

Circular strategies and policies for offshore wind

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ECHT
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energie

circulariteit



human
capital

transitie

offshore
EXPERIENCE

 De
Rijke
Noordzee



Offshore Wind 
innovators 
Powered by TKI Wind Op Zee

Interreg 
North Sea Region
Decom Tools
European Regional Development Fund EUROPEAN UNION



Nationaal Programma
RES Regionale
Energie
Strategie



Circular strategies and Roadmap for their implementation



Rijksdienst voor Ondernemend
Nederland



Limited resources

Limited planet

Climate change



Smart use of resources

Circular strategies

Sustainable energy generation



Collaboration

- Horizontal
- Vertical
- Industry / Academia / Policy



What is the problem
and what to do regarding policy?



Redefining "waste"

Definition of waste (EU Waste Directive 2008/98/EC)



Article 3

Definitions

For the purposes of this Directive, the following definitions shall apply:

1. **'waste'** means any substance or object which the holder discards or intends or is required to discard;

Article 4

Waste hierarchy

1. The following waste hierarchy shall apply as a priority order in waste prevention and management legislation and policy:
 - (a) prevention;
 - (b) preparing for re-use;
 - (c) recycling;
 - (d) other recovery, e.g. energy recovery; and
 - (e) disposal.



EU Waste Directive 2008/98/EC



Article 6

End-of-waste status

▼M4 ▼

1. Member States shall take appropriate measures to ensure that waste which has undergone a recycling or other recovery operation is considered to have ceased to be waste if it complies with the following conditions:

(a) the substance or object is to be used for specific purposes;

▼B ▼

(b) a market or demand exists for such a substance or object;

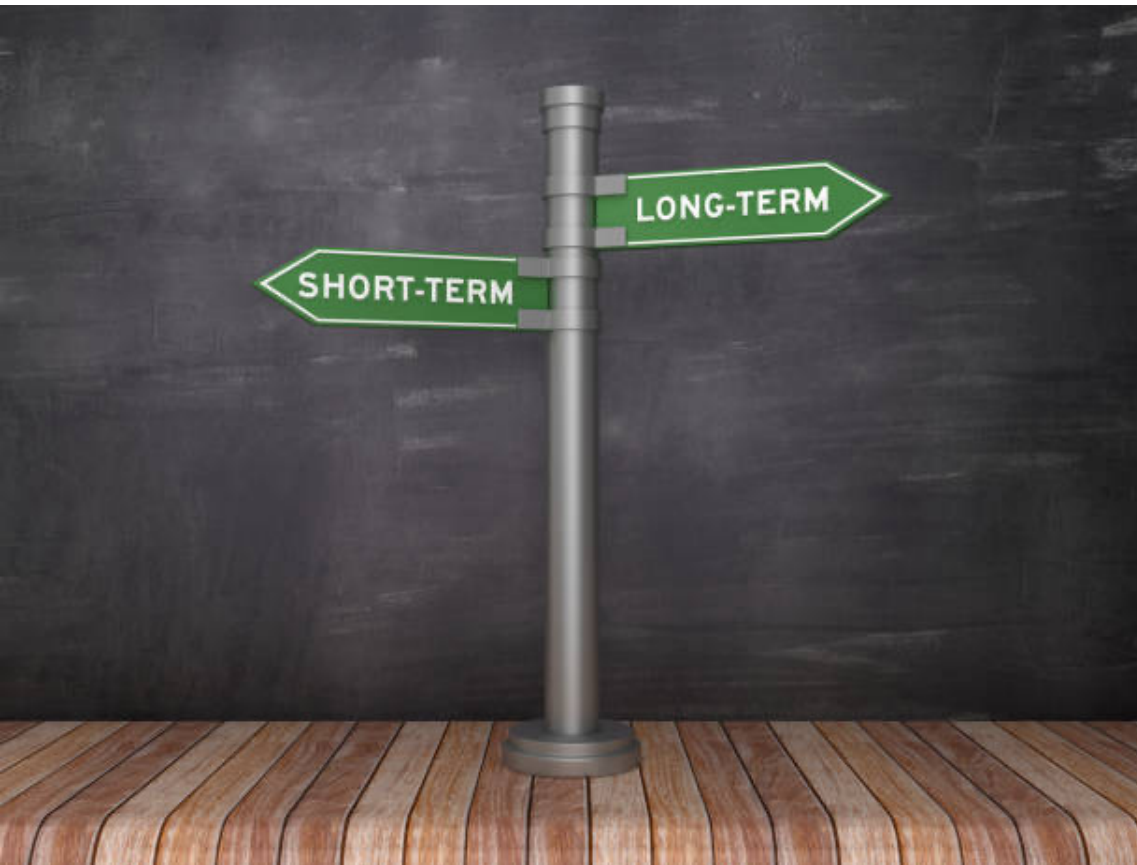
EU Waste Directive 2008/98/EC vs Circular Economy



- EU Green Deal
- Circular Economy Action Plan (CEAP)
- Fit for 55
- Extended Producer Responsibility (EPR)
- Eco-design Directive
- Sustainable Product Initiative (SPI)
- Digital product passports (DPP)
- Product and Organisation Environmental Footprint Methods
- Tagging, Tracking and Tracing Technology
- Product(group) directives (batteries, textiles, tyres etc. etc.)
- Right to Repair Directive

EU Waste Directive





**Short term goals
hindering longterm
ambitions**

Subsidies



Subsidies

Baseline from oil and gas

Zero-subsidy wind farms achieved

Offshore Wind



Offshore wind farm and turbine size

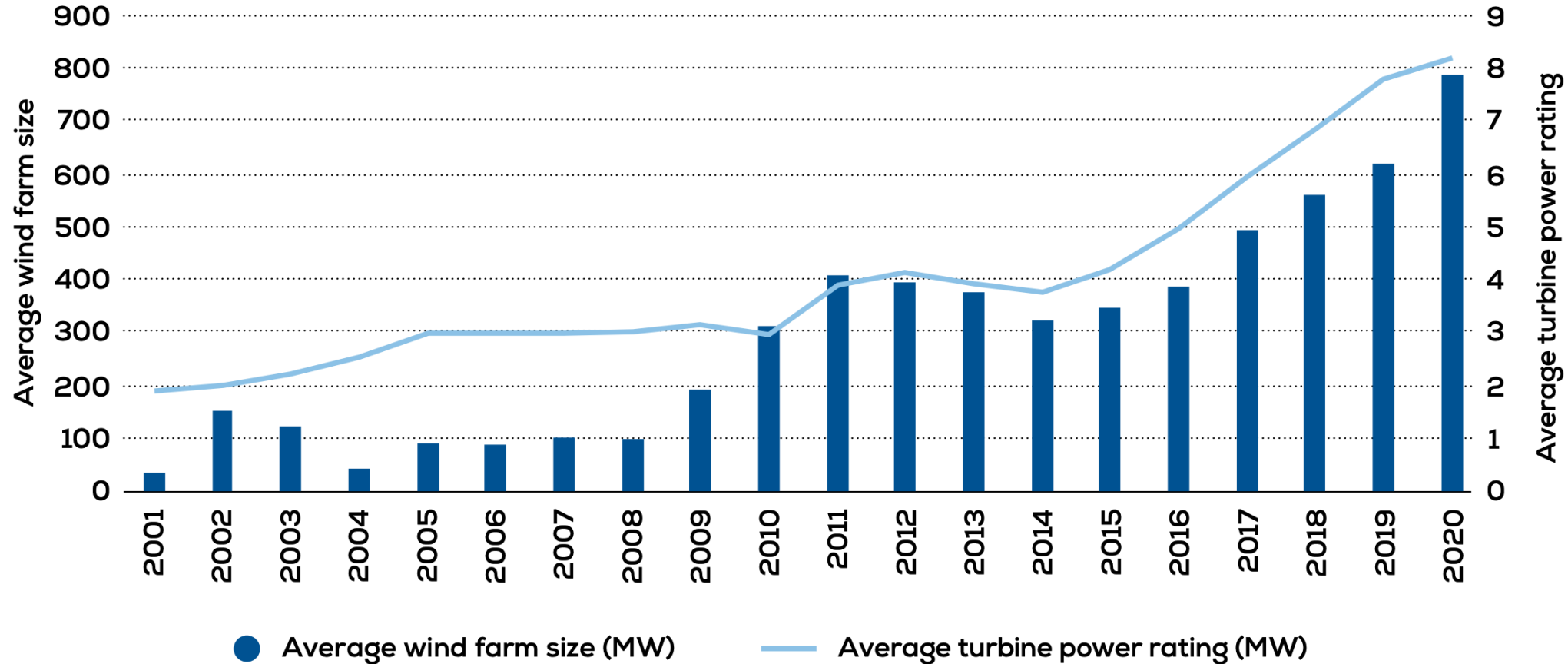


Figure 6. Average annual installed wind farm size and average turbine power rating for offshore wind in Europe.

Offshore Wind



Offshore currently 22 GW

Target 300 GW by 2050

2010: 4 MW took 3-4 days

2020: 8 MW in one day

Need of ramp up **x6**

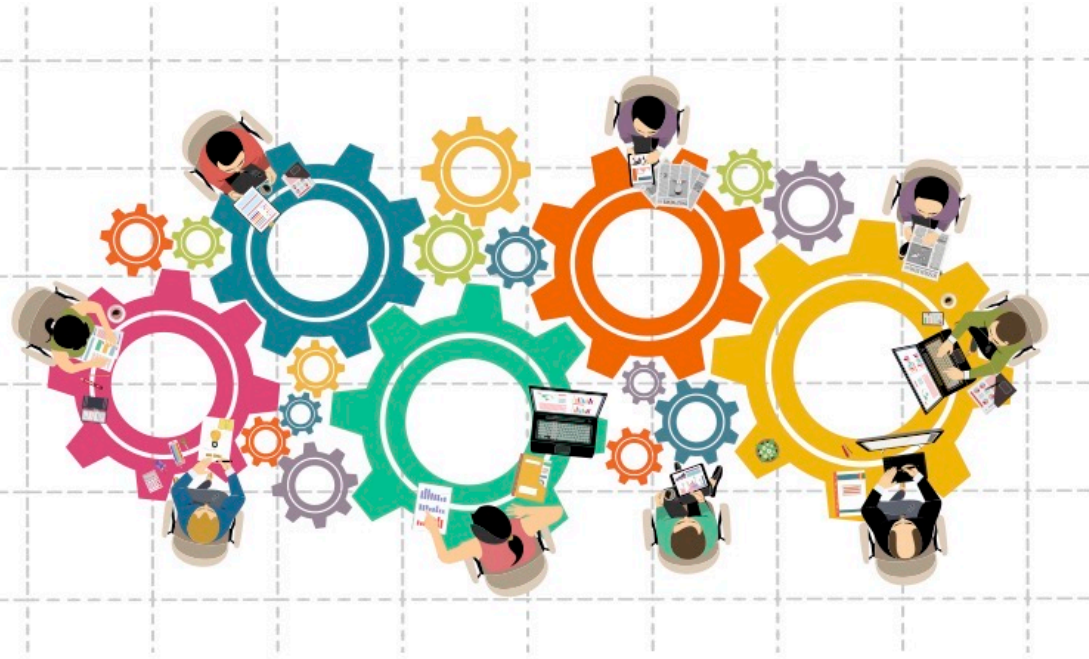
Offshore Wind



DK: RWE paying 375 M€ for Thor

NL: 50 M€ for max scoring in tender

- Higher prices for consumers
- Bankruptcies in supply chain
- Production out of Europe



Roadmap advice to Circular Economy for Manufacturing Industry

“Adviesroute naar een Circulaire Economie voor de Maakindustrie”

Roadmap for wind industry in the Netherlands



Together with Circular Wind Hub partners

19 general Circular strategies

22 WT part-focused strategies

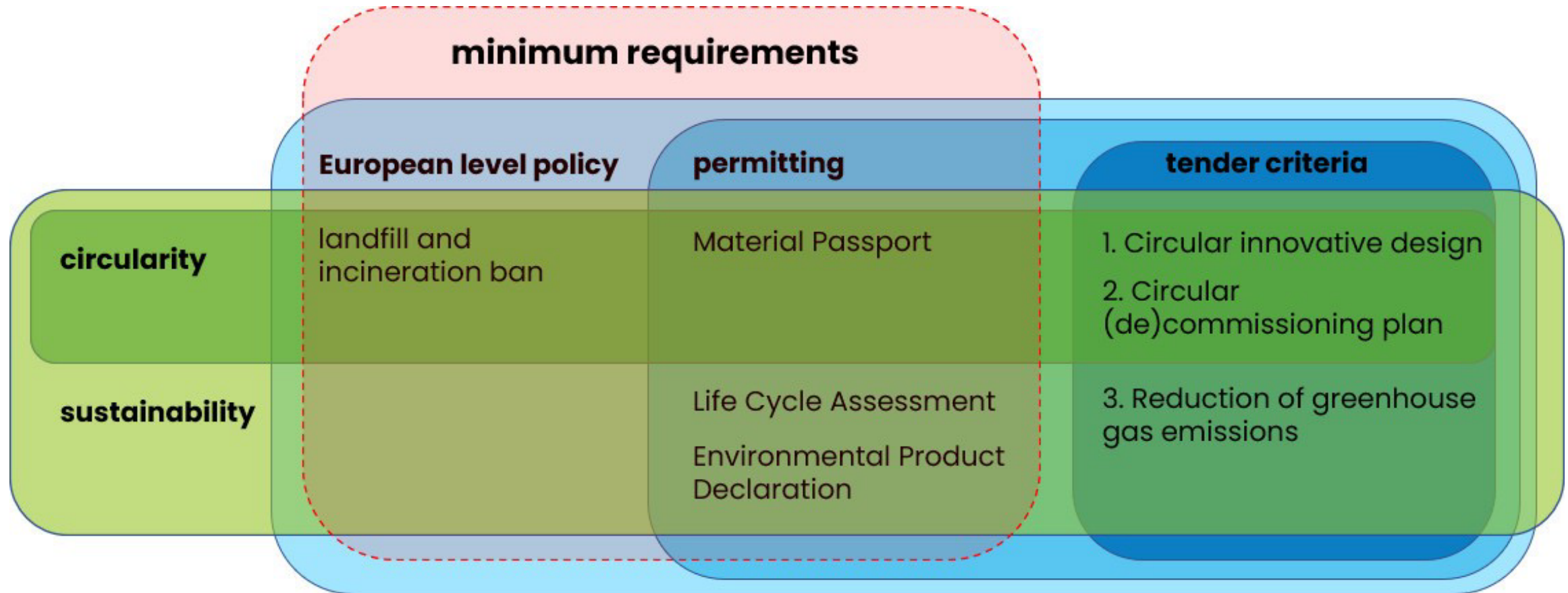
Roadmap for wind industry in the Netherlands



Three main circularity goals:

1. Increased security of supply through 100% traceability of materials across the value chains by **2030**
2. 100% secondary use of of wind turbine materials by **2050**
3. Permit to operate a wind farm for 50 years before **2030**

Roadmap for wind industry in the Netherlands



Opportunities



Transparency with privacy layers

Reliable data

Innovation acceleration

Level playing field

Wrap up



New narrative needed
with regulative change



Short term win leads to
long term loss



Collaboration and
transparency leads to
acceleration



Thank you for sharing the energy!

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