

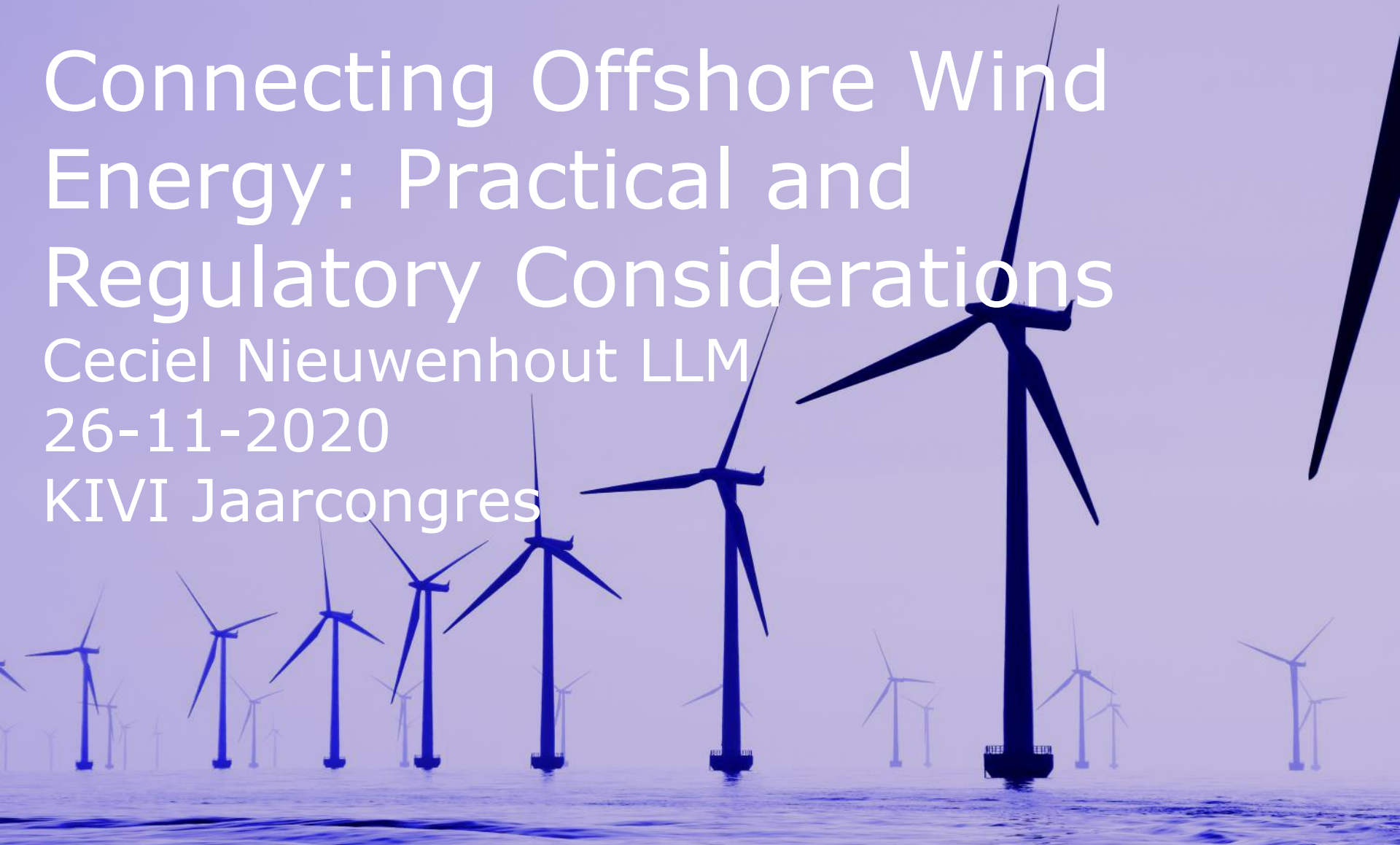


Connecting Offshore Wind Energy: Practical and Regulatory Considerations

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26-11-2020

KIVI Jaarcongres





Introduction

- My background
 - PhD on the legal framework for an offshore meshed grid; Groningen Centre for Energy Law and Sustainability
- About this webinar
 - Developments in the North Sea
 - Connect offshore wind?
 - Practical considerations
 - Regulatory considerations
 - Questions/remarks?



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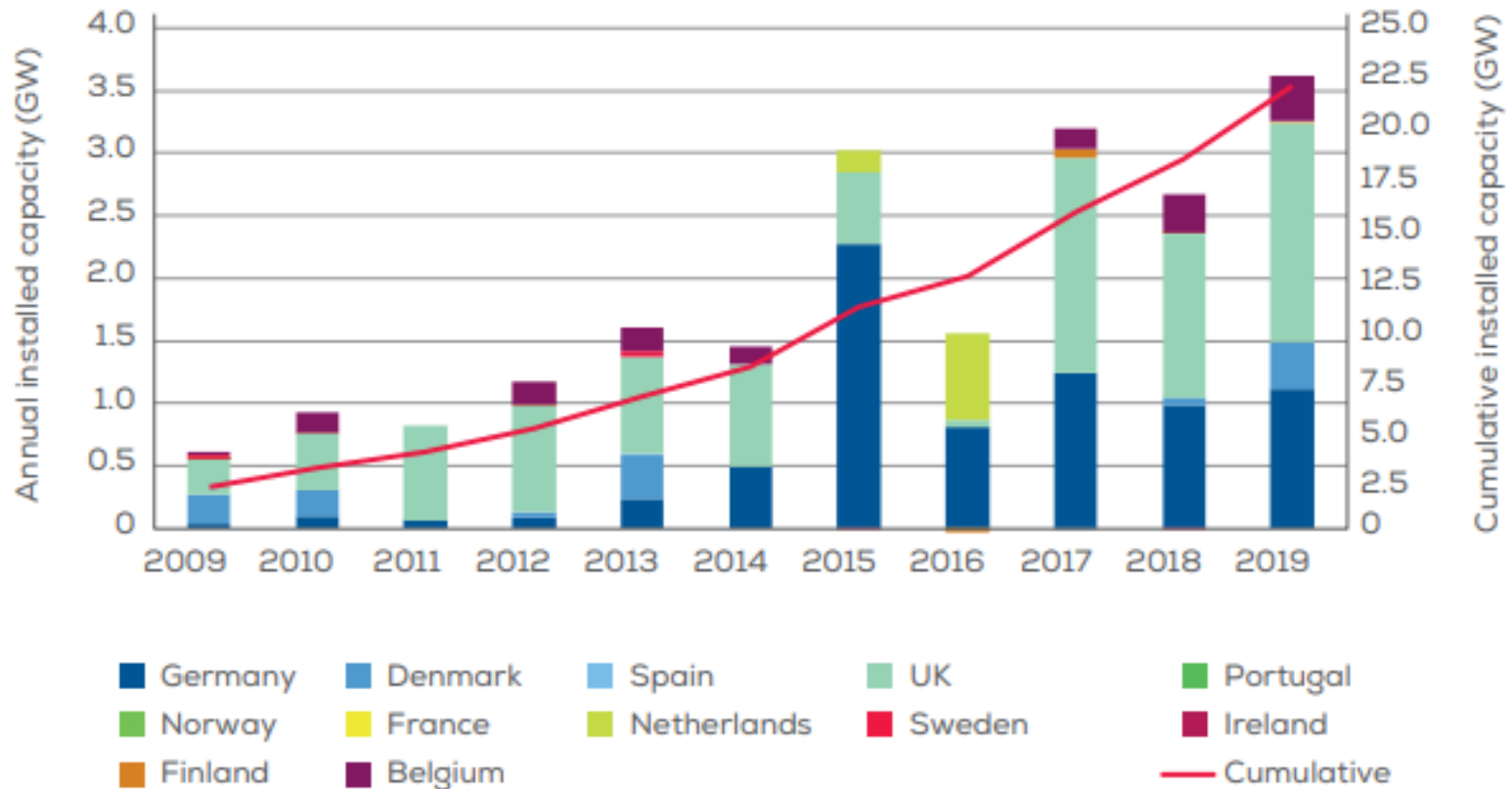
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Developments in the North Sea



Wind energy in the North Sea

Annual offshore wind installations by country (left axis) and cumulative capacity (right axis) (GW)





Interconnection Capacity

- > EU-wide targets: 5% to 10%
- > Coastal states: connect to the other side via submarine cables: interconnectors
- > The more renewable energy, the more valuable interconnection becomes



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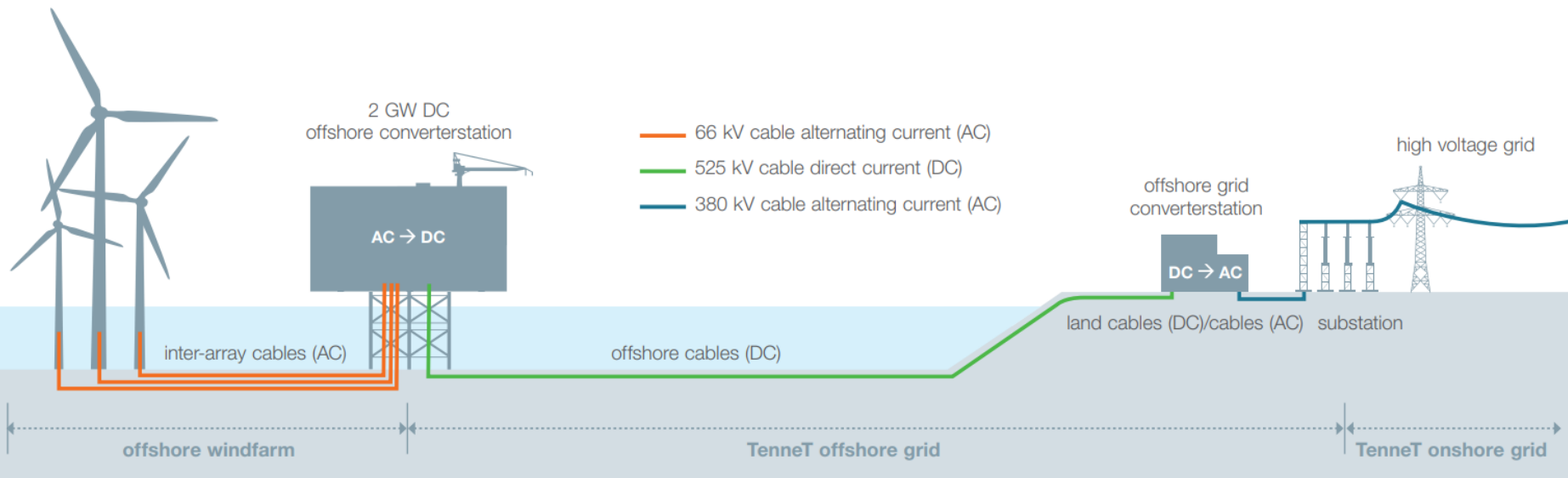


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Connecting Offshore Wind

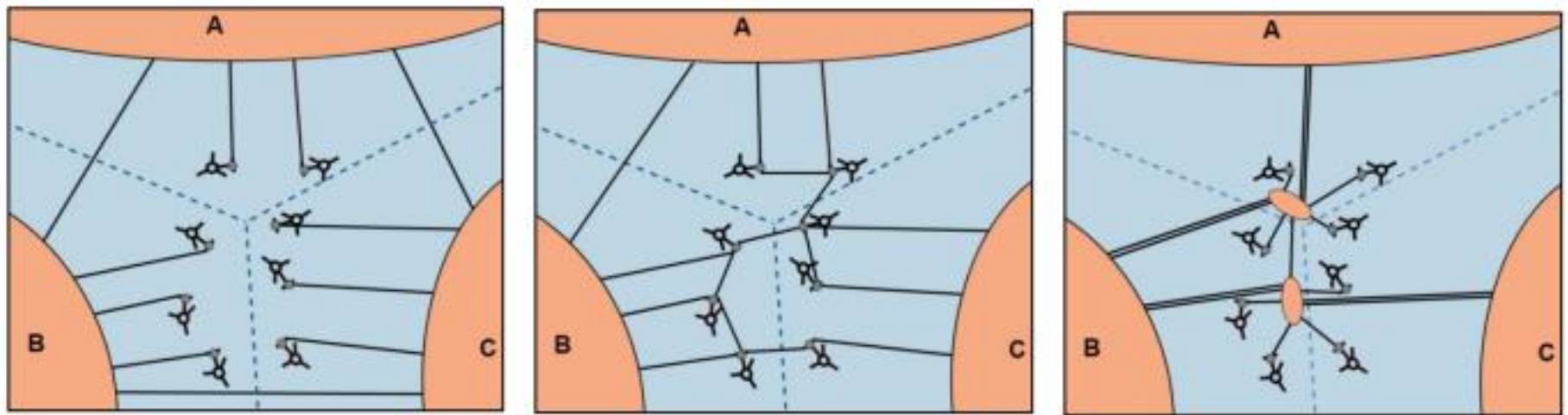


Radial connection



Source: TenneT TSO

Connection scenarios



> From radial to “meshed offshore grid”

> Source: PROMOTioN



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Practical Considerations



Practical Considerations:

- > How much wind can we connect?
- > Can we store the energy?
- > Support schemes for offshore wind
- > What to do at the end of the lifetime of the windfarms?



Regulatory Considerations

- What needs to be regulated?
- International Law and Jurisdiction
- How do coastal states cooperate?



What needs to be regulated?

- > Jurisdiction over the cables?
- > Governance of the grid
 - How do the coastal states cooperate and make decisions?
 - Economic & technical rules
 - Who can own the grid?
 - Grid expansion and long-term plans
 - Conflict resolution

International Law

- > Law of the sea: customary law and UNCLOS
- > Different zones – different legal regimes

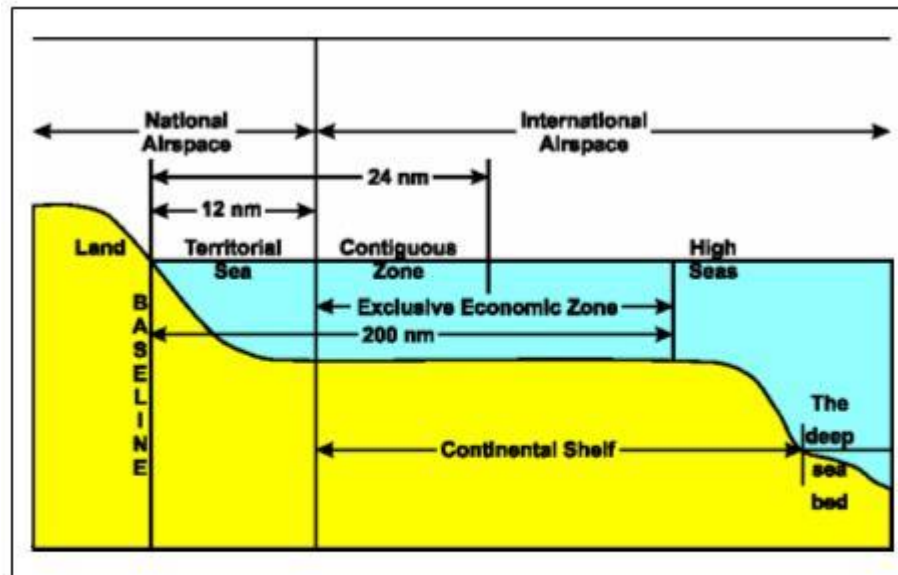


Figure 1 Maritime Zones
(Schofield, 2003: 18)



Different zones / functions

- > Territorial zone
- > Exclusive Economic Zone
- > Continental shelf

- > Freedom to navigate
- > Freedom to lay cables



Article 56 Rights, jurisdiction and duties of the coastal State in the EEZ

- > 1. In the exclusive economic zone, the coastal State has:
 - > (a) sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the seabed and of the seabed and its subsoil, and with regard to other activities for the economic exploitation and exploration of the zone, such as the production of energy from the water, currents and winds;
 - > (b) jurisdiction as provided for in the relevant provisions of this Convention with regard to:
 - (i) the establishment and use of artificial islands, installations and structures;

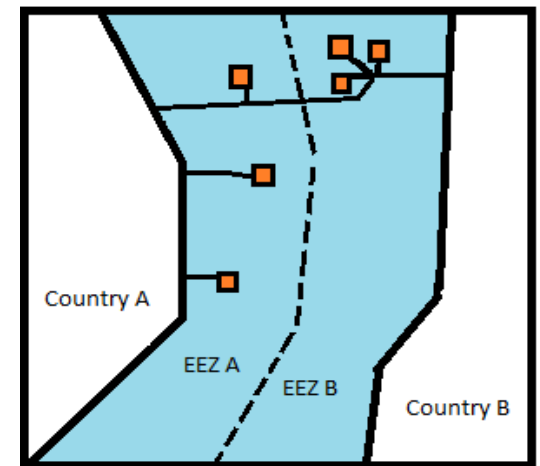
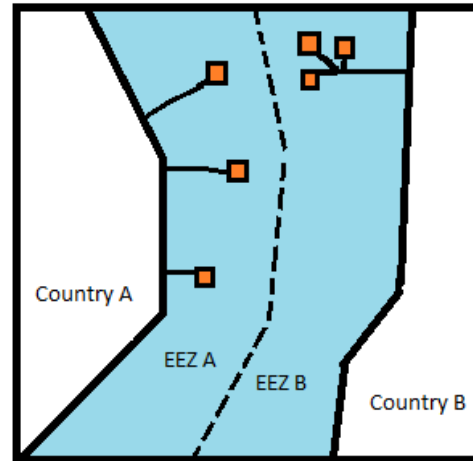
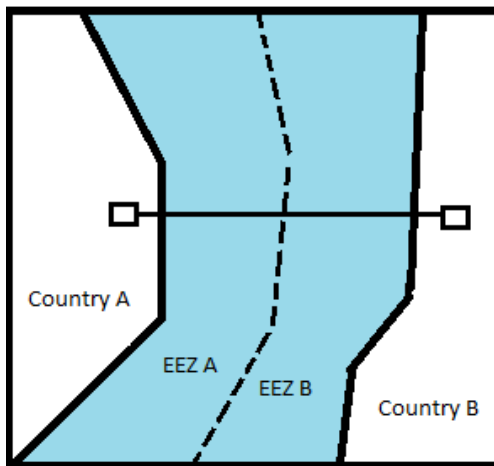


Article 79 Submarine cables and pipelines on the continental shelf

- > 1. All States are entitled to lay submarine cables and pipelines on the continental shelf, in accordance with the provisions of this article.
- > 2. Subject to its right to take reasonable measures for the exploration of the continental shelf, the exploitation of its natural resources and the prevention, reduction and control of pollution from pipelines, the coastal State may not impede the laying or maintenance of such cables or pipelines.
- > 3. The delineation of the course for the laying of such pipelines on the continental shelf is subject to the consent of the coastal State.
- > 4. Nothing in this Part affects the right of the coastal State to establish conditions for cables or pipelines entering its territory or territorial sea, or its jurisdiction over cables and pipelines constructed or used in connection with the exploration of its continental shelf or exploitation of its resources or the operations of artificial islands, installations and structures under its jurisdiction.
- > 5. When laying submarine cables or pipelines, States shall have due regard to cables or pipelines already in position. In particular, possibilities of repairing existing cables or pipelines shall not be prejudiced.



Different regulatory scenarios



Implications for jurisdiction AND for EU law!



EU Law

General organisation of the electricity sector

Electricity Directive

ACER Regulation

Regulation on cross-border exchanges

Renewable Energy Directive

State Aid and RES support schemes

REMIT

Offshore Windfarm Planning

EIA Directive

Strategic Environmental Assessment Directive

Maritime Spatial Planning Directive

Marine Strategy Framework Directive

Habitats and Birds Directives

Offshore Electricity Grid Investment / Construction

Trans-European Electricity Networks Regulation

Regulation on notification of investment projects in energy infrastructure

Inter-TSO compensation mechanism

Offshore Electricity Operation

NC on Requirements for grid connection

NC on HVDC Grid Connection

NC on CACM

NC on Forward Capacity Allocation

NC on Electricity Balancing



How to cooperate?

- > On the basis of EU law?
- > On the basis of international law?
- > On the basis of a **hybrid** form?
- > "North Sea Agreement" as a mixed partial agreement':
 - Coastal states & EU partipate
 - to address governance of offshore grid



Conclusion

Innovation (offshore wind, offshore grids) and high ambitions of the coastal states require updated regulatory framework!

From radial connections to offshore grid

Make sure all coastal states can cooperate in an offshore grid



Bonus Slide:

- > Would you like to learn more?
- > www.promotion-offshore.net
 - Deployment plan shows technical, spatial and regulatory considerations for a future meshed offshore grid
- > More legal/regulatory background:
 - Deliverable 7.1 on international law and a comparative overview of national law of the coastal states
 - Deliverable 7.2 on the mixed partial agreement, regulatory options for support schemes and how to deal with “hybrid assets”
 - Any questions: feel free to contact me per email: c.t.nieuwenhout@rug.nl



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2
3

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