 825 MW PV**
- **A-Rating** since 2003



### Leading wind farm operator

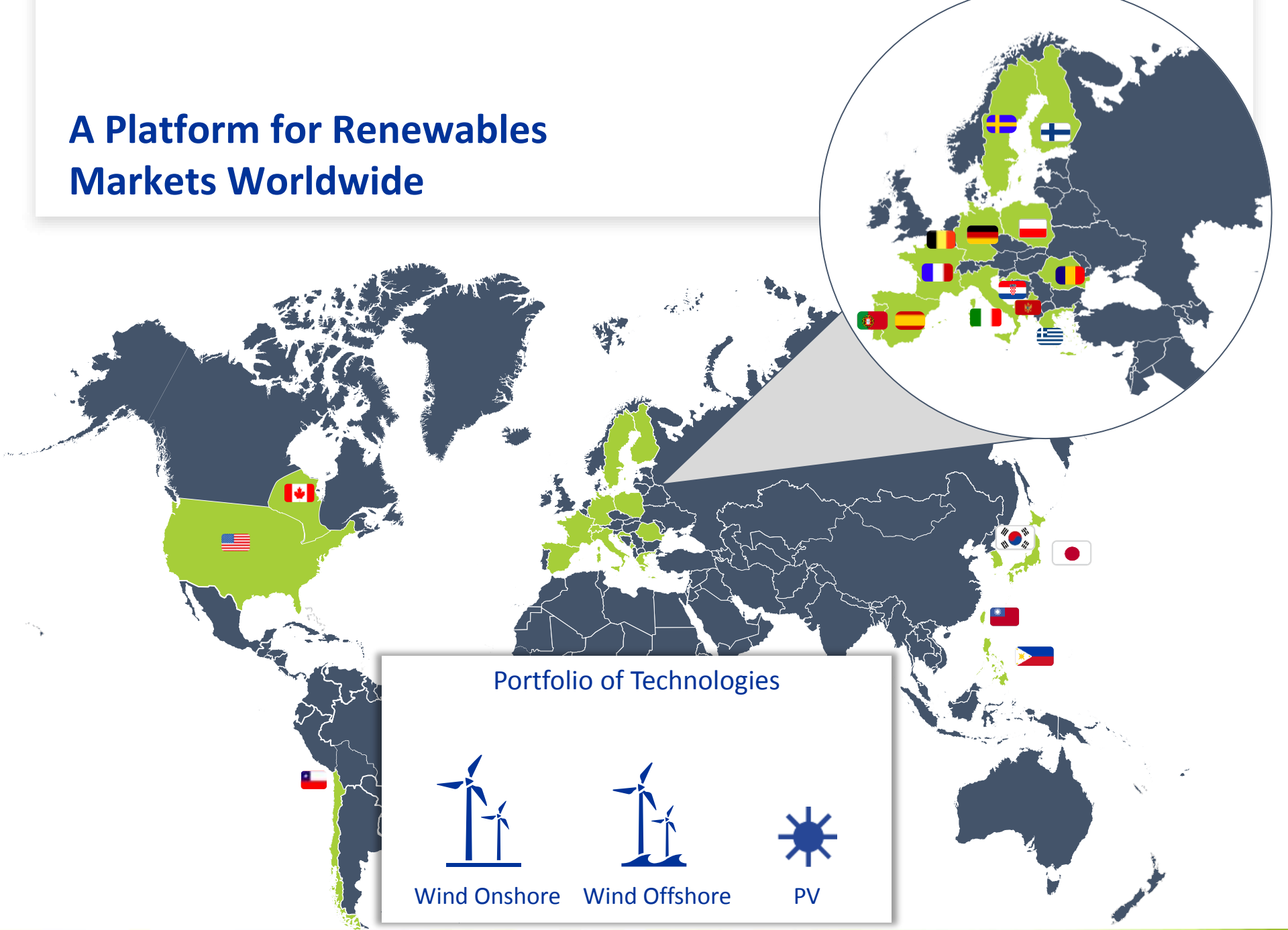
- **1,965 WTG/ 4,053 MW** under TCMA
- **Technical 24/365 Management**
- **Commercial operations**
- **370** employees
- **10 offices in 7 countries**
- **Multiple technologies**
- **Broad variety of clients**



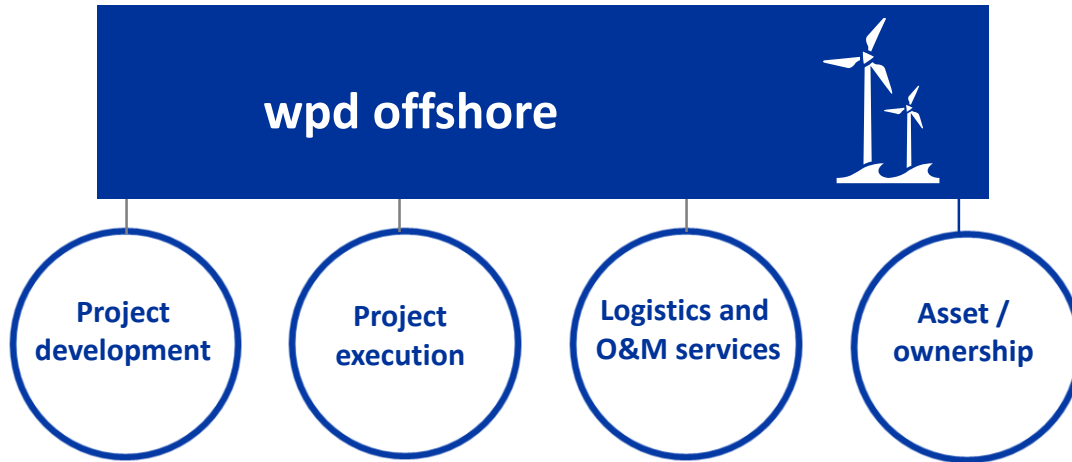
### Independent, multi-brand O&M provider for wind turbines

- **3,617** turbines under contract
- **1,162** employees
- **126** Offices & service stations
- **Multi-brand strategy** (incl. Vestas, Siemens, Nordex, Senvion, Enercon Gamesa, Fuhrländer, etc.)
- **Services for On- and Offshore wind**

# A Platform for Renewables Markets Worldwide



# wpd offshore Facts



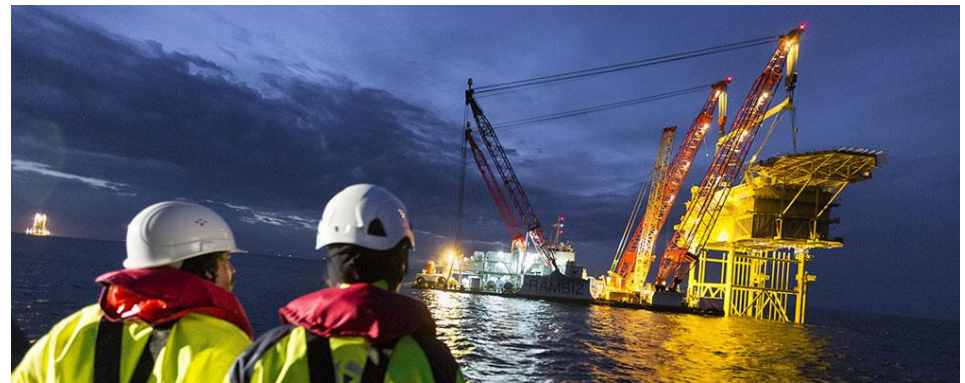
## Team

**250+ project team members**, combining the record of developing 21 offshore wind farms with the construction experience of 3 offshore wind projects

**7 offices:** Bremen, Rostock, Stockholm, Paris, Taipei, Tokyo and Seoul.

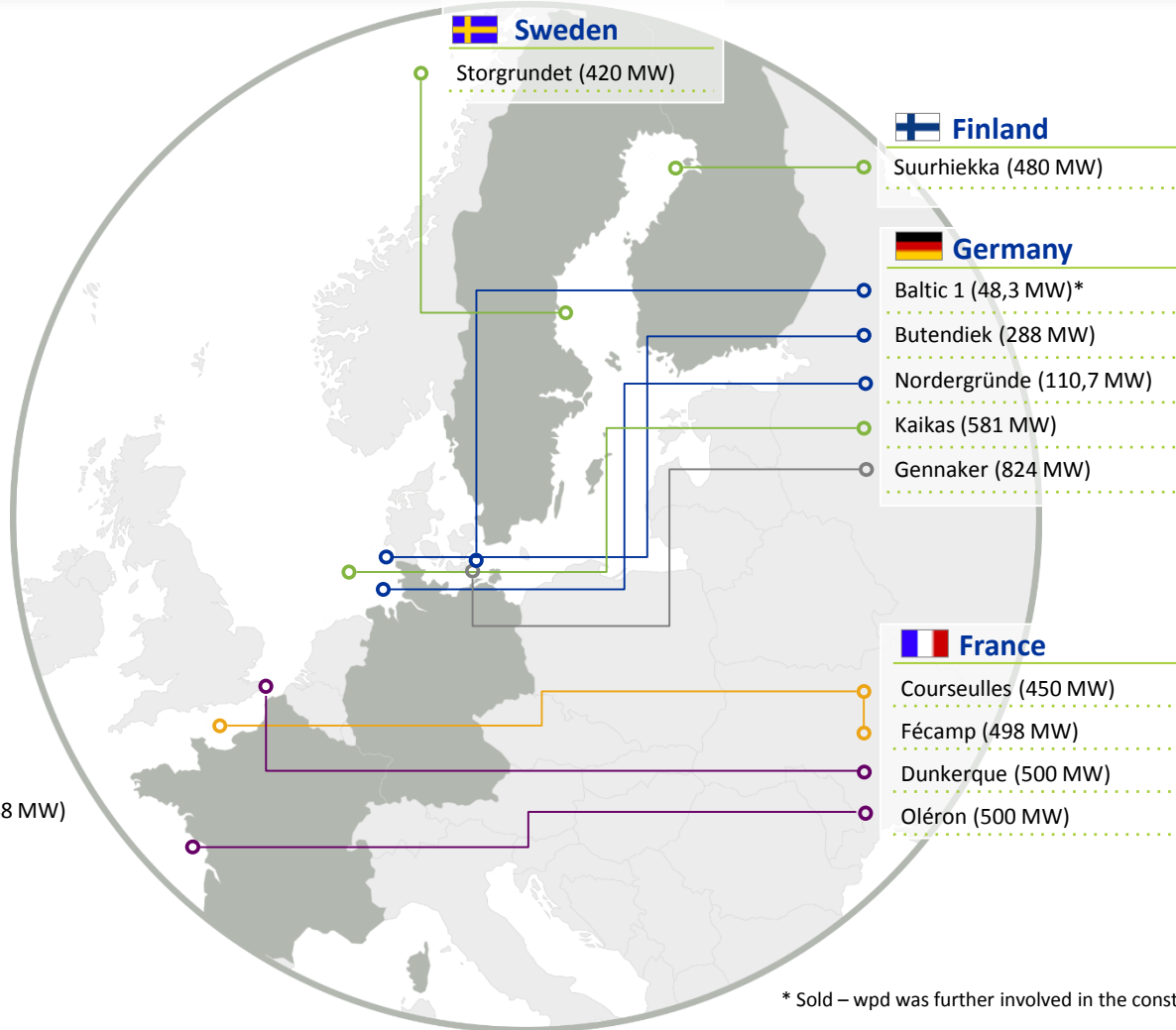
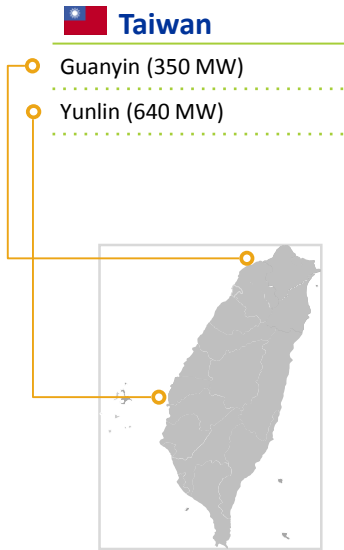
## Strategy

- Development of a diversified worldwide offshore-wind-farm-portfolio
- Extensive expertise in project and construction management as well as logistics and O&M services
- Ownership and operation at later stage together with investment partners



# wpd offshore

## Current project portfolio



### Project stages (total output)

- in operation (447 MW)
- approved and in the procurement process (1,948 MW)
- approved (1,481 MW)
- participation in tender process (1,000 MW)
- permission process (824 MW)

\* Sold – wpd was further involved in the construction management

# **wpd offshore & Japan**

## **Areas of collaboration**



### **Existing and future areas for collaboration with Japanese industry:**

- a) **Participation in European operational experience – Case study Butendiek**
- b) **Collaboration in new overseas offshore wind markets – Case study Taiwan / Yunlin project**
- c) **Japanese domestic market**

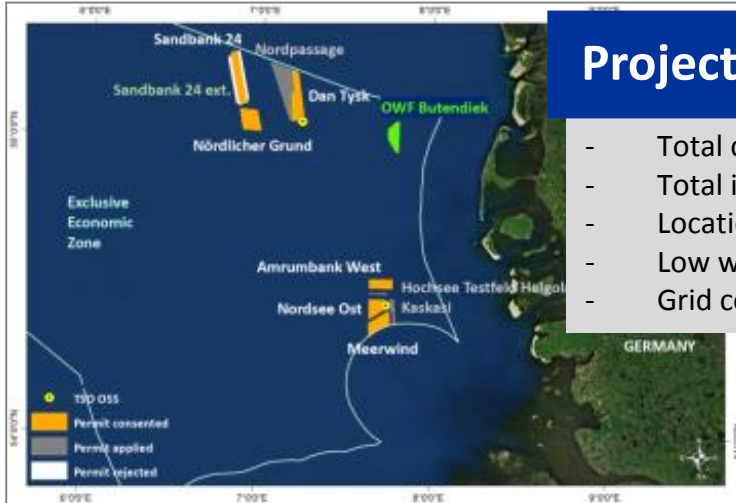
# wpd offshore & Japan

## Butendiek – operational and refinanced



### Project Key data:

- Total capacity: 288 MW
- Total investment volume of € 1.3 bn
- Location: 32 km west of the island of Sylt
- Low water depth (17 - 22 m)
- Grid connection: via SylWin-cluster



### Project is a success story:

- wpd manager through construction & operations
- Installation **on time** and **on budget**
- Performance at P50 level
- Successful **refinancing** in spring 2017 at attractive terms with **Japanese MUFG** as financial advisor and Mandated Lead Arranger

### Equity Investors



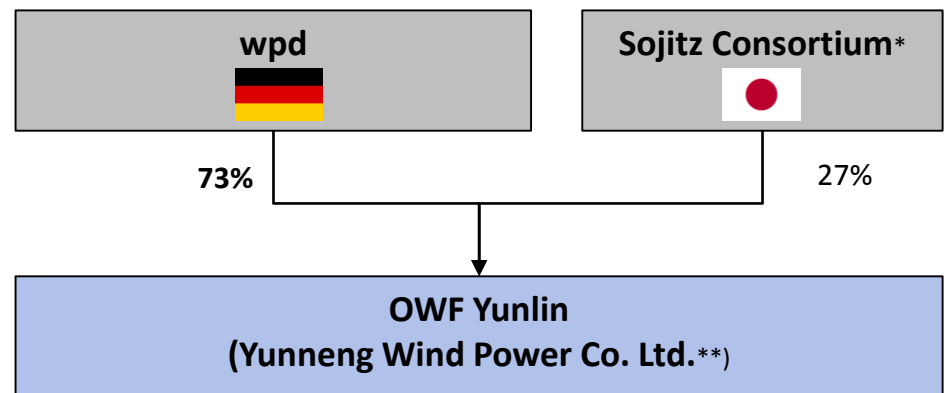
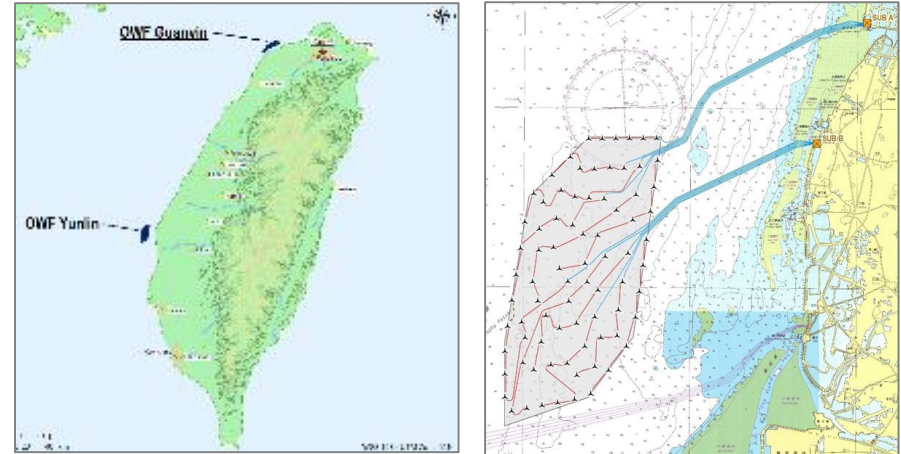
# wpd offshore & Japan

## Taiwan – first Asian hot spot for offshore wind



### Attractive market next door...

- **wpd** is a first mover and developed the **most advanced pipeline** on renewable energy projects in **Taiwan**
- **strong interest of Japanese players** in Taiwanese offshore wind market
- similar **environmental challenges** as in Japan (e.g. earthquakes, taifuns, etc.)
- early engagement of **Japanese financing expertise** via SMBC as financial advisor
- involvement of **Sumitomo Electric Industries (SEI)** as part of utilising the benefits of the **regional supply chain**
- participation of **Japanese consortium** in shareholding of Taiwanese **first large scale** offshore wind project to be realised in 2020/2021



\* Sojitz lead consortium (Starwind GmbH) consists out of Sojitz Corporation, JXTG Nippon Oil & Energy Corporation, Chugoku Electric Power Co., Chudenko Corporation, Shikoku Electric Power Co.  
\*\* indirect shareholding via HoldCo



# wpd offshore & Japan

## Domestic activities



- **wpd Japan K.K.** founded in **2018**
- head office opened in **Tokyo**, Kita Aoyama
- 5 local employees and **growing**
- Business fields: offshore wind, onshore wind and photovoltaic
- **1 GW offshore wind** projects in early development
- wpd intends to **transfers** its **extensive wind energy know-how** to the Japanese market
- possibilities for **strategic partnership** with Japanese industry are actively being evaluated

### Portfolio of Technologies



Wind Onshore



Wind Offshore



PV



# wpd offshore & Japan

## Outlook for Japan



- **Strong bonds** between **European** activities and **Japanese industry** are already existing
- several **challenges** the Japanese offshore wind industry is currently facing, have already been encountered in **Europe** and overseas
- **leveraging** on the European experience in open and transparent **partnerships at eye level** could make **Japan** one of the **driving forces** for the development for offshore wind in Asia
- as one of the **leading developer** of offshore wind in Europe and Taiwan, **wpd** aims to play a significant role and actively support building up a **sustainable** and **affordable offshore wind industry** in Japan



Thank you for your attention.



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