



'GREENNOVATION' MEETS SKILLS ANTICIPATION: POLICY LESSONS FOR MAKING THE GREEN TRANSITION HAPPEN

Iván Pineda

Our members make wind energy work

500+ MEMBERS

Wind turbine manufacturers

e.g.



GE Renewable Energy



SIEMENS Gamesa
RENEWABLE ENERGY

Vestas

Wind farm developers

e.g.



Ørsted



Power utilities

e.g.



RWE

VATTENFALL

Component manufacturers

e.g.



Prysmian Group



tpi COMPOSITES



Digital solutions & service providers

e.g.

Atos

HITACHI
Inspire the Next
Hitachi Energy

Schneider
Electric

sereema



EPC, Installation and logistics

e.g.



MAERSK
SUPPLY SERVICE

Port of
Amsterdam



Van Oord
Marine ingenuity

Financial & legal services

e.g.

Allianz

Ambiens

AQUILA
CAPITAL



Green
Investment
Group

DENTONS

Research institutes

e.g.

CATAPULT
Offshore Renewable Energy

DTU
Danmarks
Tekniske
Universitet

Fraunhofer
IWES

eit
InnoEnergy

TU Delft

Energy Buyers

e.g.



BOREALIS
Keep Discovering



Google

+ NATIONAL WIND ENERGY ASSOCIATIONS

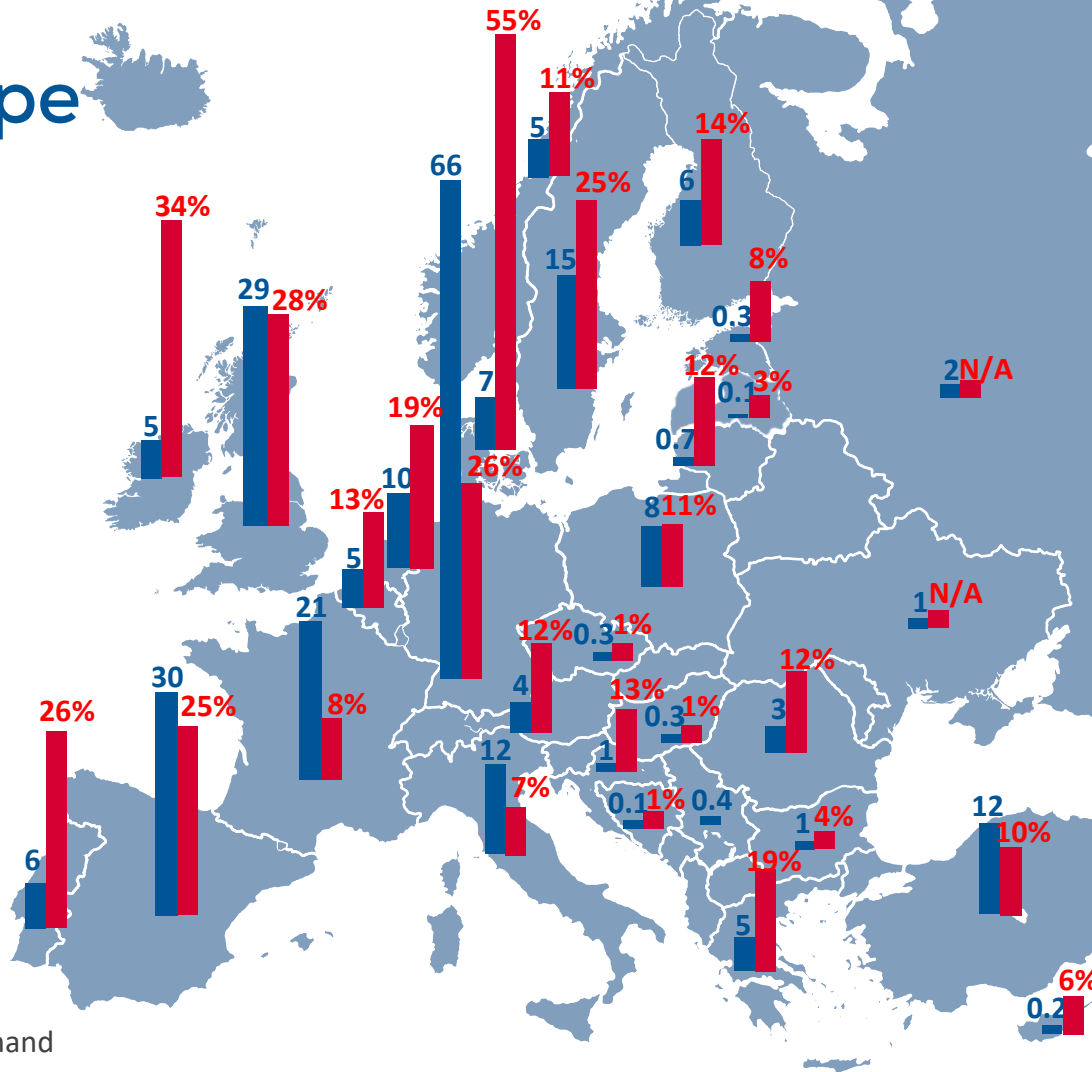
Wind energy in Europe

255 GW

17%
of Europe's
electricity demand



- GW installed
- Wind share of electricity demand



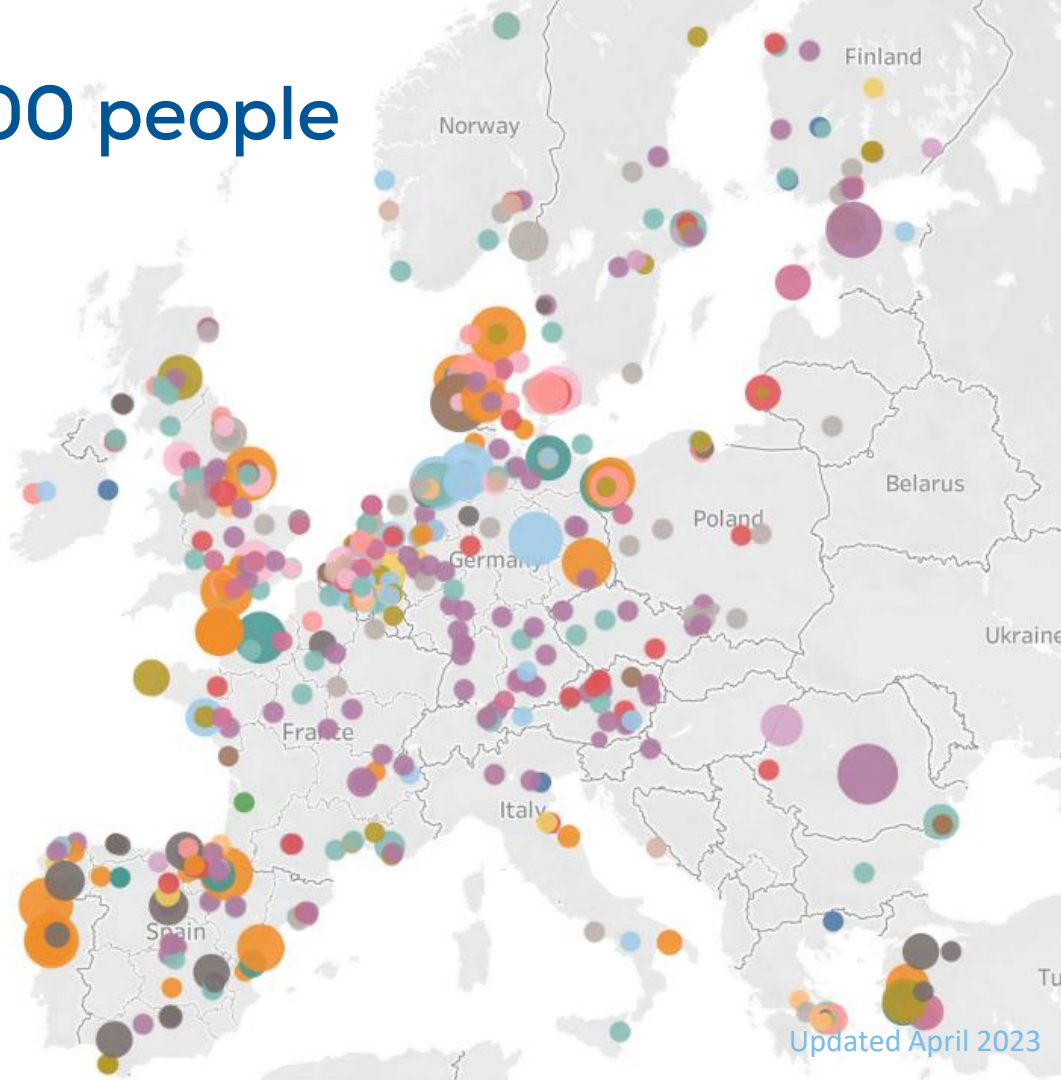
Economic benefits of wind energy in Europe

€42bn
to Europe's
GDP

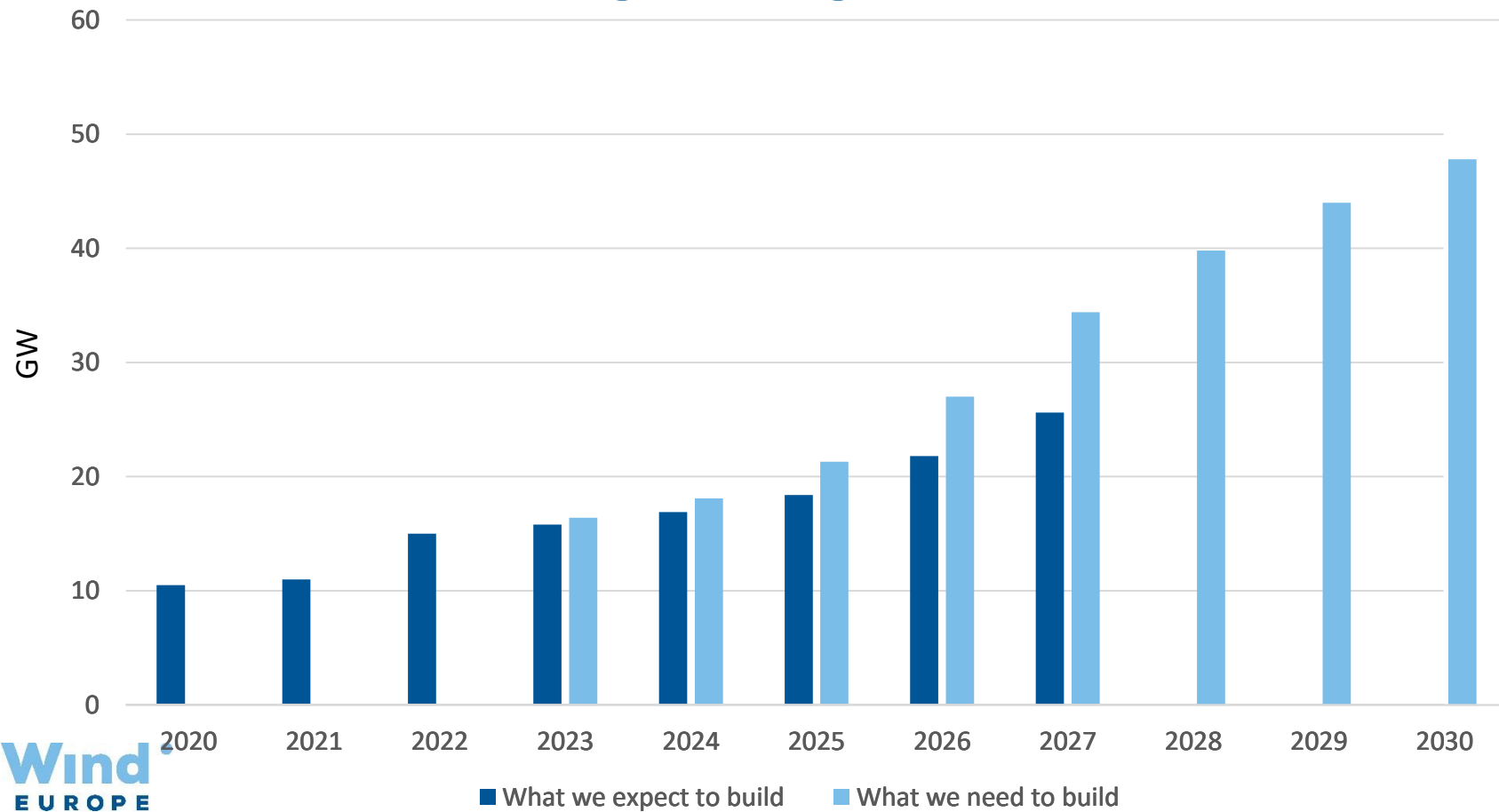
1 new turbine
=
€13m
to the
economy

Wind employs 300,000 people

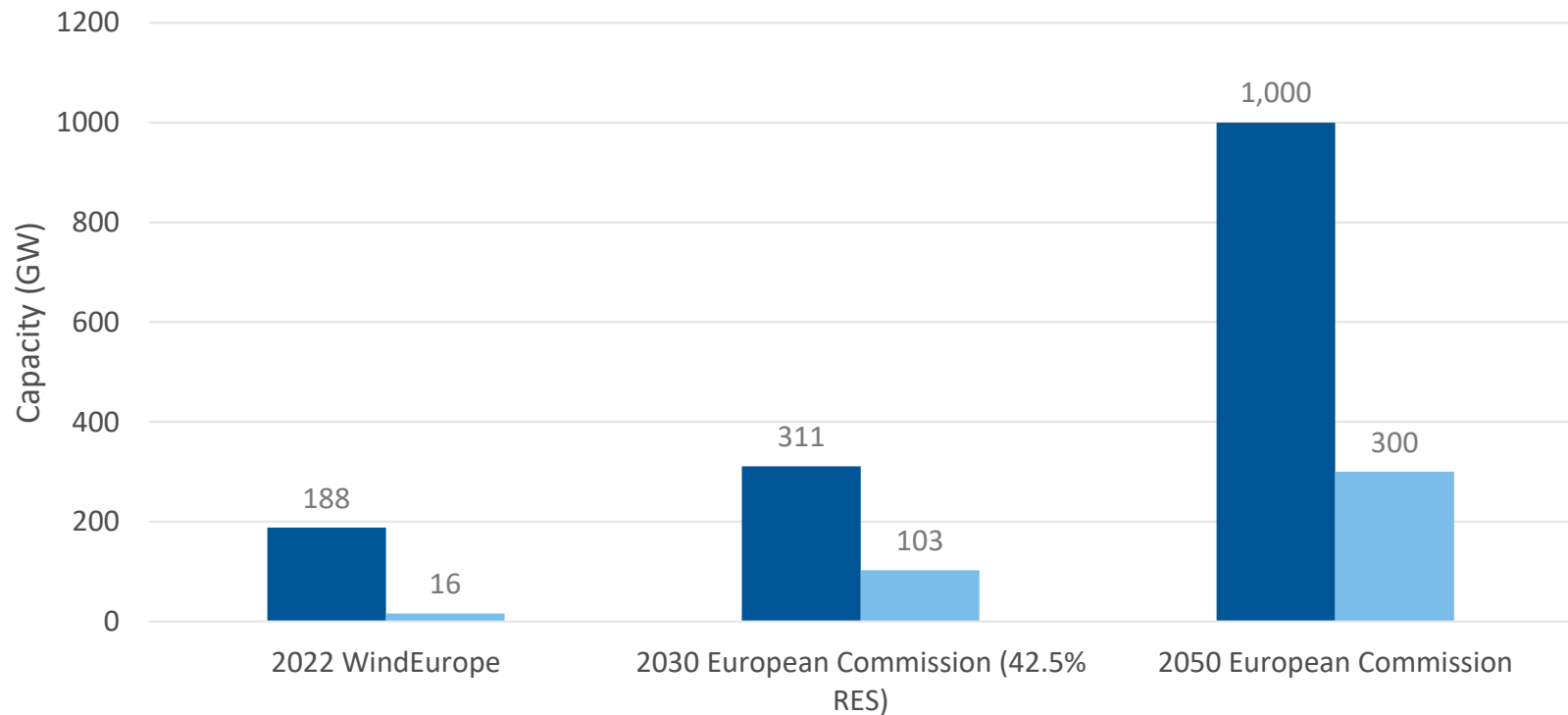
- Components
- Assembly
- Blades
- Foundations
- Gearboxes
- Nacelles
- O&M
- Other
- R&D
- Towers
- Cables
- Generators
- Logistics
- Port



Europe isn't building enough wind



Huge increase in wind capacity coming



Jobs in factories: Rotor Blades

1,000 jobs

Wind[®]
EUROPE

Siemens Gamesa facility for the Hornsea Project One UK © Siemens Gamesa Renewable Energy

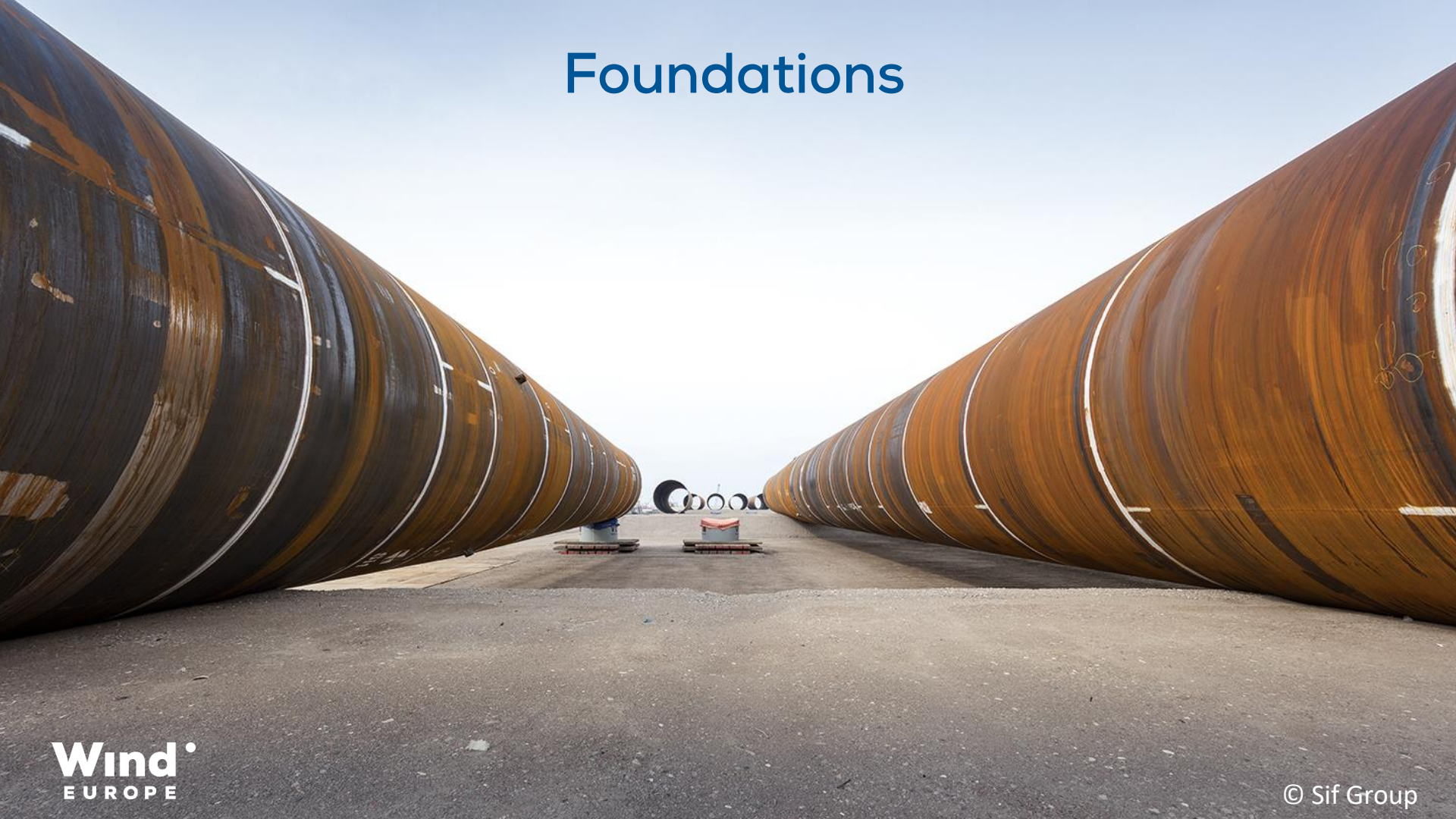
Hub



Wind
EUROPE

© GE Renewable Energy

Foundations



Tower



Jobs in construction



Jobs in logistics





Jobs in ports

£310m investment

+1,000 jobs

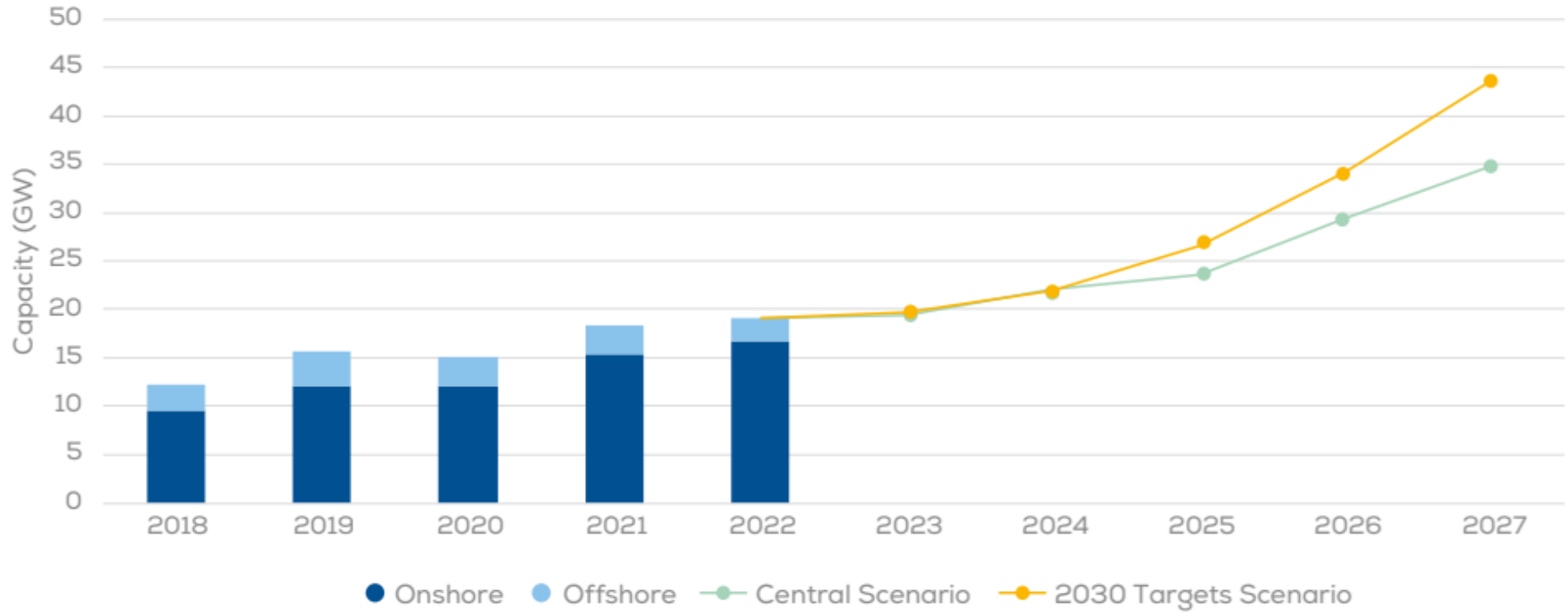
Wind
EUROPE

Hull, UK © Siemens Gamesa Renewable Energy

European supply chain



Europe must step-up annual installations, fast.



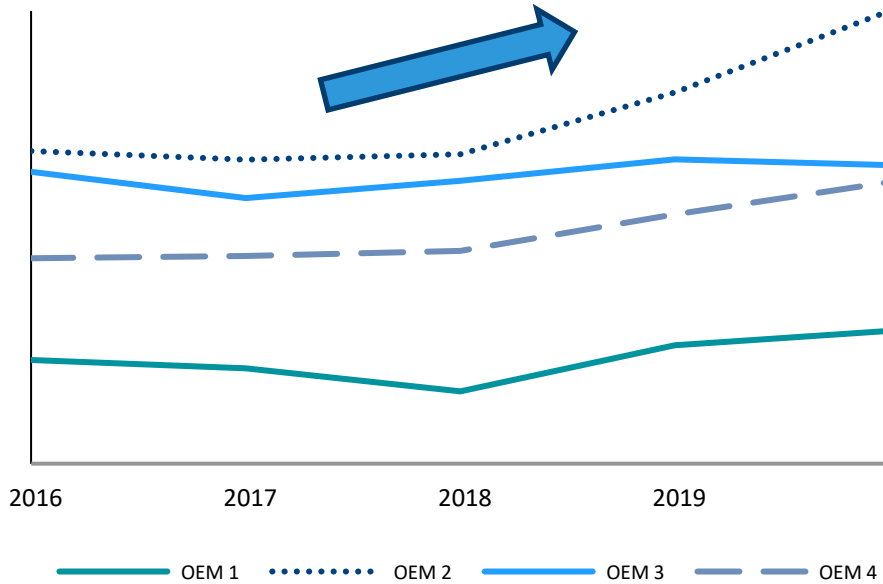
Permitting

	In Renewable Acceleration Areas	Outside Renewable Acceleration Areas
New projects	1y Offshore 2y	2y Offshore 3y
Repowering projects	6 months Offshore 1y	1y Offshore 2y

Supply chain is struggling

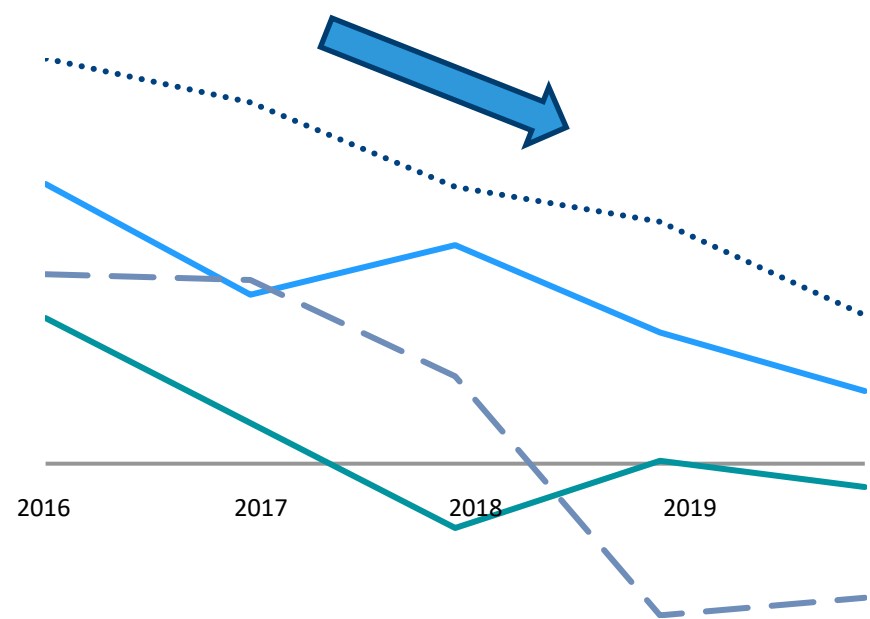
Onshore wind revenues

Top 4 western OEMs



Onshore wind margins

Top 4 western OEMs



Net-zero Industry Act

A woman wearing a blue protective suit, a blue face shield, and safety glasses is leaning over a workbench in a factory. She is looking at a document or piece of equipment. The background is a blurred industrial setting with lights and machinery.

- Support manufacturing in Europe
- Auctions rewarding European content
- Promote Skills needed in Net-Zero Technologies
- Speed and simplicity

Re-skilling



RenewAcad- Romania

Working with schools



Co-existence with environment and society



Co-existence with environment and society



218.7 MW



OPERATING BETWEEN
1998-2017



GREECE

- 62 direct permanent locally-based jobs;
- €16.5 million in total benefit from operation;
- €27.7 million total benefit from the special 3% turnover tax; and
- €44.4 million total benefit from construction.



© HWEA

ALL THE WIND FARMS IN SOUTH EVIA ISLAND

Living together





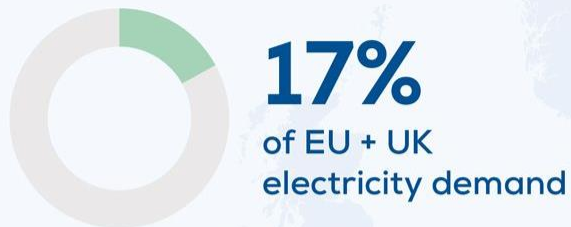
Wind[°]
EUROPE

windeurope.org



WindEurope, Rue Belliard 40
1040 Brussels, Belgium

European wind energy generation in 2022



225 GW
onshore wind
capacity

14%
onshore wind of EU + UK
electricity demand

24%
average onshore wind
capacity factor*

489 TW/h
EU + UK wind energy generation

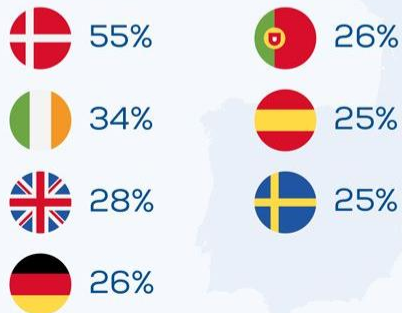


30 GW
offshore wind
capacity

3%
offshore wind of EU + UK
electricity demand

36%
average offshore wind
capacity factor*

Highest wind energy shares



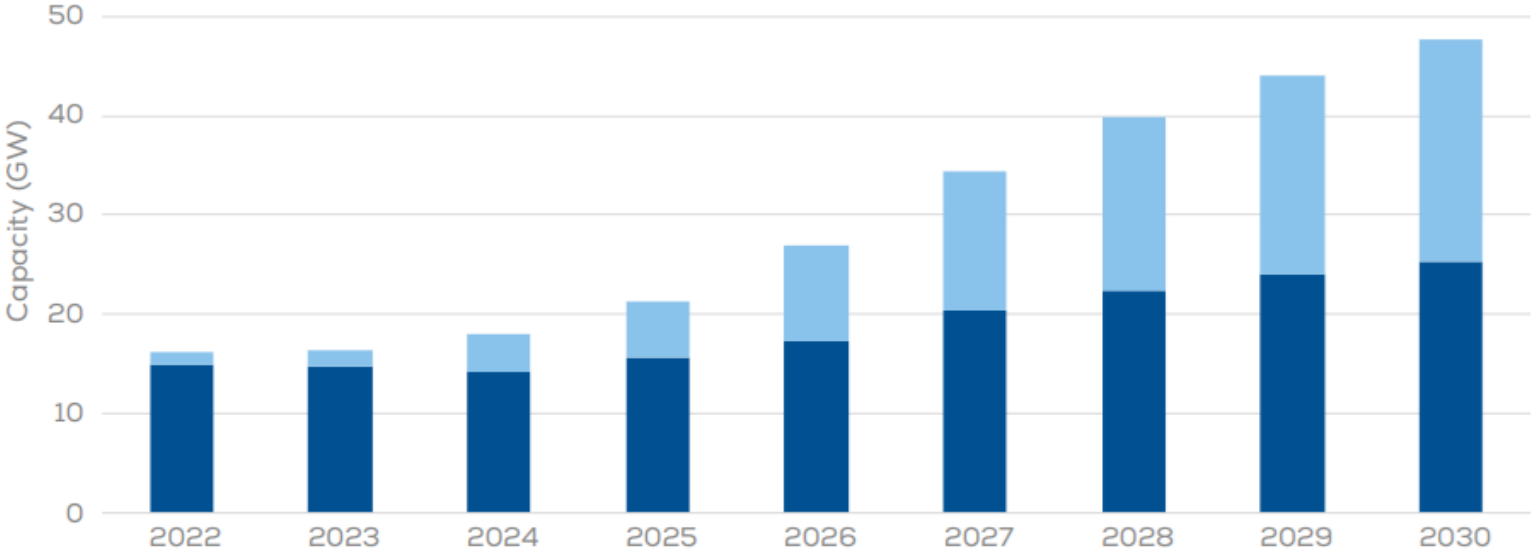
 **16 February**
Record in wind production



*Capacity factors of entire fleet including old turbines

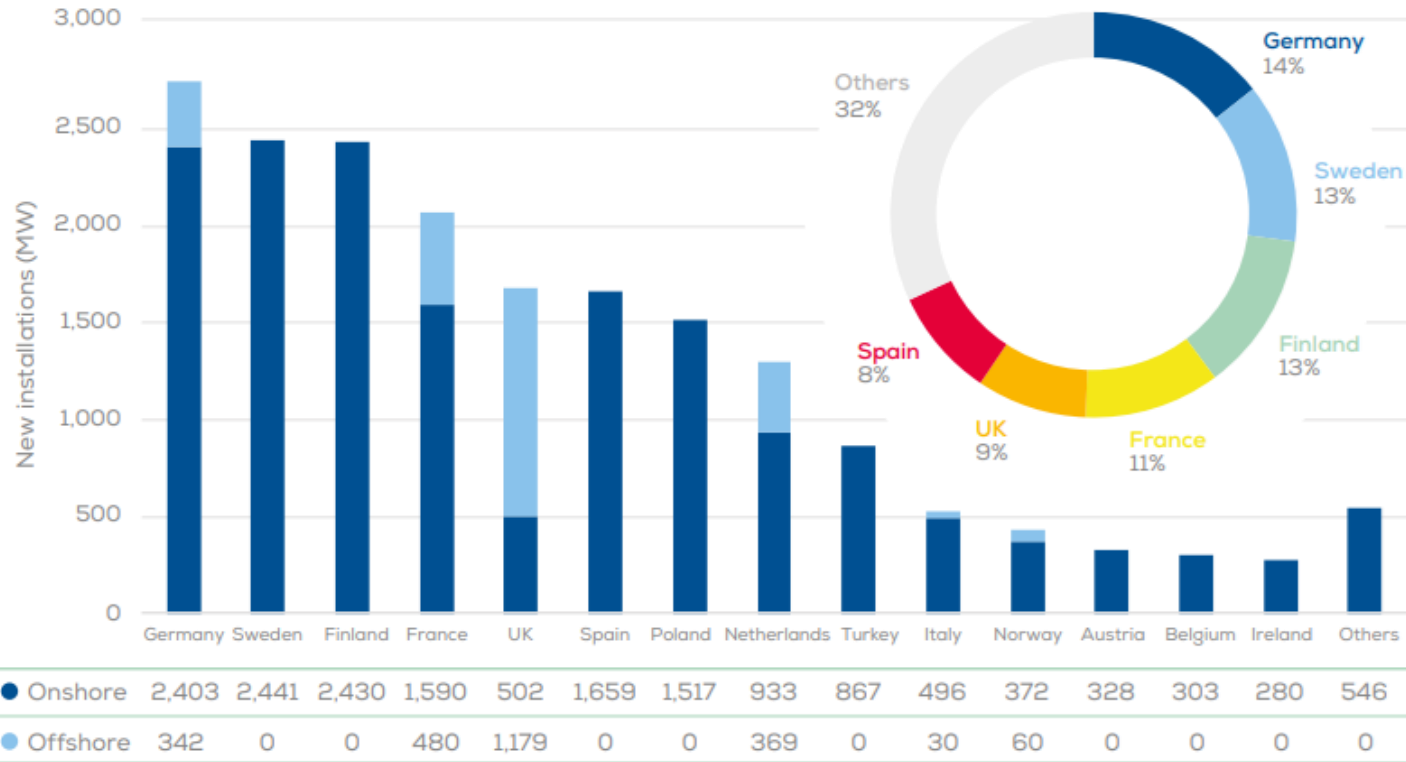
Build out of wind energy in the EU

EU – RePowerEU Scenario



● Onshore wind	14.9	14.7	14.2	15.7	17.2	20.3	22.3	23.9	25.2
● Offshore wind	1.2	1.8	3.8	5.7	9.8	14.1	17.5	20.1	22.4

Wind energy installations per country



Source: WindEurope

ECONOMY AND JOBS

