

REGULATING AND FINANCING THE NORTHERN SEAS OFFSHORE GRID

PROMOTiON Stakeholder kick-off meeting, 29 June 2016, Brussels



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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 691714.



TODAY

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A FEW REGULATORY TOPICS

- ↗ Cross border grid planning: TYNDP 2016
- ↗ NSOG as “priority corridor”
- ↗ Importance of a CBA methodology
- ↗ Lack of framework
- ↗ Example in practice

FINANCING TOPICS

- ↗ Financing investments
- ↗ Financeability issues

THE PROMOTiON STUDY

- ↗ Study objectives
- ↗ Setup of the study

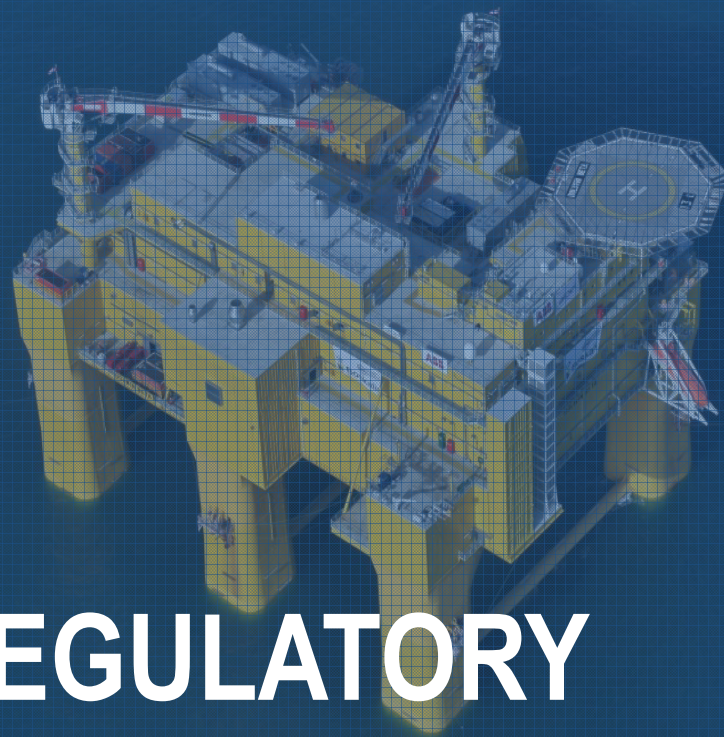


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A FEW REGULATORY TOPICS

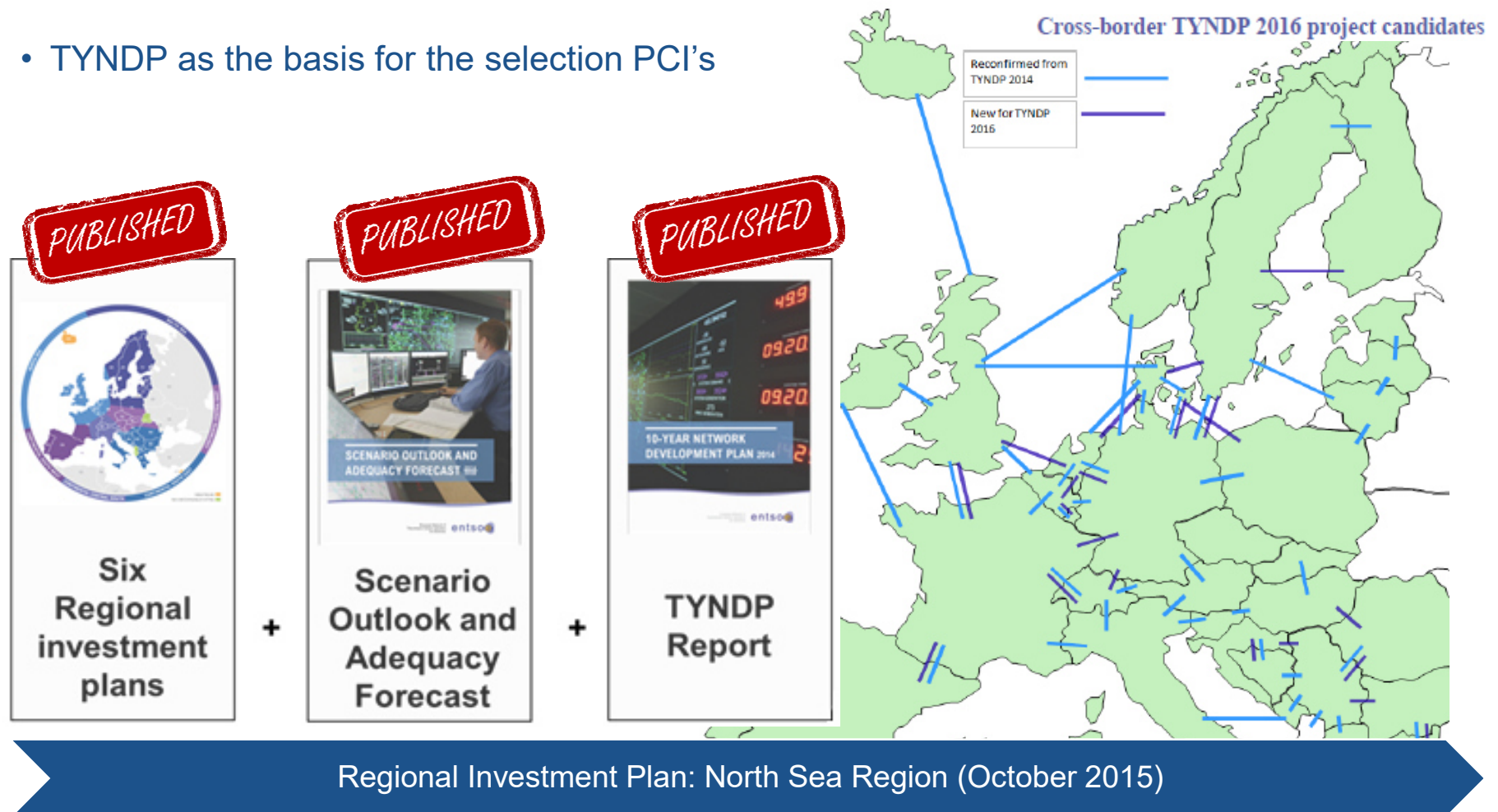


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Cross border grid planning: TYNDP 2016

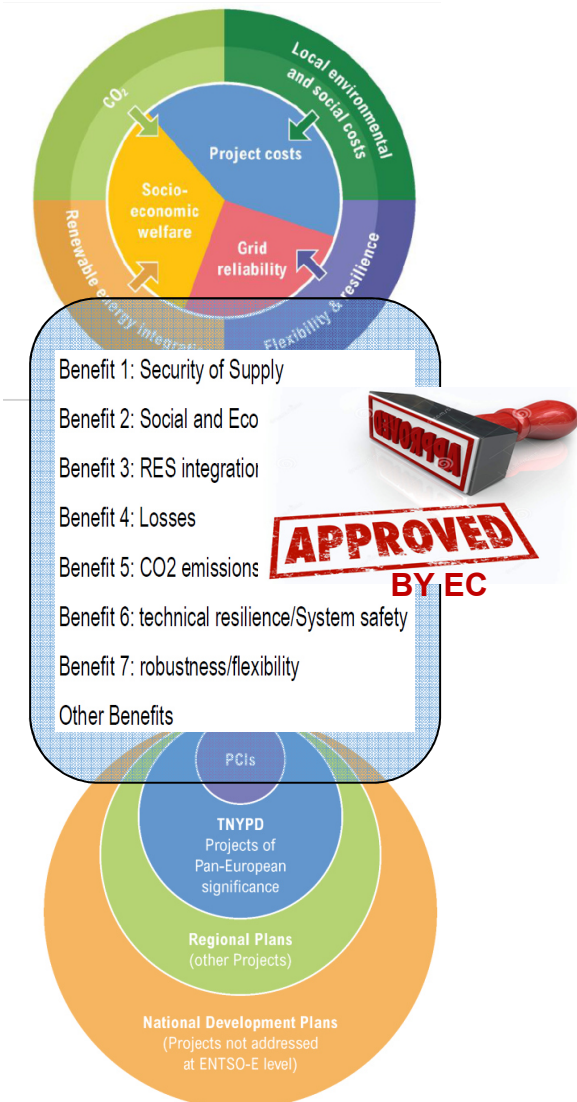
- Regional investment plans as foundation for the TYNDP 2016 (June 2016)
- TYNDP as the basis for the selection PCI's



Importance of a CBA methodology

- Approved Cost Benefit Analysis methodology represents the base for the CBA assessment for all the TYNDP 2016 projects
- However, further monetization (or valuation) of non-monetary benefits is becoming increasingly important (prevent double counting of benefits and guarantee objectivity)
- CBA as basis for cross border cost allocation (CBCA)
- Some guiding principles of current CBAs may be more/less relevant in case of a NSOG

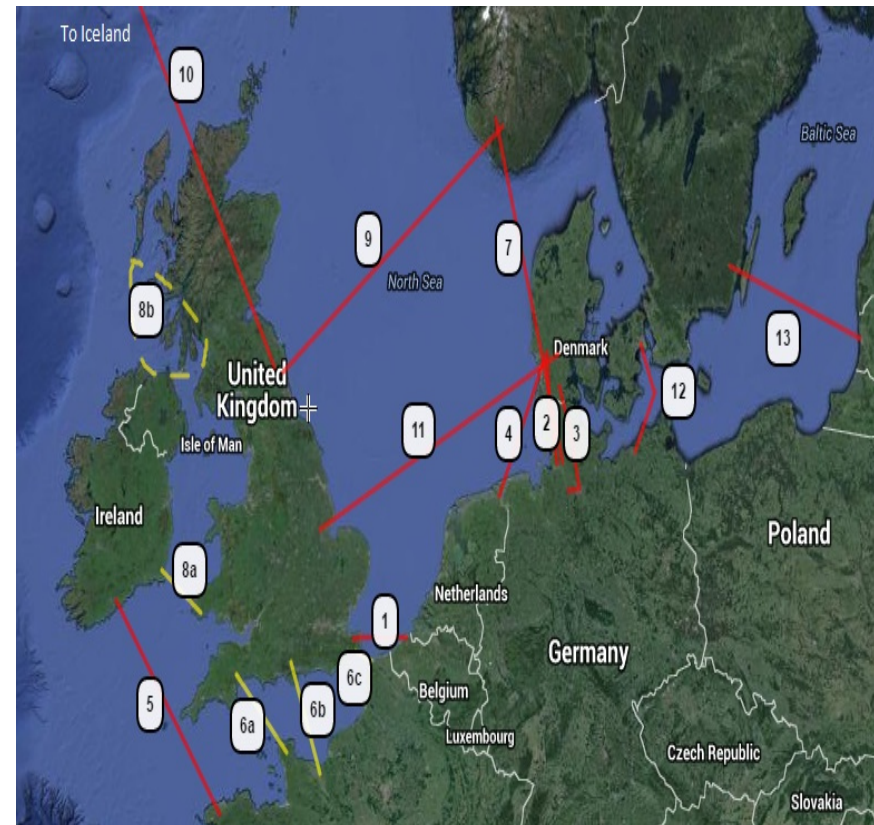
Status of Implementation	ENTSO-e 1.0 & 2.0	ENTSO-g	Smart Grid	Balancing
INPUT (1) Project interaction must be taken into account in the project and baseline definition	Multiple TOOT	Two baselines	No common baseline	Not applicable
INPUT (2) Data consistency and quality should be ensured	TYNDP	TYNDP	No common data gathering process	TYNDP
INPUT (3) Costs should be reported in disaggregated form	Not clear	Not clear	Not clear	Unclear
CALCULATION (4) CBA should concentrate on a reduced list of effects	Reduced list	Reduced list	50 KPI + 22 EPRI effects + other qualitative	Reduced list
CALCULATION (5) Distributional concerns should not be addressed in the calculation of net benefits	OK	OK	OK	OK
CALCULATION (6) The model used to monetise the production cost savings and gross consumer surplus needs to be explicitly stated	Explicit model available	Explicit model available	No common model	Explicit model available
CALCULATION (7) A common discount factor should be used for all projects	4% for all	4% for all	No common discount rate	Uniform; aligned with TYNDP & PCI; regularly updated
CALCULATION (8) A stochastic approach/scenario analysis should be used to address uncertainty	OK	OK	OK	OK
OUTPUT (9) Benefits should be reported in disaggregated form	Not clear	Not clear	Not clear	Regional and country effects should be reported
OUTPUT (10) Ranking should be based on monetization	MCA	MCA	MCA	Monetized ranking



NSOG as “priority corridor”

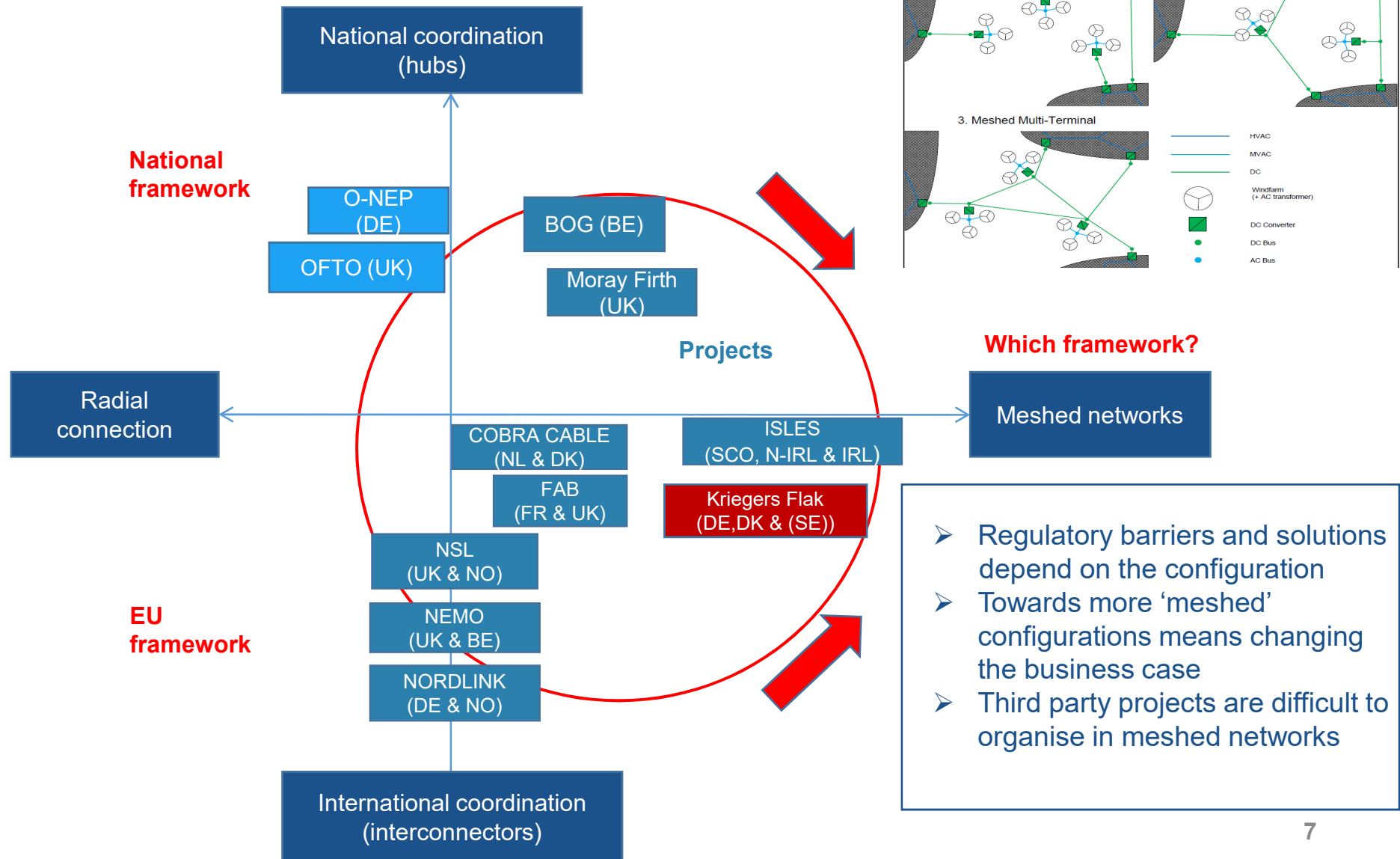
- **Key objectives:**
 - 1) maintaining the security of supply;
 - 2) a higher integration of the European energy market; and
 - 3) increasing integration of renewable energy sources (wind, solar and hydro) and as a result a lower CO2 emission
- PCI's eligible for **grants; fast permitting procedures; additional investments incentives** (via national regulators)
- Possibility to request for **cross border cost allocation** (via national regulators)
- So far, the focus has been on the regulation of **point-to-point interconnectors**

*An offshore meshed grid requires a framework suitable for **new configurations** (!)*

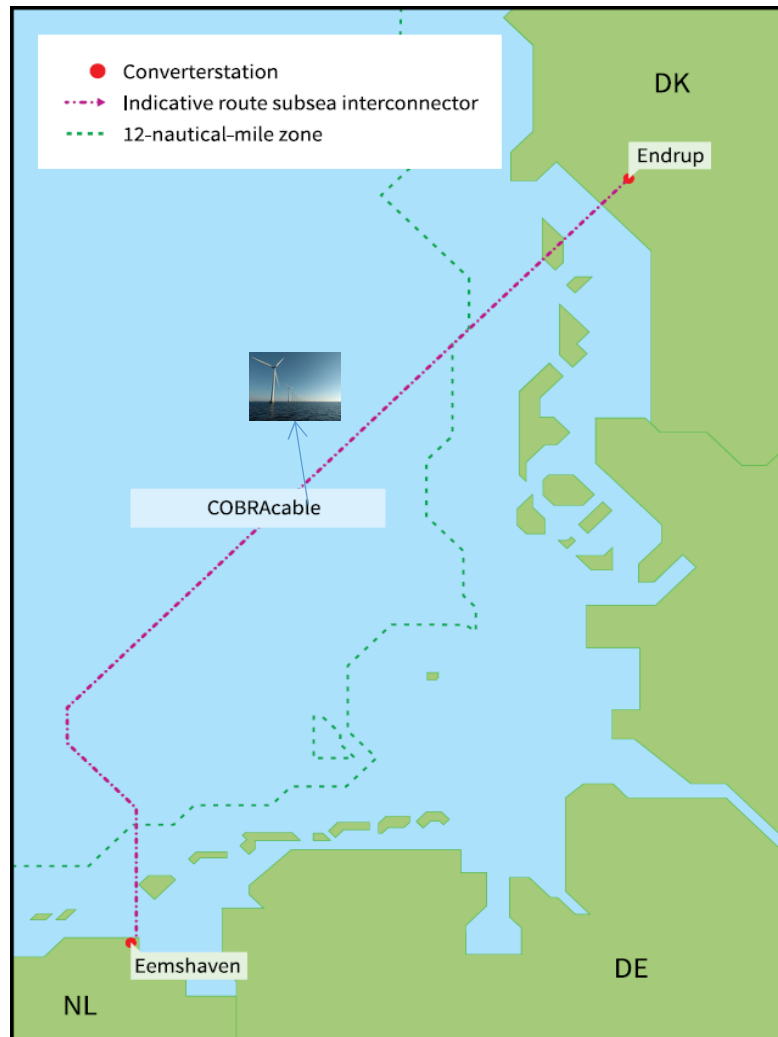


Union list of project of common interest (27/01/2016)

Lack of framework



Example in practice



Practical barriers

- 5 jurisdictions; each with several permits
- different regulatory regimes at both ends of interconnectors (cost treatment)
- possible connection of a German windfarm

**Project
business case
(negative)**



**Socio-economic
Business case
(positive)**

**Tension between long term objectives
(price convergence) and interconnector business cases
(built on congestion rents)**

Some obvious regulatory questions

- Status of asset? Which regulatory regime?
- Which support scheme is applicable?
- How is capacity allocated between wind farm generation and interconnection capacity?
- Who bears which costs?

FINANCING TOPICS

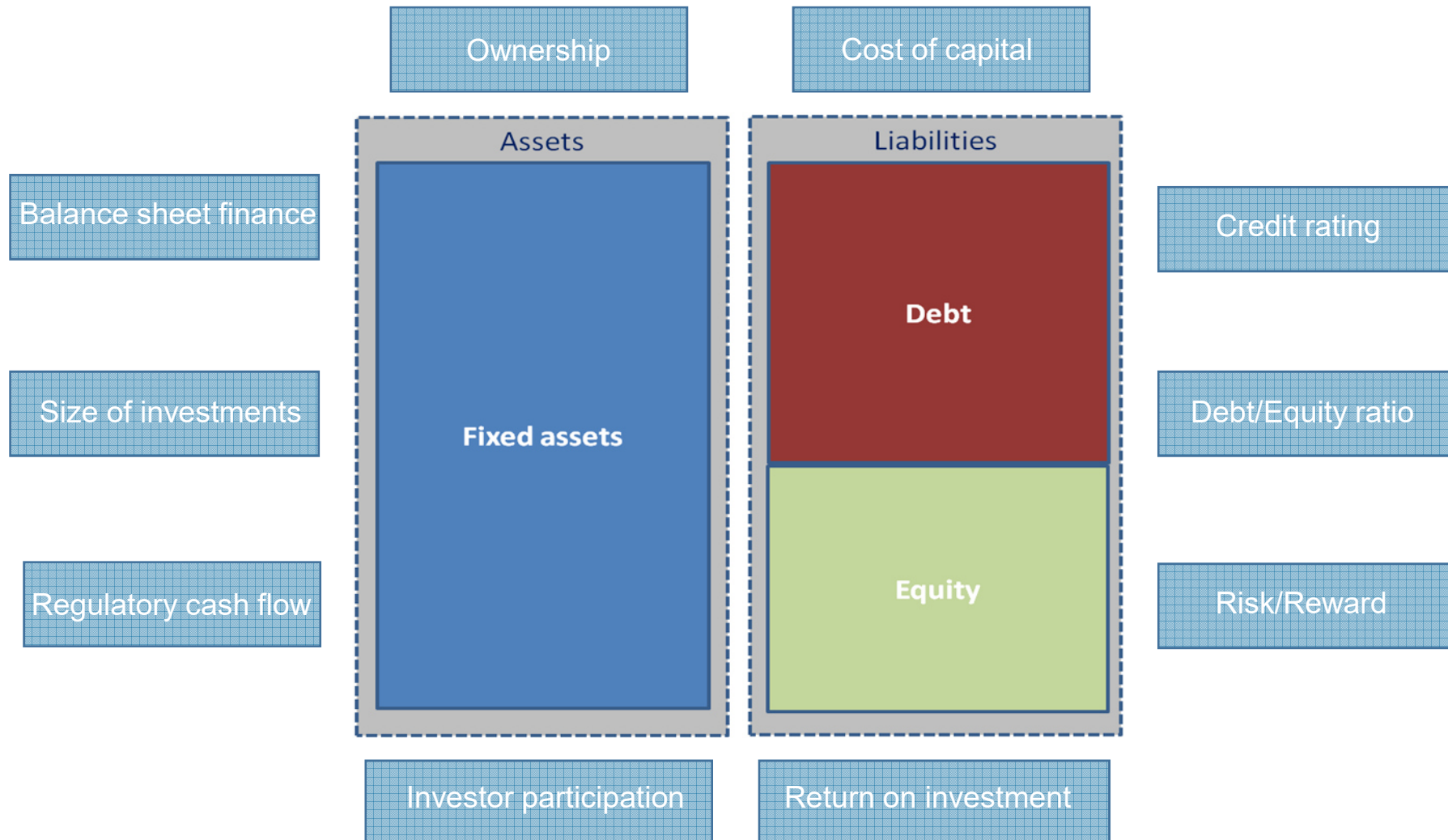


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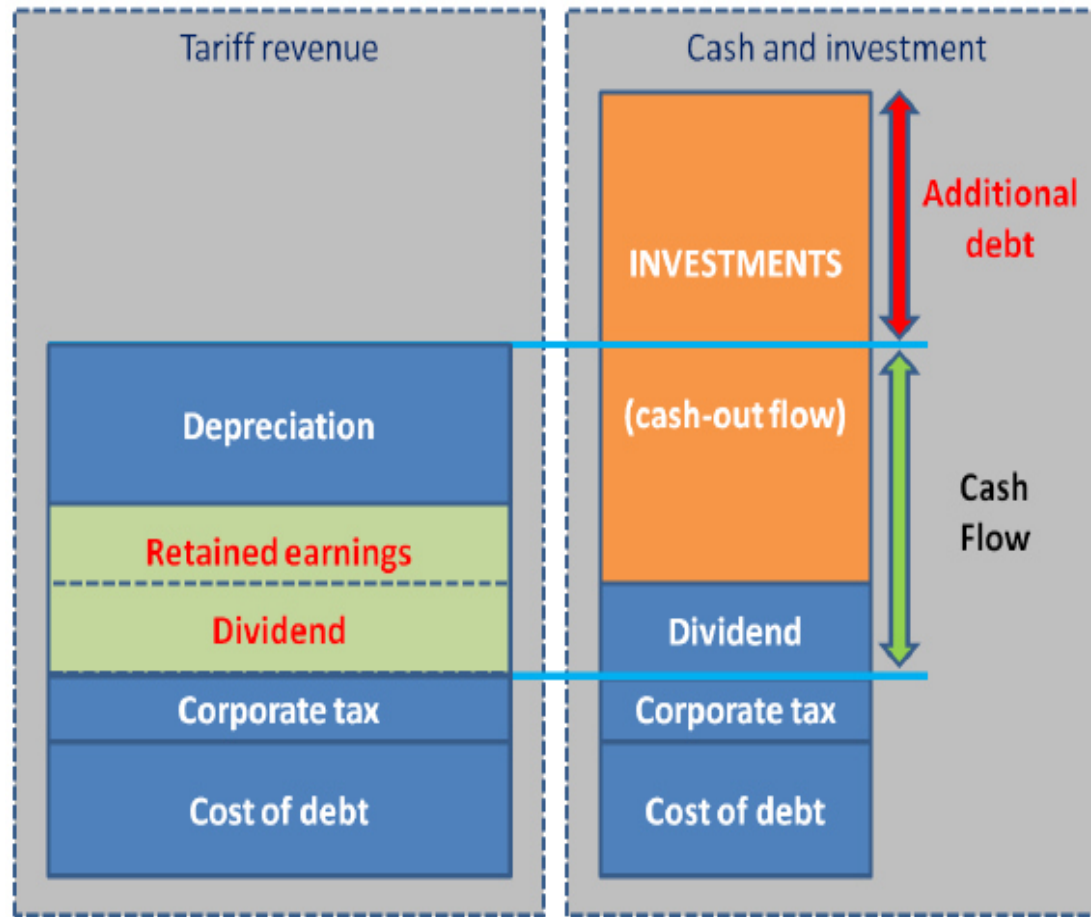
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Financing investments

Regulation has a profound impact on financeability



Financeability issues



- Most regulators look back and focus on short term cost reduction
- Regulatory cashflow is usually not sufficient to finance investments
- Additional capital (debt & equity) is required
- Increase in debt is limited due to requirements credit rating (cash flow and balance sheet ratios)
- Additional equity may be available however capital needs to be sufficiently remunerated
- Risks need to be in balance

Financeability constraints may lead to:

- higher cost of debt, resulting in higher investment costs
- lack of incentives, resulting in lower (anticipatory) investments

THE PROMOTiON STUDY

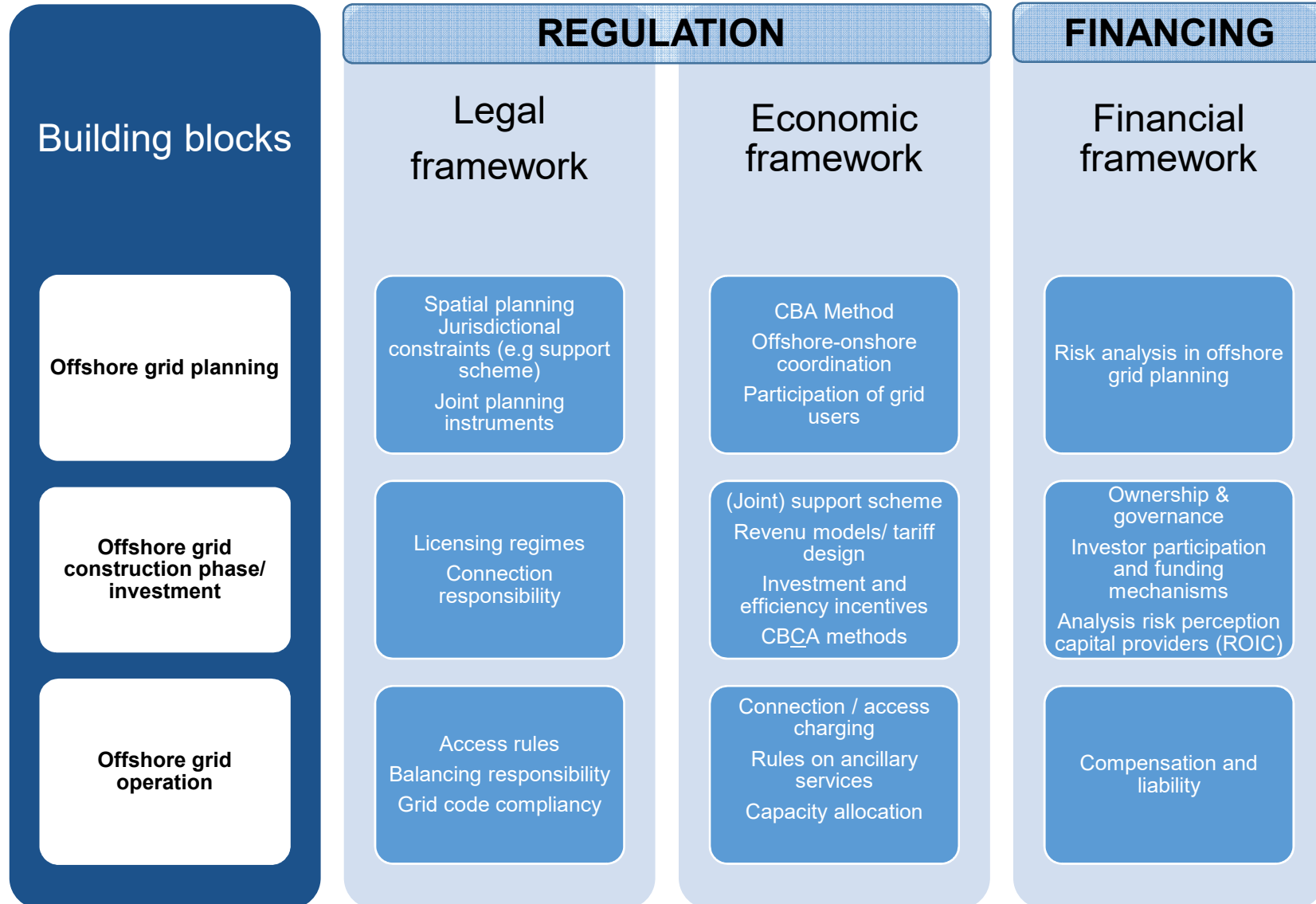


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Study objectives

- To develop the appropriate policy, regulatory and financial framework, tackling different regulatory and barriers with concrete solutions and recommendations
- This means:
 - legal certainty for investing parties involved and a clear allocation of responsibilities
 - effective and efficient coordination between infrastructure developers and wind farm developers
 - a stable revenue profile over the lifetime of the investment, matching the risks and the uncertainties of long term capital intensive infrastructural investments
 - ensuring financeability

Set up of the study



Discussion

- Which regulatory and/or financial barriers do you experience in practice in (offshore) cross border project development?
- What is important for you as a stakeholder that should be addressed in this study?
- Which topology? Which case studies are of special interest?