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THE EUROPEAN WIND ENERGY ASSOCIATION



Regulatory Aspects of the Integration of Wind Energy

Christian Kjaer – CEO, EWEA

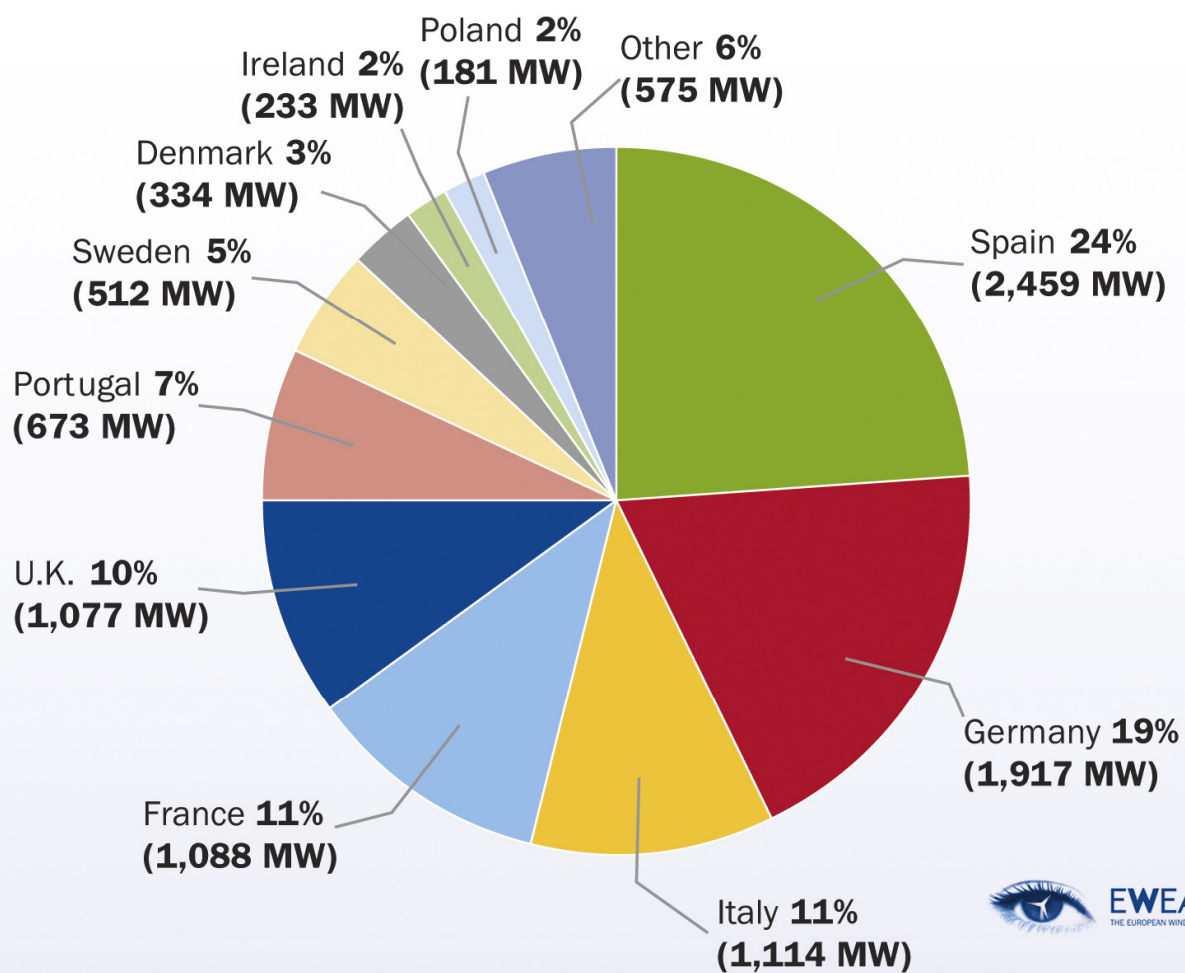
CEER Workshop
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Outline

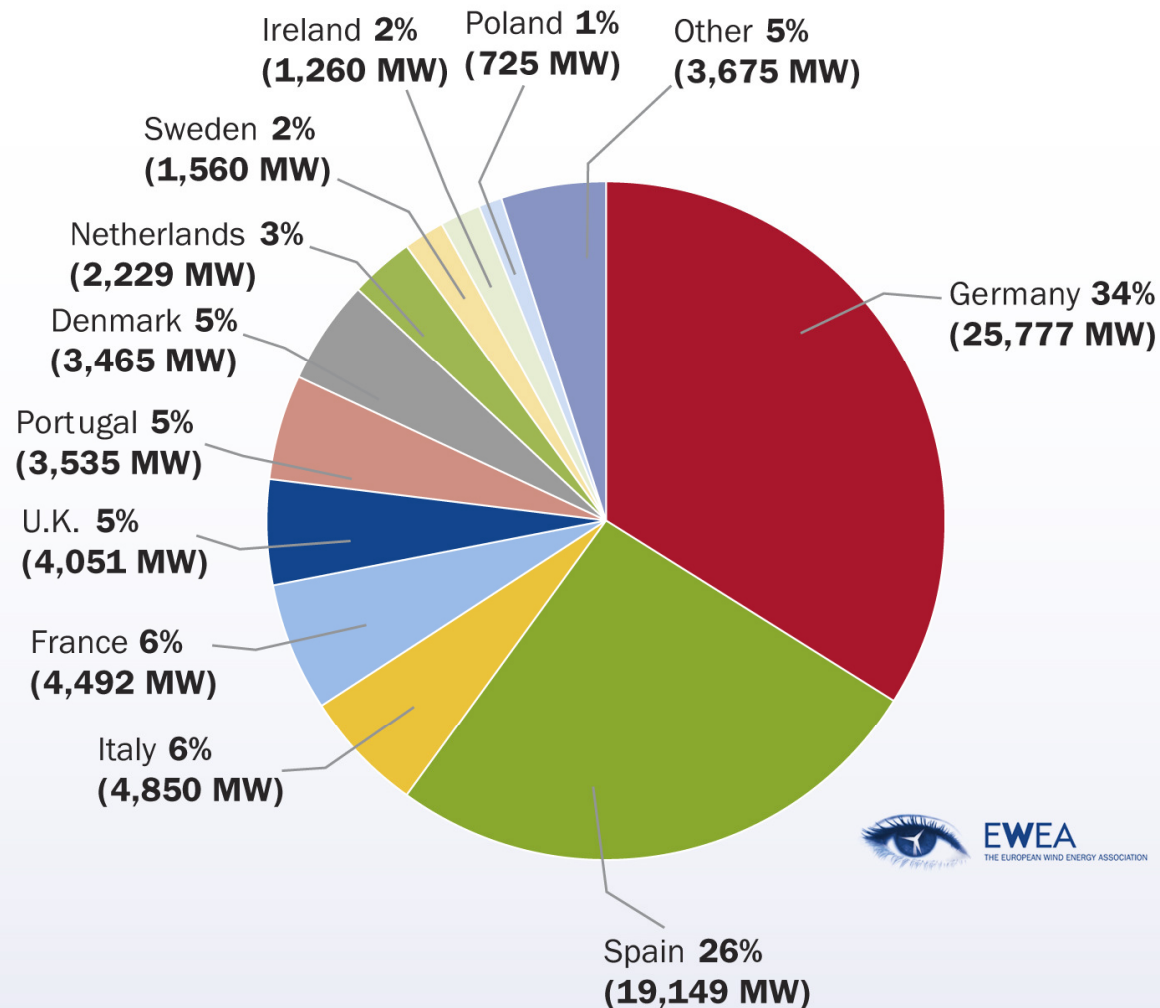


- Current Market developments
- Outlook on wind power installations in Europe and targets for 2020 and 2030
- Guiding principles for a future regulatory framework for the integration of wind energy
- Rationale for network arrangements
- The way forward in market integration
- A European Supergrid

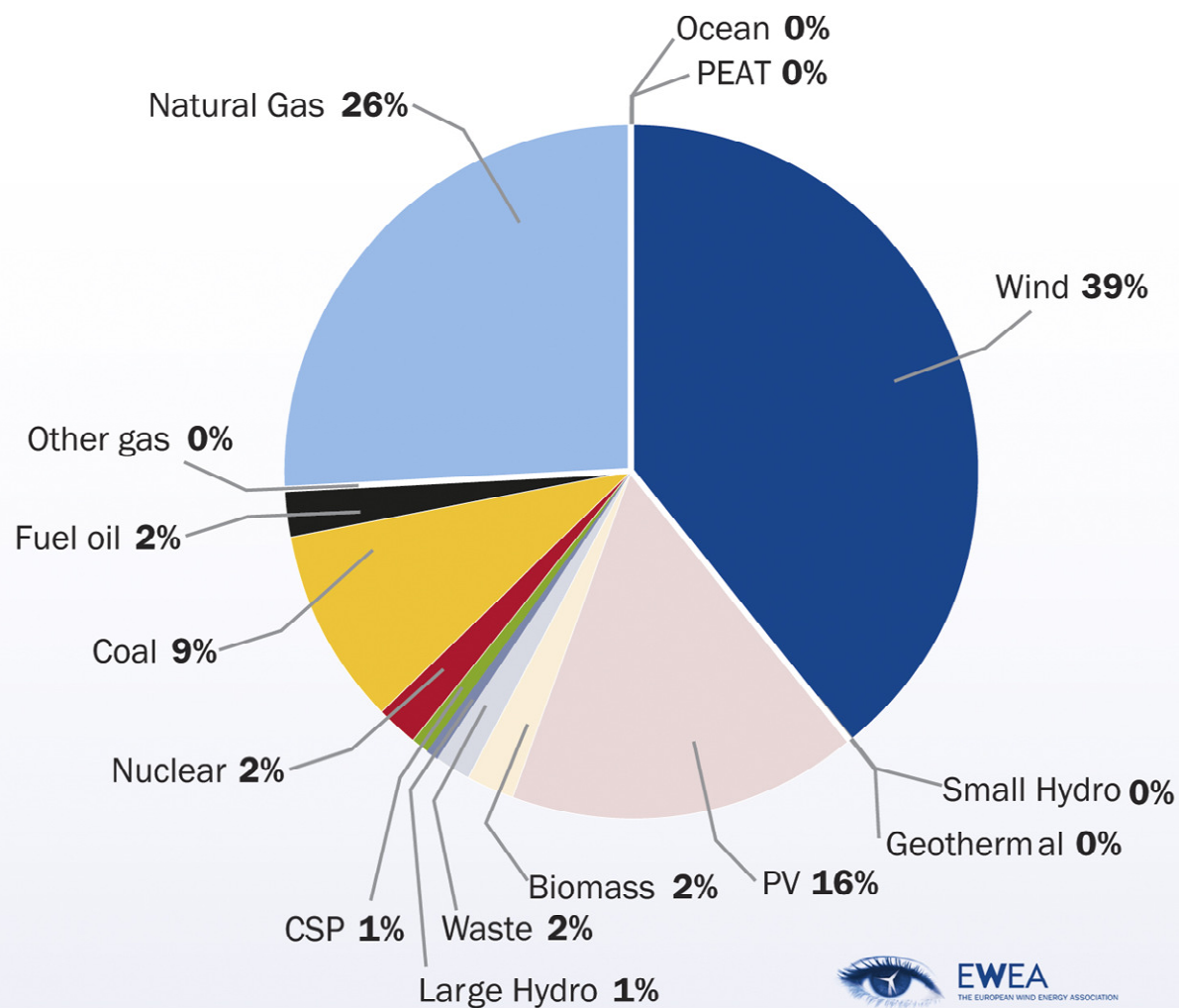
EU member state market shares for new capacity installed during 2009. Total 10,163 MW



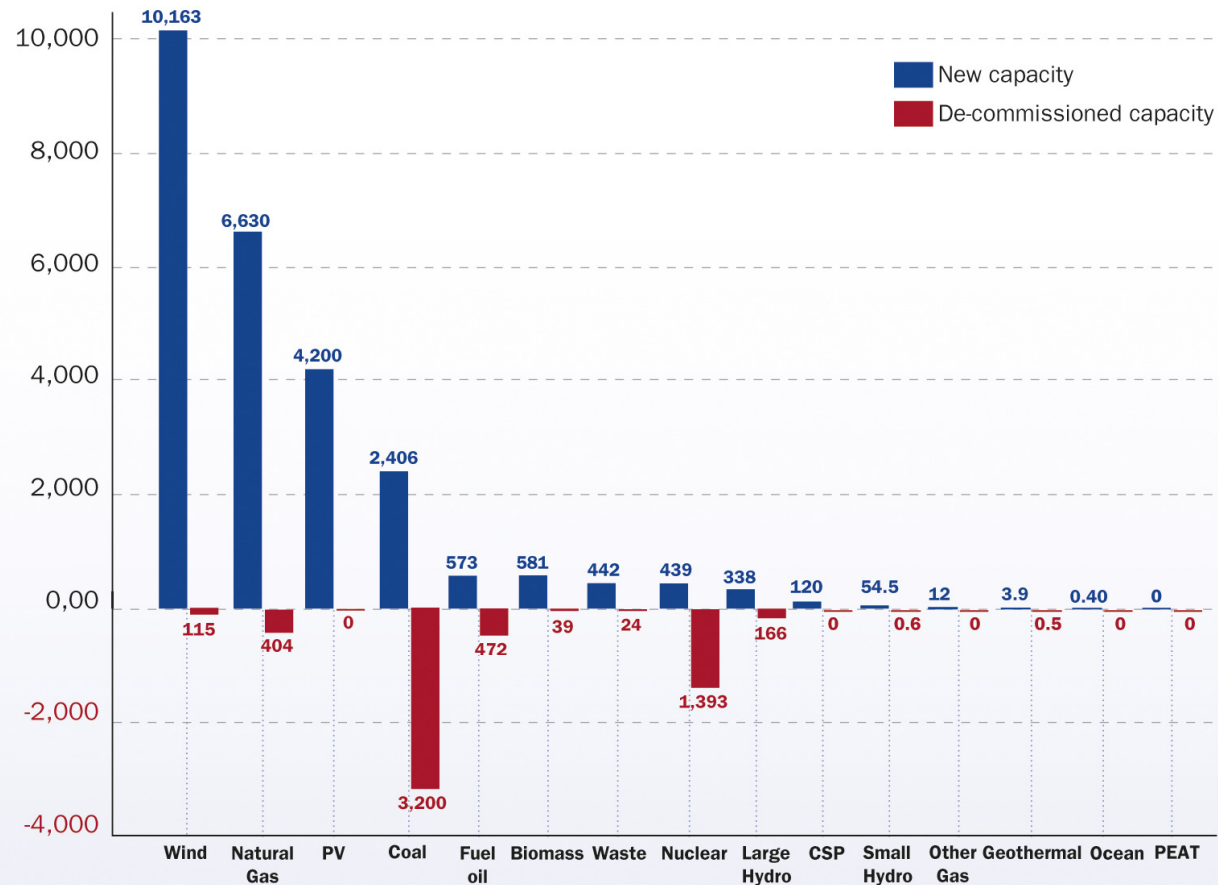
EU member state market shares for total installed capacity (2009). Total 74,767 MW



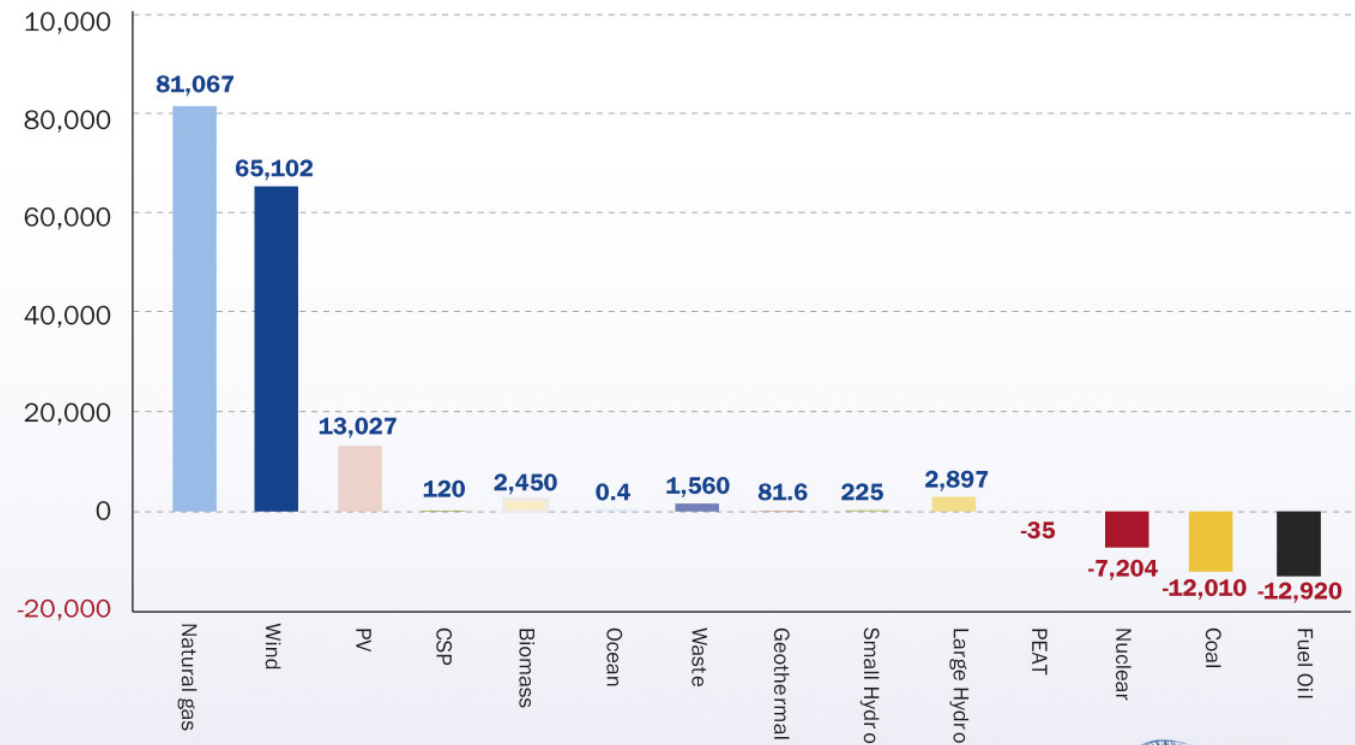
Share of new EU power capacity installed during 2009 (MW)



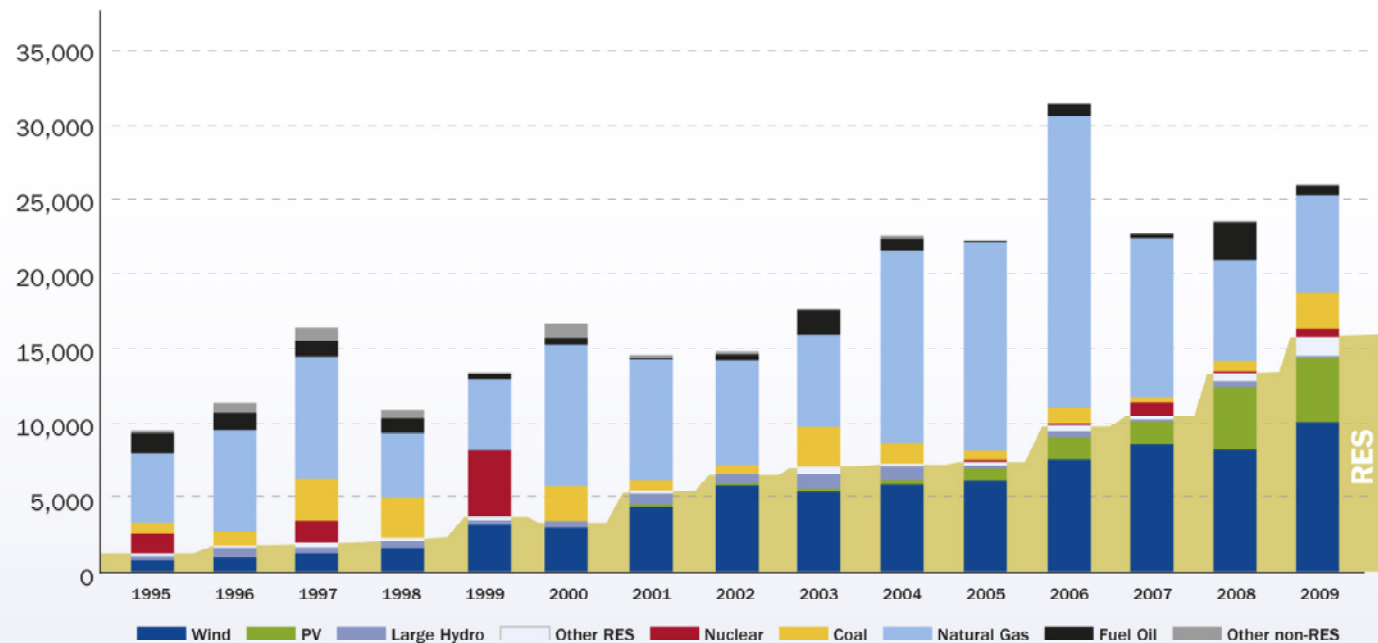
New installed capacity and de-commissioned capacity in EU 2009



Net electricity generating installations in EU 2000 - 2009



New installed capacity per year 1995 - 2009





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EWEA targets in the EU up to 2020 and 2030

Two Scenarios up to 2020:

“Baseline” Scenario: 230 GW installed capacity, of which 40 GW is offshore. 580 TWh, 14.2% of EU electricity demand.

High Scenario: 265 GW installed capacity, of which 55 GW is offshore. 681 TWh, 16.7% of EU electricity demand.

Target for 2030:

400 GW, of which 150 GW is offshore. 1150TWh, 26.2-34.3% of EU electricity demand.

Guiding principles for a EU Regulatory Framework for RES

1. RES Directive

- Binding RES targets for 2020
- Guaranteed transmission and distribution of electricity produced from RES
- An appropriate grid infrastructure should be ensured

2. 3rd Liberalisation Package

- Newly established bodies ENTSO-E and ACER
- Binding cross border rules: Network Codes
- A first Pan-European Grid Plan: The ENTSO-E 10-Year Network Development Plan

These two legislative packages should be the guiding principle for stakeholders when considering any policy options.



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Rationale for network arrangements (I)

- In the absence of effective competition, priority access and dispatch is necessary.
- Benefits of grid development should not be solely related to RES, but put in a broader context of the development of an internal electricity market and enhanced security of supply.

Priority grid access should not be seen as positive discrimination, but as compensation given there is no functioning internal energy market.

Rationale for network arrangements (II)



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- The functioning and liquidity of wholesale markets and cross-border interconnectivity together with the forecast horizon influences to what extent wind farm operators can be at all in balance.
- The application of state-of-the-art forecast tools together with larger balancing areas is the key!

➡ In regimes where balancing costs must be borne by the wind farm operator, regulators should ensure that these costs are transparent and represent only the real cost of balancing.

Market design and the integration of wind power

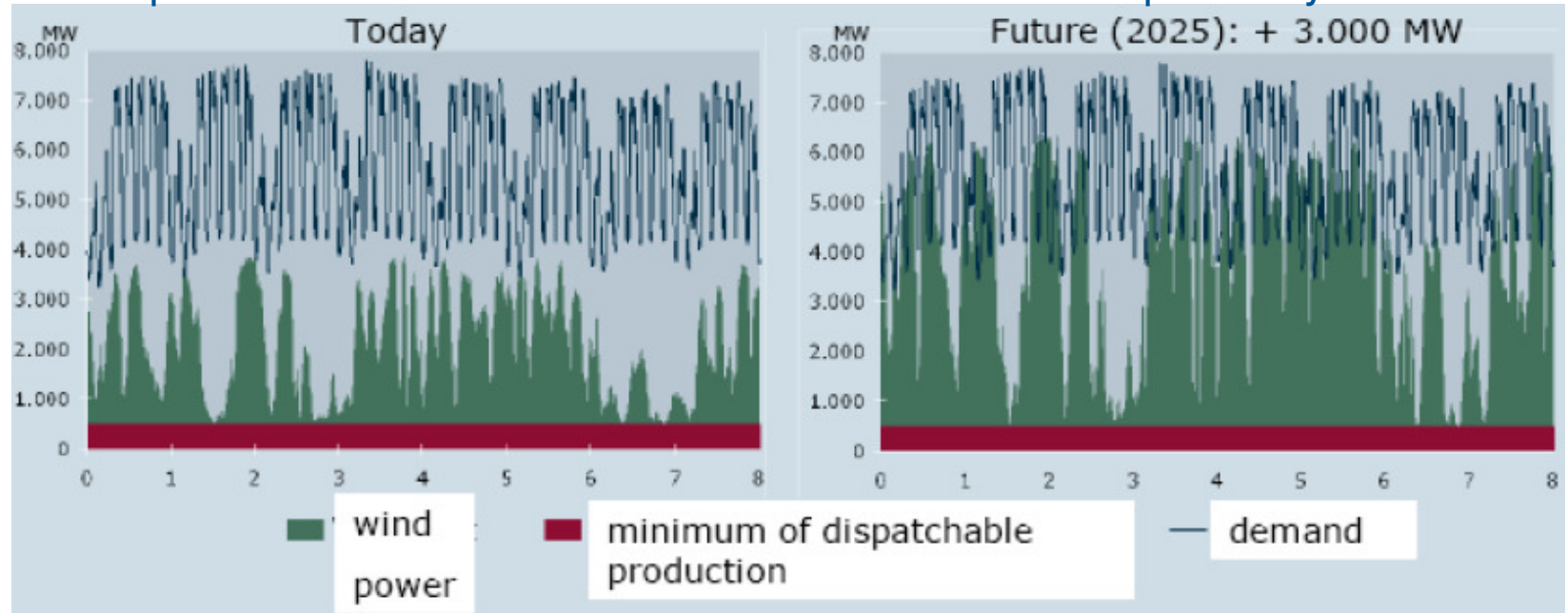
- A cost-effective deployment of wind power, and the integration of European electricity markets are fundamentally linked.
- The market's gate-closure time closer to real-time would have a dramatic impact on forecast accuracy and the cost of balancing the system as proven by various power system studies.

➡ EU-wide deployment of intra-day market trading with implicit auctioning and gate closure times as close to real time as possible is needed.

Why are functioning power markets crucial for the integration of wind energy?

The concern of the TSO:

Consequences of an additional 3000 MW on the Danish power system



Source: Energinet.dk

Optimal utilisation of both, domestic flexibility and international electricity markets is a prerequisite to maintain security of supply and maximise the value of wind power.

The way forward in market integration



Seven regional initiatives are promoted by regulators as a bottom-up approach complementary to top down tools (e.g. network codes)

National liberalisation ➡ Regional market integration ➡ A truly integrated European market

Recent example: Baltic Energy Market Interconnection Plan (BEMIP)



The BEMIP provides for the extension of the Nordic electricity market model to the three Baltic States along with new cross border transmission lines

BUT: An ambitious cross-regional integration roadmap is also needed.

A European Supergrid



What is needed from the European Regulators:

- A European approach towards an optimised European electricity system should be promoted.
- Acknowledge that a European Supergrid will be beneficial rather than costly for consumers.
- Design and implement schemes that favour investment decisions, and ensure a cost recovery for the investors, especially on cross-border projects, which require a more coordinated approach.
- Coordination is critical for tackling the challenges of potential distortions created by different interconnection and transmission regimes.



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Thank you very much for your attention

www.ewea.org

RENEWABLE ENERGY
HOUSE
63-65 RUE D'ARLON
B-1040 BRUSSELS

T: +32 2 546 1940
F: +32 2 546 1944
E: ewea@ewea.org