Policy co-ordination for a North Sea Grid

Challenges and possible measures from a Norwegian perspective

EERA DeepWind

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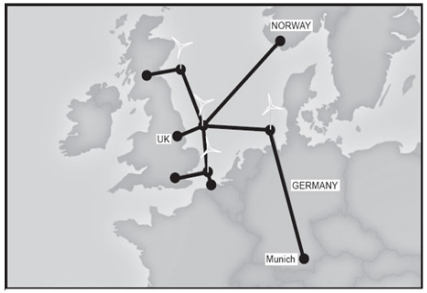
Jørgen K. Knudsen and Gerd B. Jacobsen

SINTEF Energy Research

Policy and Governance Unit

Contact: jorgen.k.knudsen@sintef.no

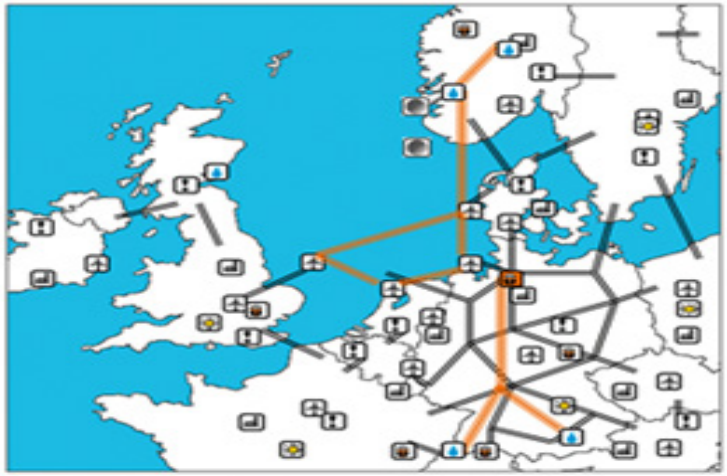
Background



NSON

North Sea Offshore and Storage Network

NFR finansiert pre-prosjekt 2014-2015



Main research questions

- *What planning and permitting challenges and benefits will occur as a result of moving towards an offshore grid solution?*
- *Which types of regulations and policy areas are necessary or desirable to harmonize or combine, and which organizations/institutions could be responsible for such development?*
- Radical vs. incremental shifts, and the need for a flexible infrastructure that can accommodate technological shifts and innovative processes. Coordination production-grid development.

Policy framework and societal acceptance

M. Wolsink / Renewable and Sustainable Energy Reviews 16 (2012) 822–835

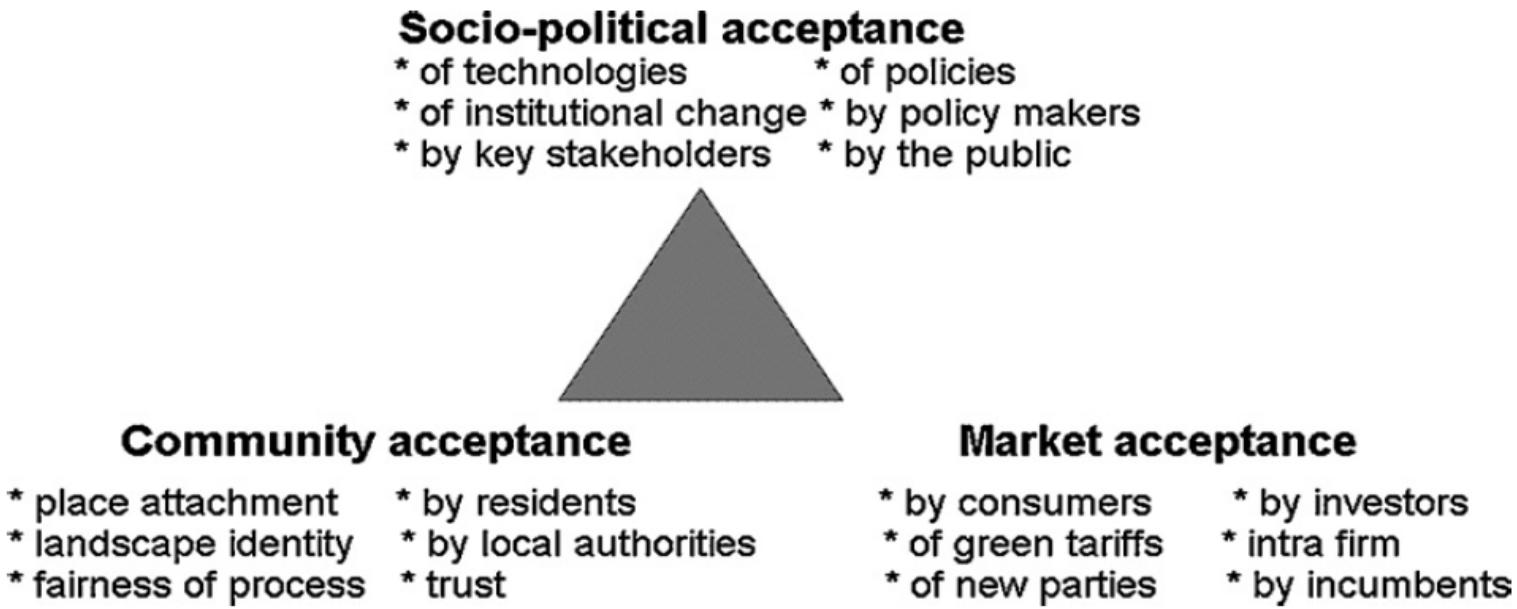
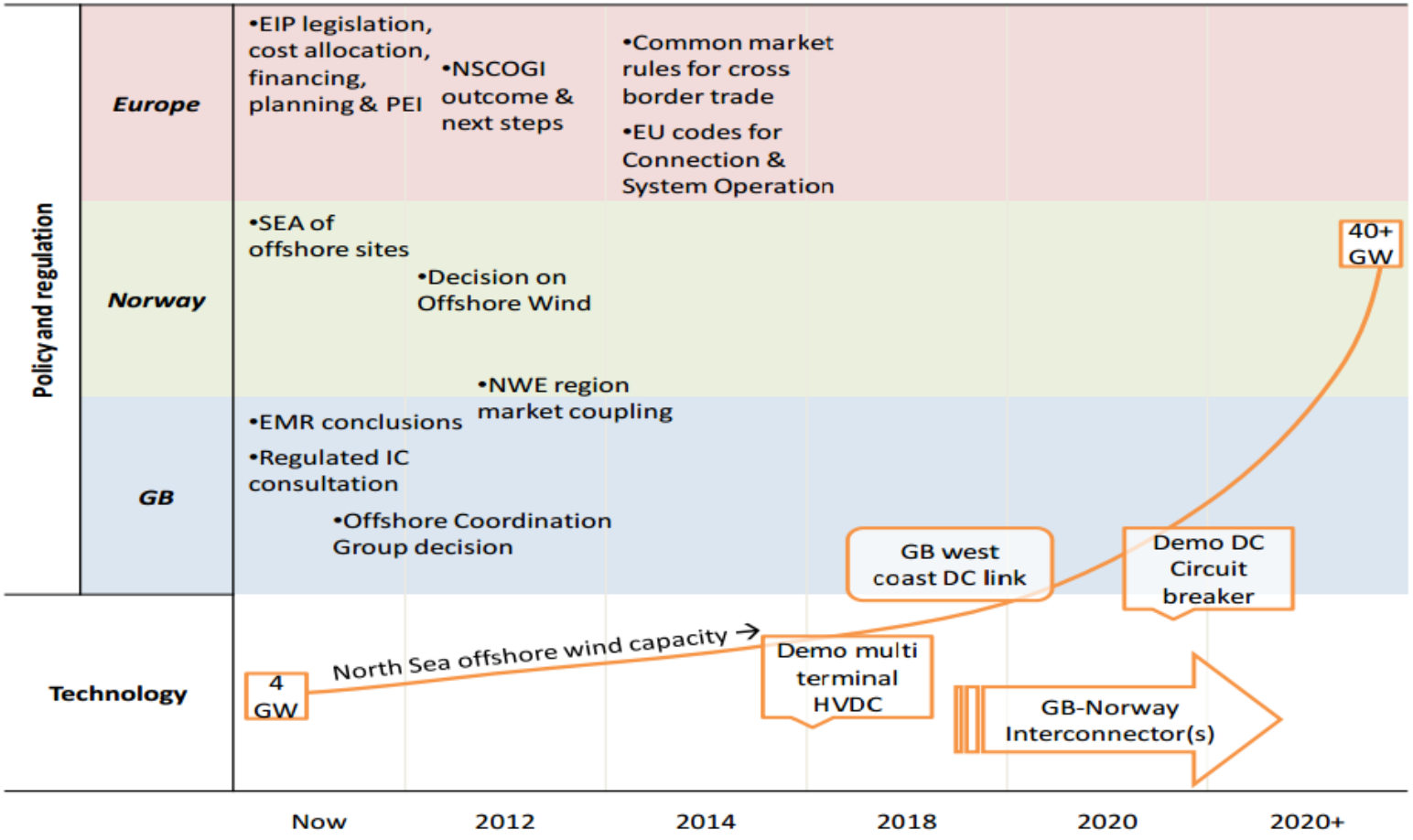


Fig. 2. Three dimensions of social acceptance of renewable energy innovations [54].

Policy development in Europe



EU level: Agencies and mandates

The North Seas Countries' Offshore Grid Initiative (NSCOGI)

Relevant policy processes at the EU level

- Energy infrastructure blueprint (2010)
- Priority corridors and priority projects
- ENTSO-E 10 Year Network Development Plan
- Projects of common interest (PCI)
  - Interconnector projects in the North Sea

- *EU regulation on facilitating permitting of common European projects (2013) (PCI): Focus on national permitting procedures*

➢ *Open question as to the effect of new EU climate-energy targets for 2030, and reinforced focus on energy security (European Energy Union under way)*

Norway: Institutional mandates and prospects for stronger international co-ordination

- Statnett – national TSO (national, but international outlook)
- NVE – national energy regulator (national, but international outlook)
- Enova – agency for renewable energy development and energy efficiency (national)

Current regulatory framework Norway, and prospects for international harmonization

- ***Permitting and licensing processes (national)***
  - Limited political involvement on overall priorities and initial planning
  - Societal acceptance and local level important; depending on the local context in question.
  - *The UK licensing system* is comparable with the Norwegian system, but there is more national political involvement in the priority process regarding alternative projects (planning phase).

- ***NordPool, and coming development of market design and couplings between European power markets (international)***

- ***Renewable electricity production funded by common scheme with Sweden (national-international)***

Relevant policy processes in Norway (1)

- No specific off-shore grid or wind power targets (yet) stipulated
- A specific off-shore energy act is adopted (2010)
- Scoping and pre-selection of feasible areas for off-shore wind power, conducted by Norwegian authorities
  - 15 feasible zones identified in a 2010 study.
  - SEA conducted for these zones (2013)
  - No projects notified thus far.
- However, little current political debate (parliament) on off-shore solutions, except the issue of land-based electrification of off-shore petroleum production.

Relevant policy processes in Norway (2)

- Two new interconnectors from Norway to UK and Germany resp. recently granted licenses (decision of 13.10.14, but appeal possible).
  - To be realized by 2018 (Germany) and 2020 (UK) and will provide increased balancing capacity from Norway

- Government has also stated an ambition of permitting merchant interconnectors, but no formal process has thus far been initiated.

- Eventual Norwegian interest for further connectors and offshore grid development will also depend on signals from European, recipient countries.

Societal acceptance as a challenge for common infrastructure?

- Recent assessment of stakeholders' positions towards a possible North Sea Grid (Midttun et al. 2012).
  - Perceived high costs and technological challenges seen as hurdles.

- Studies on landfall points in relation to interconnectors, cross-national comparison:
  - E.g. Hansen et al. 2011: Much debate and criticism, but less so in Norway than in other countries.

- Studies on 'on-shore' grid development (national grid):
  - E.g. Knudsen et al. forthcoming: Local scepticism towards export purpose of grid construction. At the same time, the way the public is involved is important.

➢ *Important to distinguish between political and societal acceptance of the vision and strategy, and the local acceptance related to landfall points and other locally visible consequences.*

Current potential for co-ordination and harmonization

- ***Joint scenario development feasible at an early stage***
  - Also include the business development, innovation and employment factors. Ensure strong linkage, and evt. support form the political level.

- ***Planning and coordination of grid development plans:***
  - Aware of related need for grid reinforcements nationally
  - Hence, the importance of a strong coordination between national and off-shore grid development plans.
  - Norwegian experiences demonstrate the importance of early public involvement.

- ***Stronger coordination of 'PCI' efforts possible:***
  - Could be facilitated by establishing related, national 'PCI's' with specific priority within the national licensing system, reflecting the EU PCI system.

Conclusion:

- **Challenges:**
  - Conducting permitting processes given the importance of the local context and different traditions and approaches to public engagement in the concerned countries.
  - Coordinating different national positions towards energy security, competitiveness and innovation in a common planning effort.

- **Benefits:**
  - Induce innovation nationally
  - Alleviate need for grid development on-shore
  - Contribute to common security of supply

- **Politically important to define a positive vision related to innovation, employment, security of supply. Dialogue policy-makers, scientific world, industry and the end-users nationally and locally is required!**