ETIP Wind

EUROPEAN TECHNOLOGY & INNOVATION
PLATFORM ON **WIND ENERGY**

ETIPWind Advisory Group 14:00 – 15:30

26 November 2020

etipwind.eu

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TIME	AGENDA ITEM
14:00 -14:02	**Welcome, competion compliance and approval of agenda** *By Mike Anderson, Chair of the Advisory Group*
14:02 -14:05	**Introduction of new Advisory Group members** *By Mike Anderson, Chair of the Advisory Group*
14:05 – 14:15	**ETIPWind work programme** *By the ETIPWind secretariat* • Executive Committee activities: timeline, deliverables (5 min) • Public engagement (5 min)
14:15 – 14:35	**Competitiveness of the European wind industry** *By the European Commission (tbc)*
14:35 -15:05	**How to accelerate wind turbine blade recycling at industrial scale?** *By Daniel Fraile, Head of Market Intelligence, WindEurope* • State of play (10 min) • Roundtable discussion (20 min)
15:05 – 15:20	**ETIPWind publication on 2050 vision** *By Adrian Timbus, Chair of the Executive Committee* • Scope and objectives (5 min) • Roundtable discussion (10 min)
15:20 – 15:25	**AOB**
15:25 – 15:30	**Closing statement & next steps** *By Mike Anderson, Chair of the Advisory Group*

Introduction to new Advisory Group members

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Work Programme

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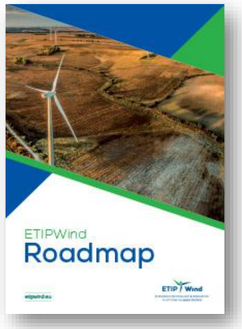
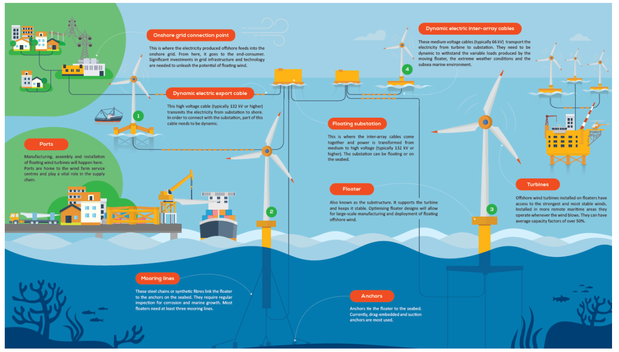
2020 HIGHLIGHTS

Outreach of the ETIPWind Roadmap

- H2020 Green Deal call, Horizon Europe…



Brochure on floating offshore wind



Workshop on scaling up offshore wind

Focus on grids and supply chain challenges

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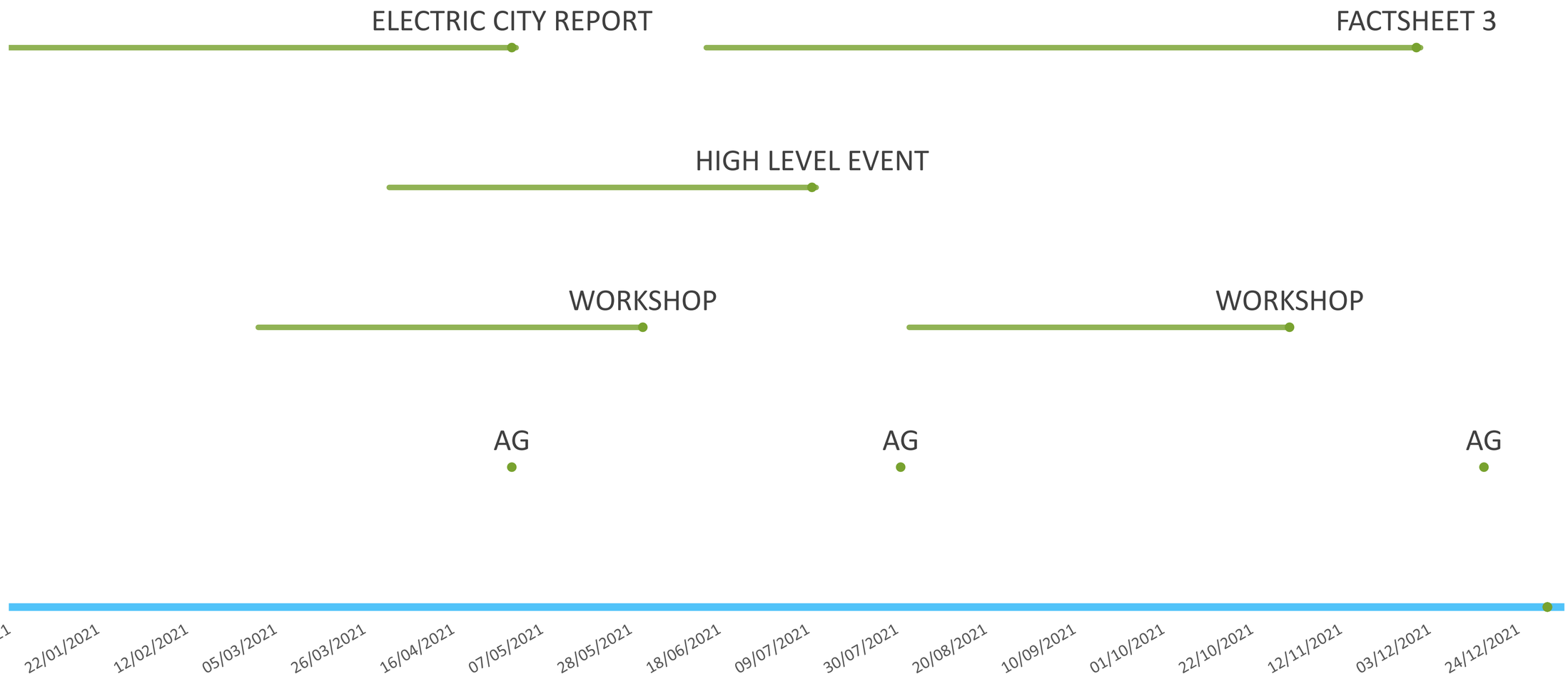
What will 2021 bring for ETIPWind? *(indicative timeline)*



Competitiveness of the European wind industry

ETIP WIND Advisory Group Meeting

Julia Walschebauer, Thomas Telsnig, Robin Verheij
European Commission

Competitiveness in the Energy Union

The capacity to

- **Produce** affordable, reliable and accessible **clean energy** through **clean energy technologies;**
- **Use** clean energy **productively;**
- **Compete** in energy and energy technology **markets** with the overall aim of bringing benefits to the EU economy and people.

Methodology base

Competitiveness is mapped by a **set of indicators** capturing different dimensions

European Commission

Competitiveness Indicators

Technology analysis
State of play and outlook

Capacity installed, generation (today, 2030 and 2050)

Cost / LCoE (today, 2030 and 2050)

Current Public R&I funding

Current Private R&I funding

Current Patenting trends

Current level of scientific Publications

Value chain analysis
Technology sector

Turnover

Gross value added growth Annual, % change

Number of companies in supply chain, incl. EU market leaders

Employment figures

Energy intensity / labour productivity

"PRODuction COMmunautaire" Annual production values

Global market analysis

Trade (imports, exports)

Global market leaders VS EU market leaders (market share)

Resource efficiency and dependence

Real Unit Energy Cost

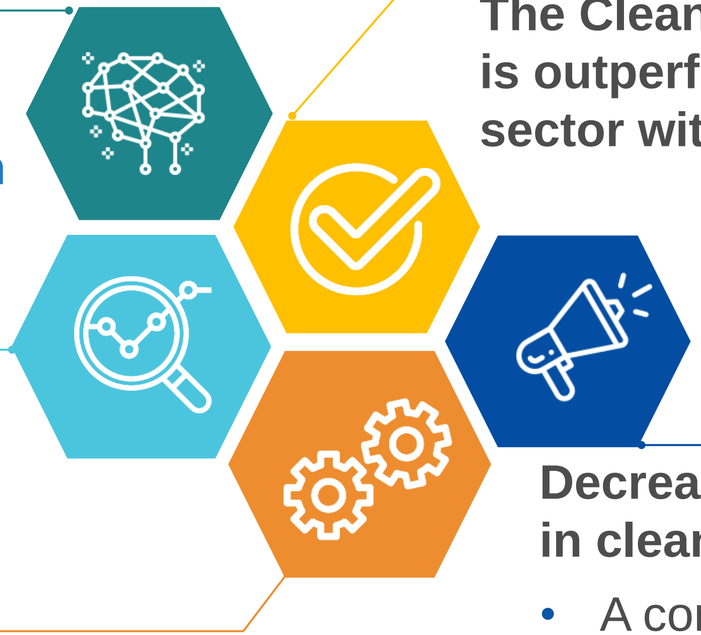
European Commission

Main findings and conclusions, CPR (2020)

We will further develop the competitiveness assessment methodology in cooperation with MSs and stakeholders

Technology-specific conclusion

- CPR: 6 key technologies
- CETTIR: 12 technologies/topics



The Clean energy technologies sector is outperforming conventional energy sector with regard to:

- Value added
- Labour productivity
- Employment growth

Decreasing of Private and Public investments in clean energy R&I:

- A considerable increase in R&I investment, both public and private, is needed to keep the EU on its decarbonisation path.
- The upcoming investments in economic recovery represents an opportunity.

A strong home market is a key factor in industrial competitiveness but it is not automatic

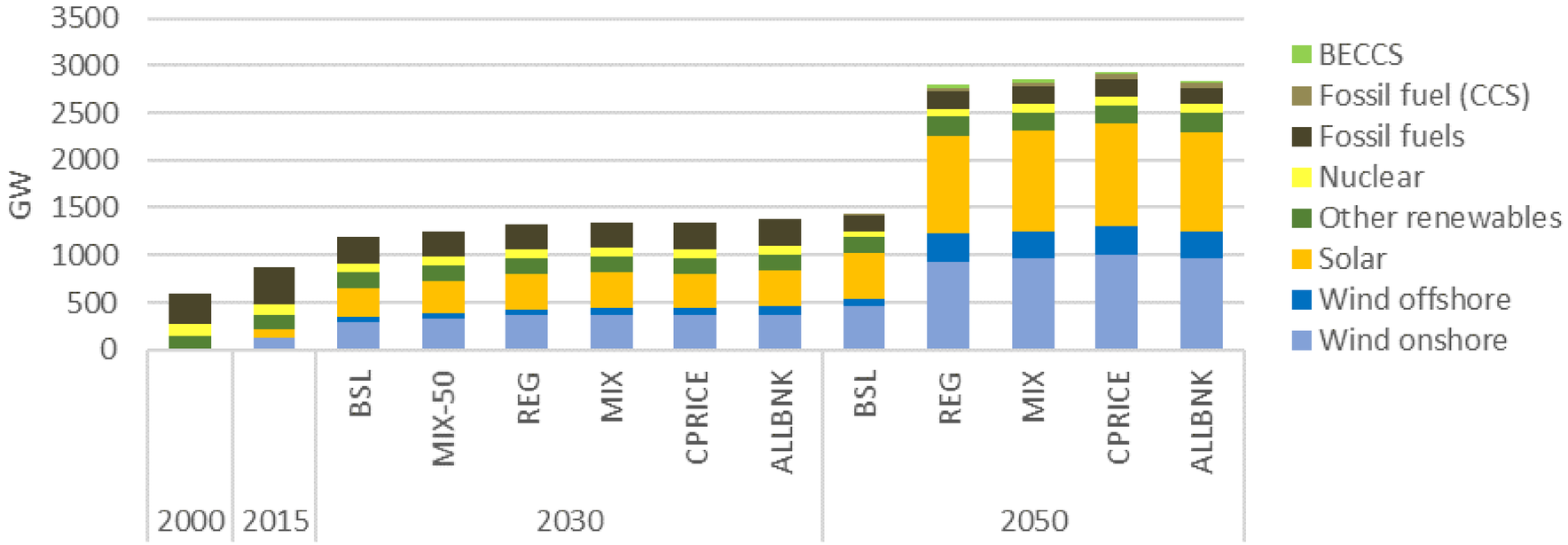
- Need to develop intelligent and focussed innovation policies to support technology development and competitiveness in the EU.

European Commission

CPR – next steps

- CPR will be published yearly
- Aim is to further develop the CPR methodology in cooperation with Member States and stakeholders
- How can members of the ETIPWind Advisory Group contribute?
  - ➢ Providing data on the sector (see indicators slide 3)
  - ➢ Providing input on the methodology (e.g. indicators used)

Onshore wind – state of play

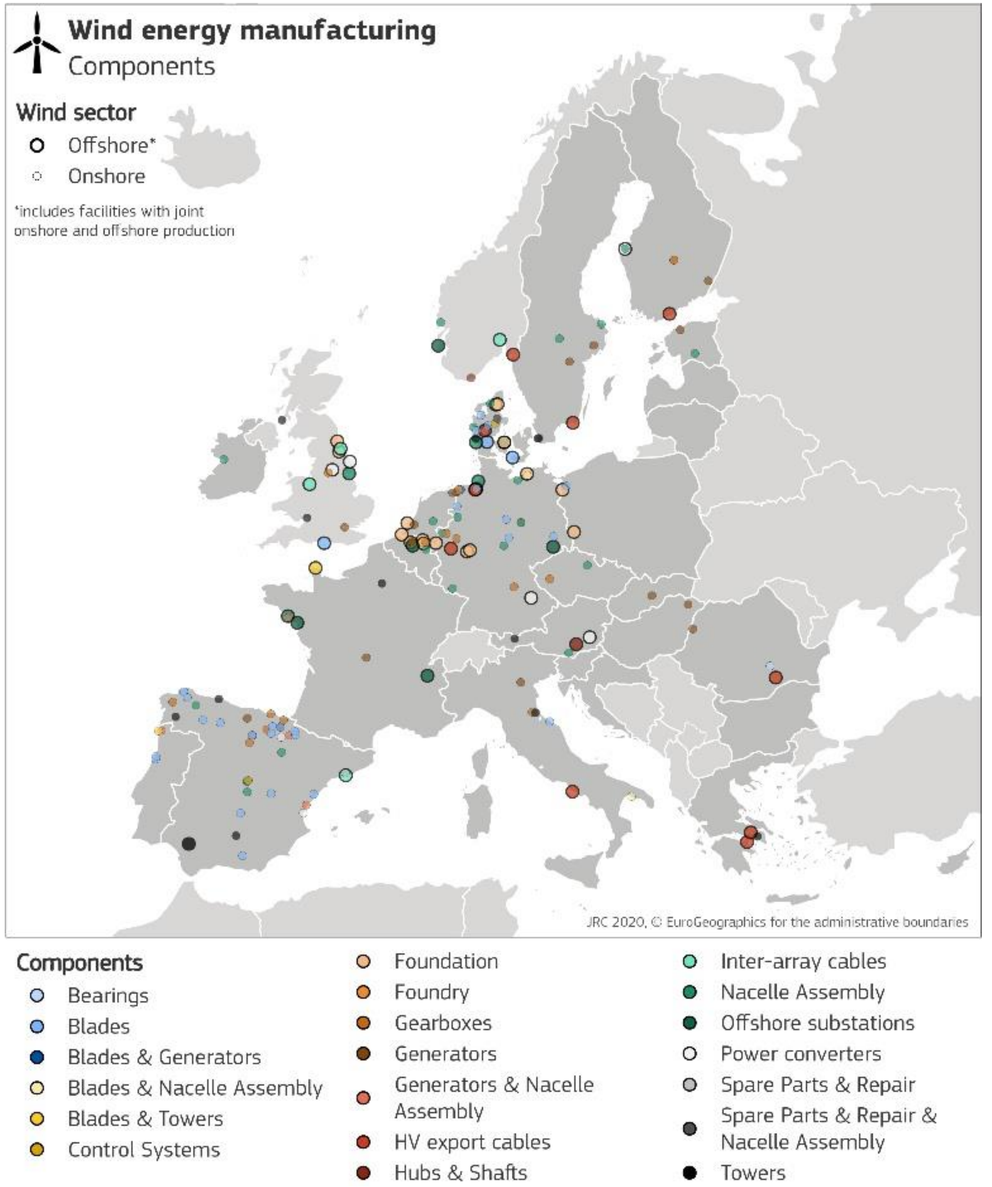


- Europe is a recognised market leader in the wind energy, with 48% of the companies headquartered in the EU;
- 100% of onshore turbines with rated capacity of 4 MW and more are European;
- 3.5 times more investment in onshore wind than in offshore wind. By far the largest investment area is turbines, in which Europe has a share of about 25%.

European Commission

Offshore wind – state of play

- **Turbine capacity increased** from 3.7 MW (2015) to 6.3 MW (2018) **thanks to R&I efforts;**
- **The EU has a first mover** advantage and is leading the innovation in floating offshore;
- About **93% of the total offshore capacity** installed in EU in 2019 produced locally by European manufacturers (Siemens Gamesa Renewable Energy, MHI Vestas and Senvion).



European Commission

Challenges and opportunities to a competitive wind industry

- The clean energy technology sector outperforms conventional energy sources in terms of value-added;

- In offshore wind energy, the EU hosts the global leaders that are building offshore wind parks around the world, and we are leading the innovation in floating offshore with about 350MW wind parks being built until 2024, which is about 62% of the global floating offshore construction plan;

- Public and private investments in clean energy R&I are **decreasing and currently insufficient to reach the 2050 climate neutrality goal**.

Opportunity: Offshore Renewable Energy Strategy

• GHG Reduction*

2030
at least 55%

2050
Climate neutrality

Renewable Electricity*

2030
> 65%

2050
85% -100%

The European Green Deal

2030
> 60 GW wind
> 1 GW ocean energy

2050
300 GW wind
40 GW OE

5 sea basins
Many activities
(Tourism, Fisheries, Transport, Defense)

Environment& biodiversity

Offshore Objective*

ial planning

European Commission

**** 2030 Climate Target Plan Impact Assessment***

Challenges

Supporting Research & Innovation in Offshore Renewable Energy

Strengthening Europe's technological leadership

Lead Actions

Improve industrial efficiency across the value chain

Support cooperation for large-scale HVDC-grid demonstration project

Create additional SET Plan group on HDVC

Develop new wind/ocean energy and solar floating technology designs

Circularity by design

Review SET Plan targets on ocean energy and offshore wind

Use of available funds for ocean energy technologies

How?
H2020 Green Deal
Call
Horizon Europe

European Commission

Questions & input

European Commission

How to accelerate blade recycling

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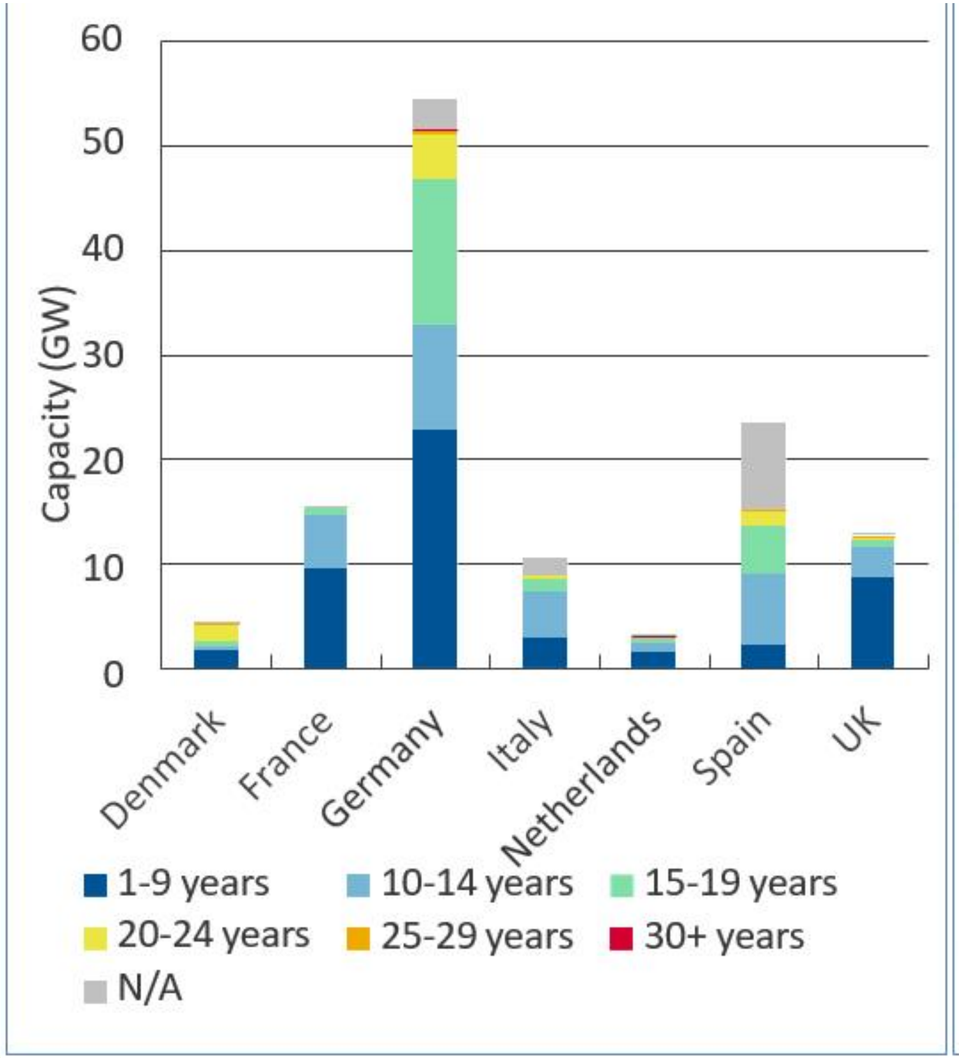
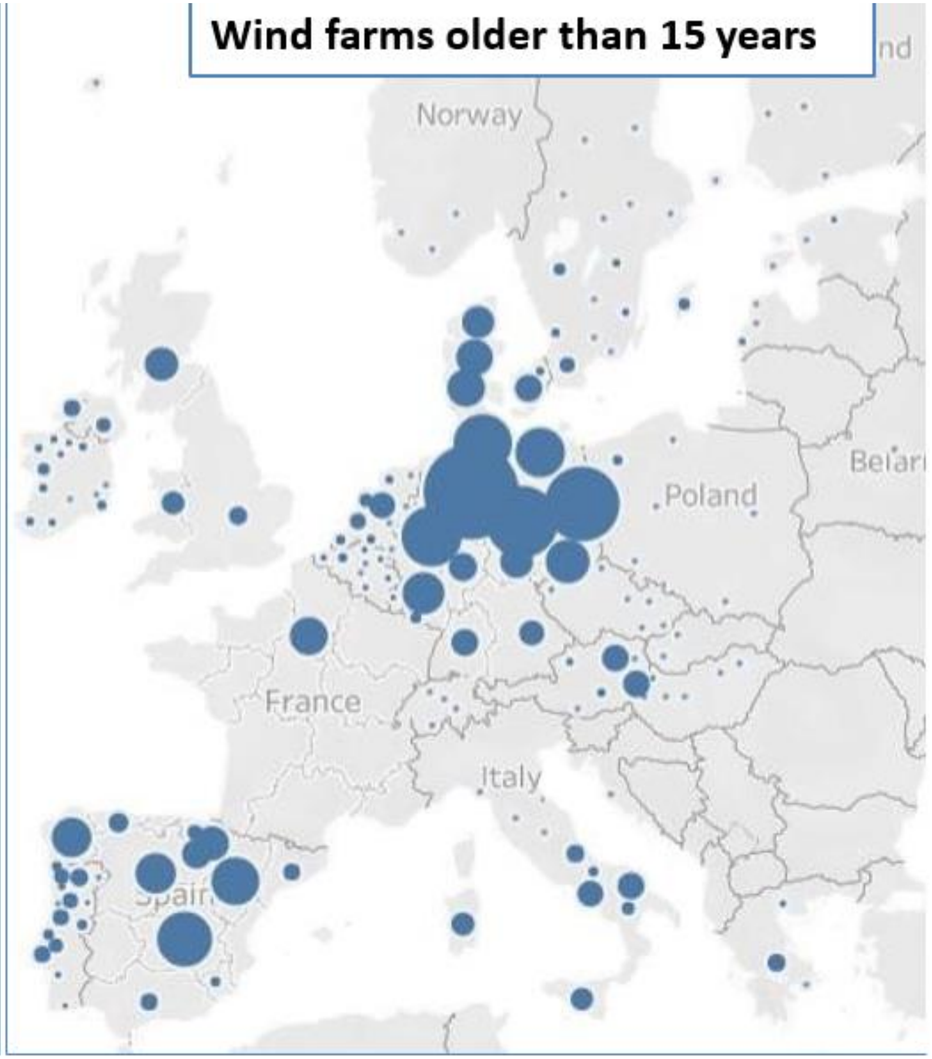
Where are the first wind farms?

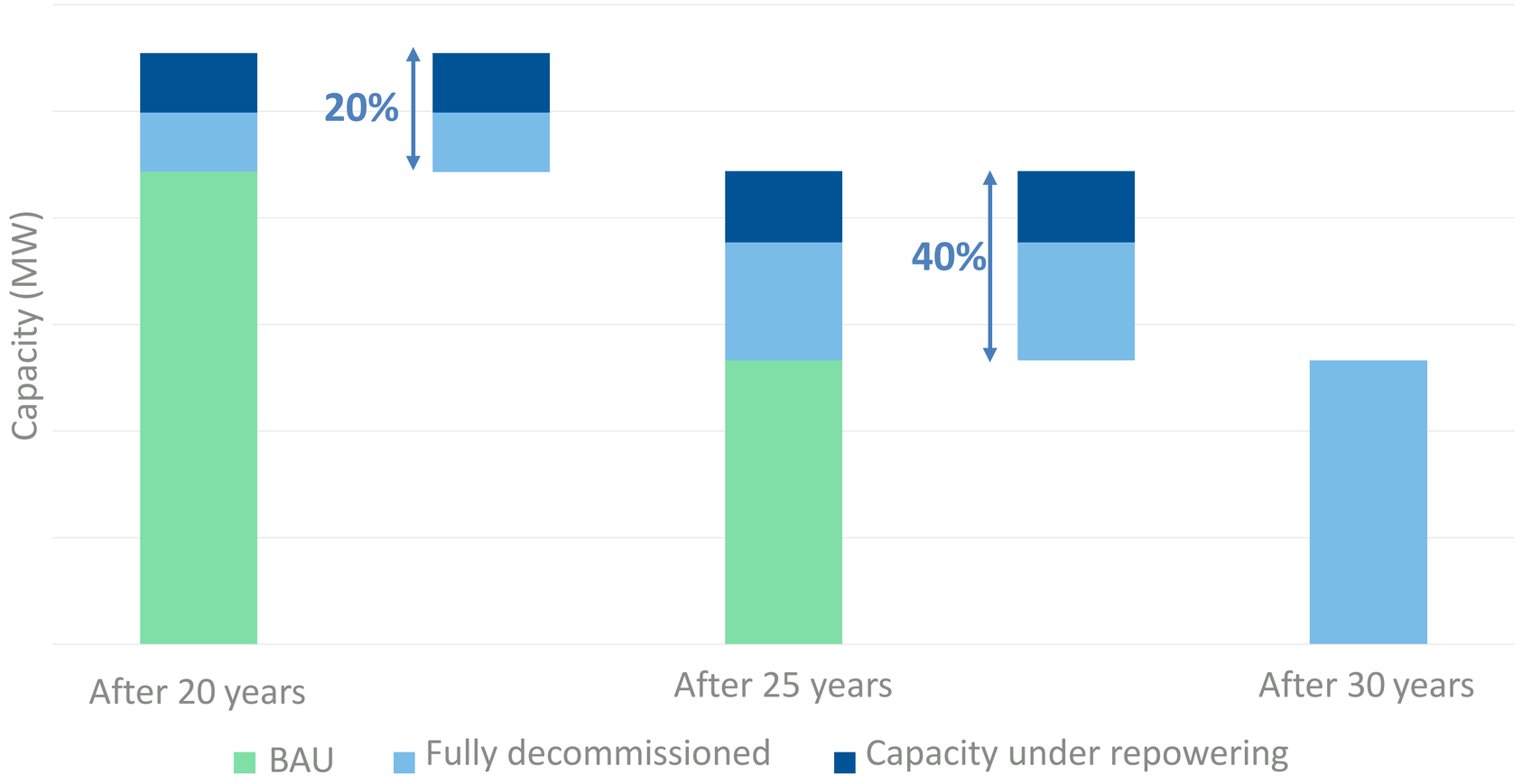




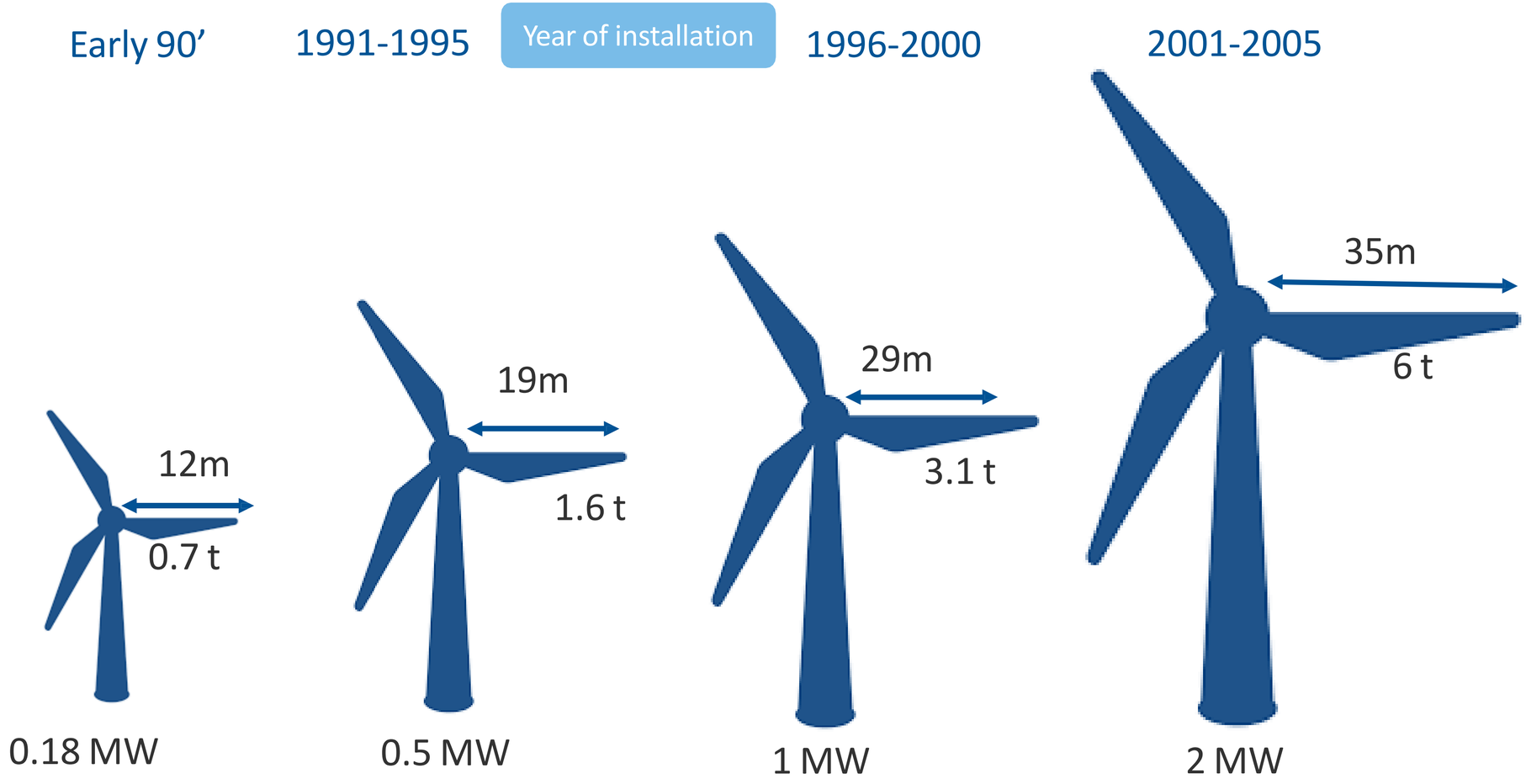
Note: specific location for France and UK not available

Source: WindEurope

Repowering and decommissioning methodology



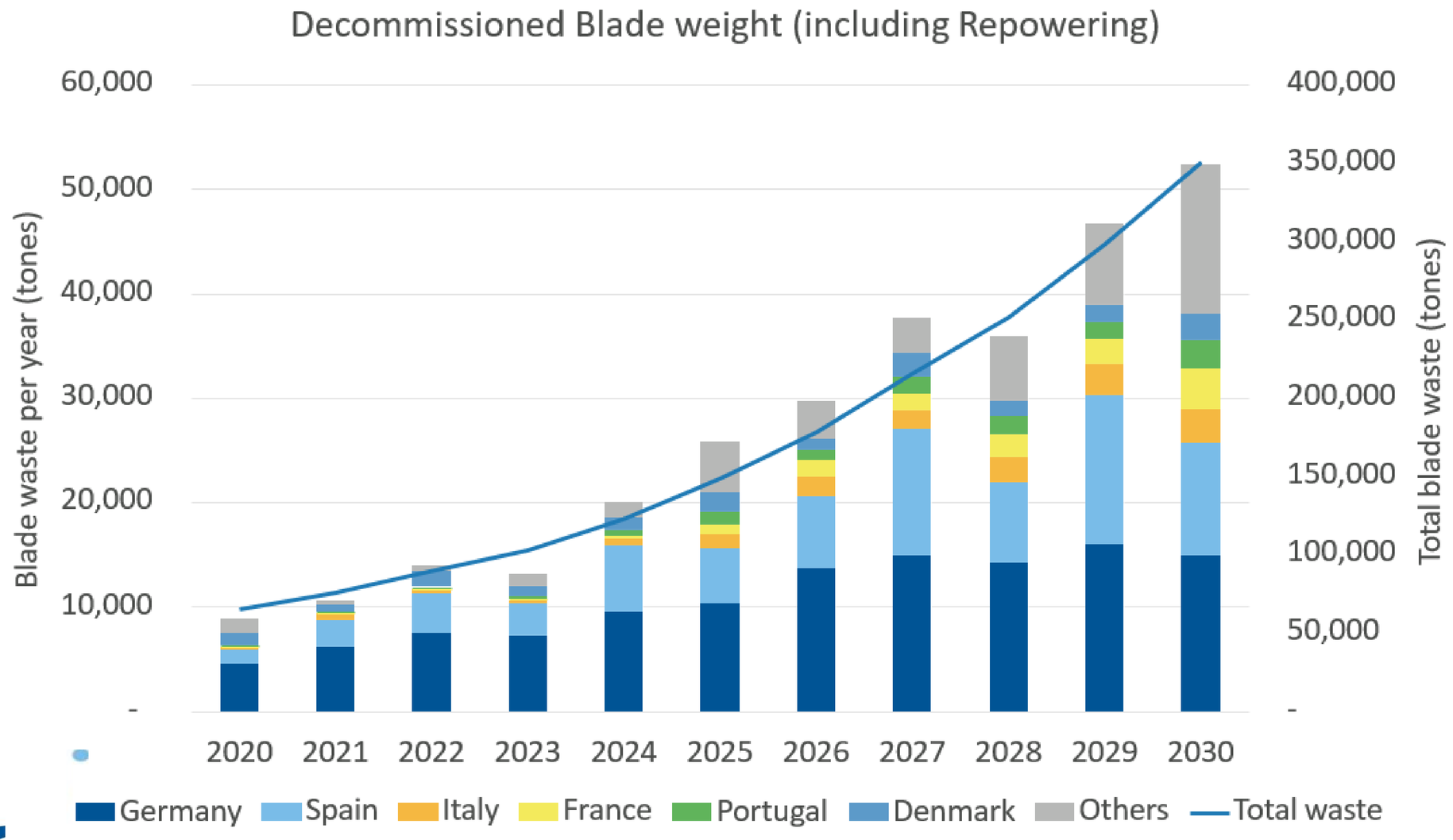
Larger turbines come with and longer and heavier blades, However the Power/blade mass remains stable



Notes: - Length, mass and power is ased on the weighted average of over 35,000 analysed turbines installed before 2005
- Indicated weight is per blade

Source: WindEurope

Up to 52,000 tonnes per year by 2030



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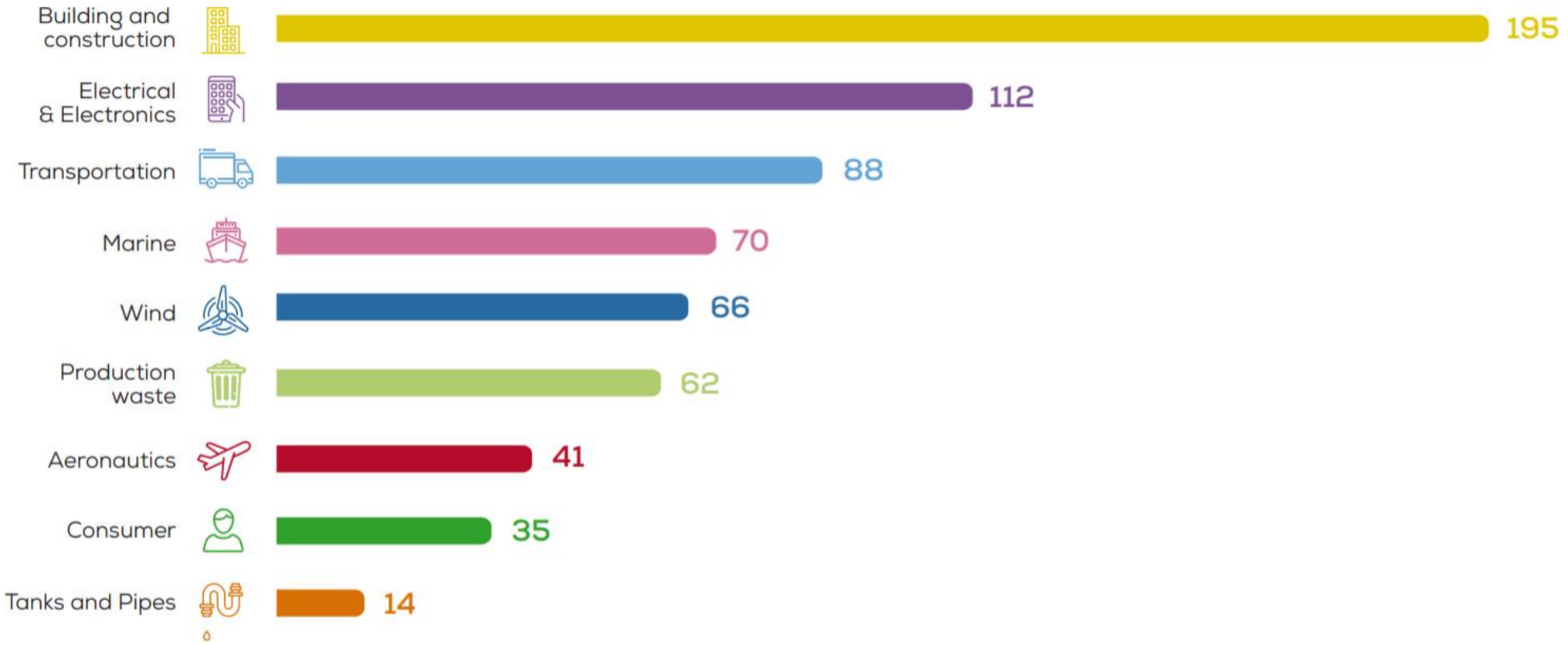
A cross-sector challenge

Volumes of composite waste by sector in 2025 (indicative)



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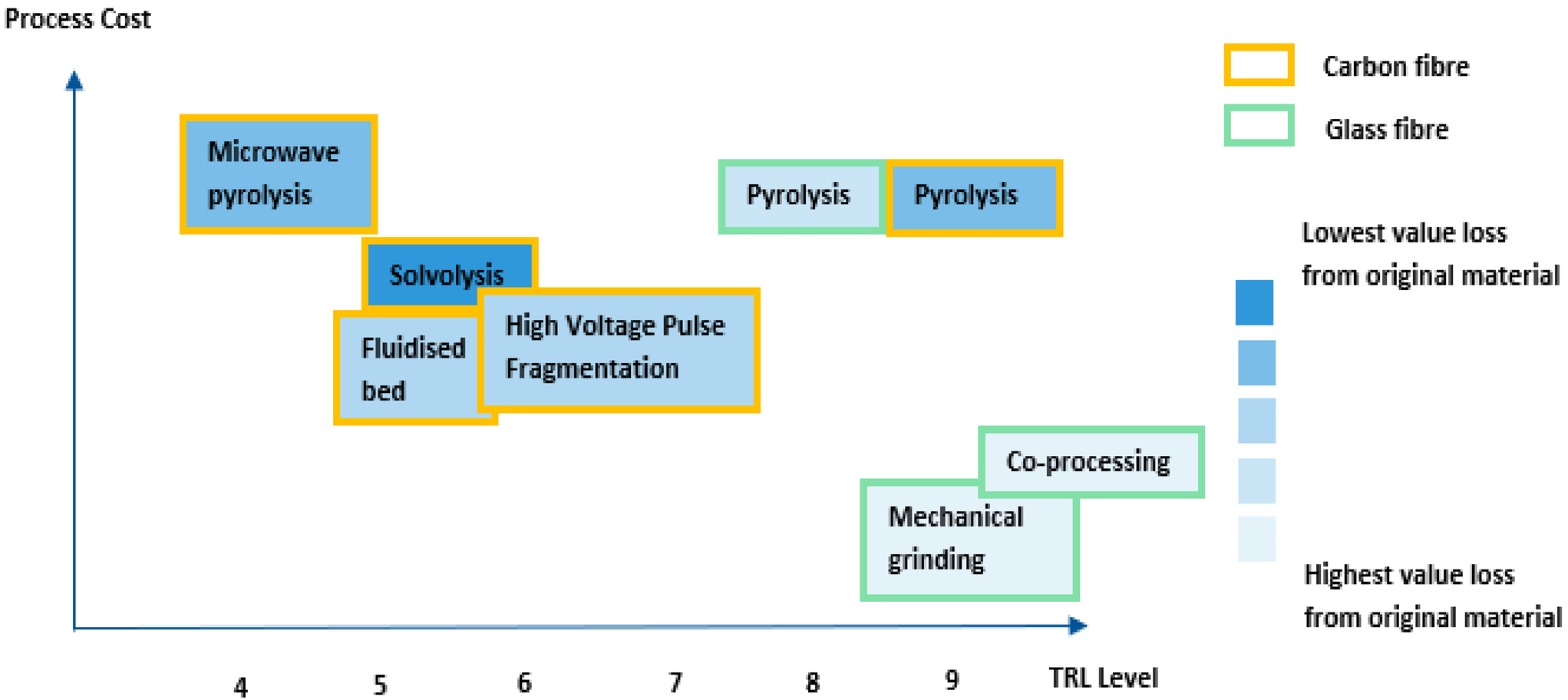
Technological solutions exist but…



Source: Adapted from Bax & Company and ETIPWind

More info at: https://windeurope.org/wp-content/uploads/files/about-wind/reports/WindEurope-Accelerating-wind-turbine-blade-circularity.pdf

ETIPWind 2021 report

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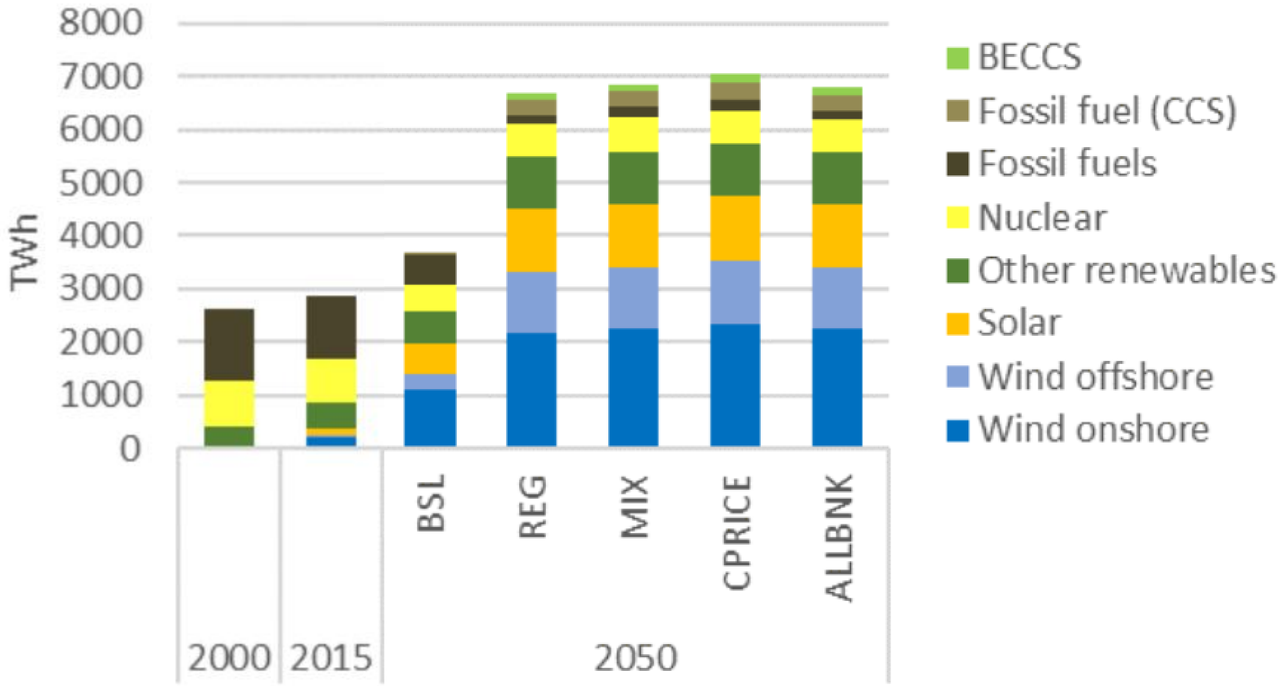
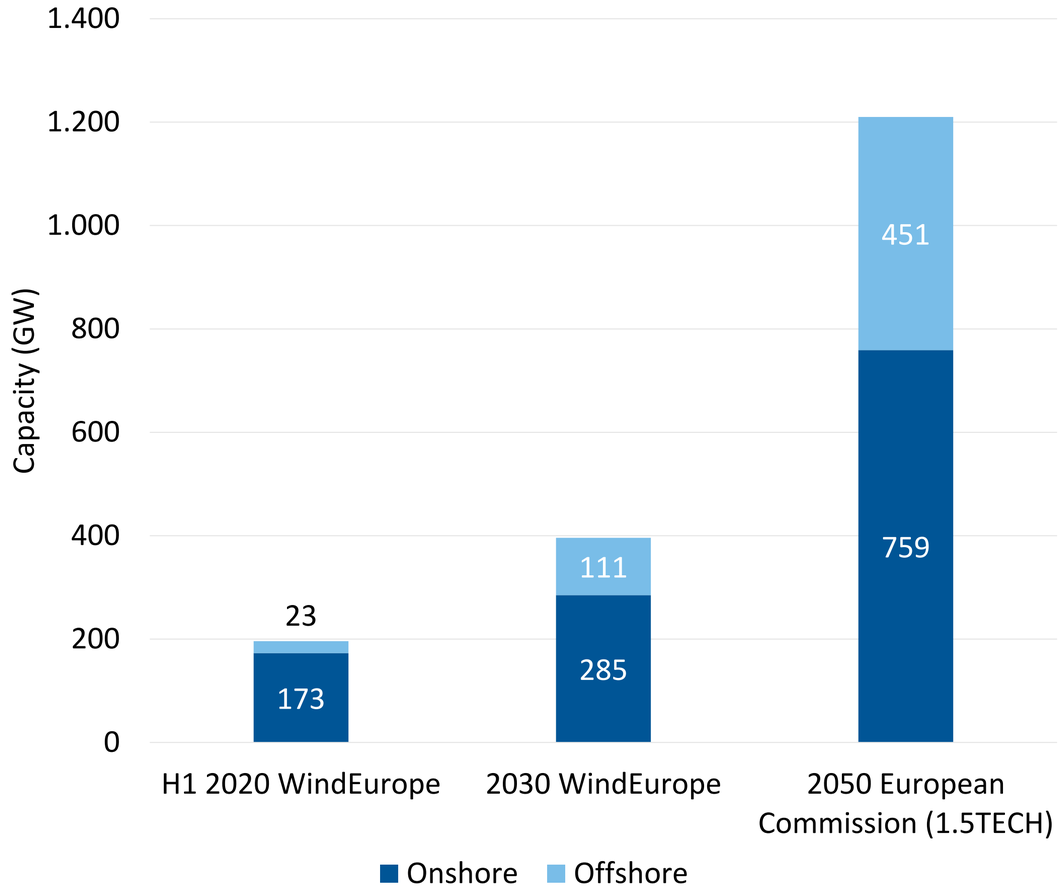
Europe wants to be climate-neutral by 2050

Increased electrification …



Source: European Commission

… requires a massive scale-up in wind



Source: European Commission, WindEurope

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How do we deliver and what do we need to get there?

Building on 2019 Advisory Group vision document

Challenge 1: demonstrate value of wind energy

- Cost reductions, supply chain & logistics, and sustainability

Challenge 2: create a system fit for renewables

- Renewables-based electrification, grid infrastructure and energy system transformation

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Wind-focused report on the ‘how’ of the energy transition

Report Structure

1. **Wind Technology** as the main energy source
2. **Electrification** is the key to decarbonisation- Putting the customer at the centre of the energy transition
    - Industry
    - Transport
    - Buildings
3. The **power grid** as the backbone of the energy system
4. **Flexibility** is the key for the system to provide reliable and low-cost renewable power
5. Advancing technology through **policy innovation**

Taskforce members

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