



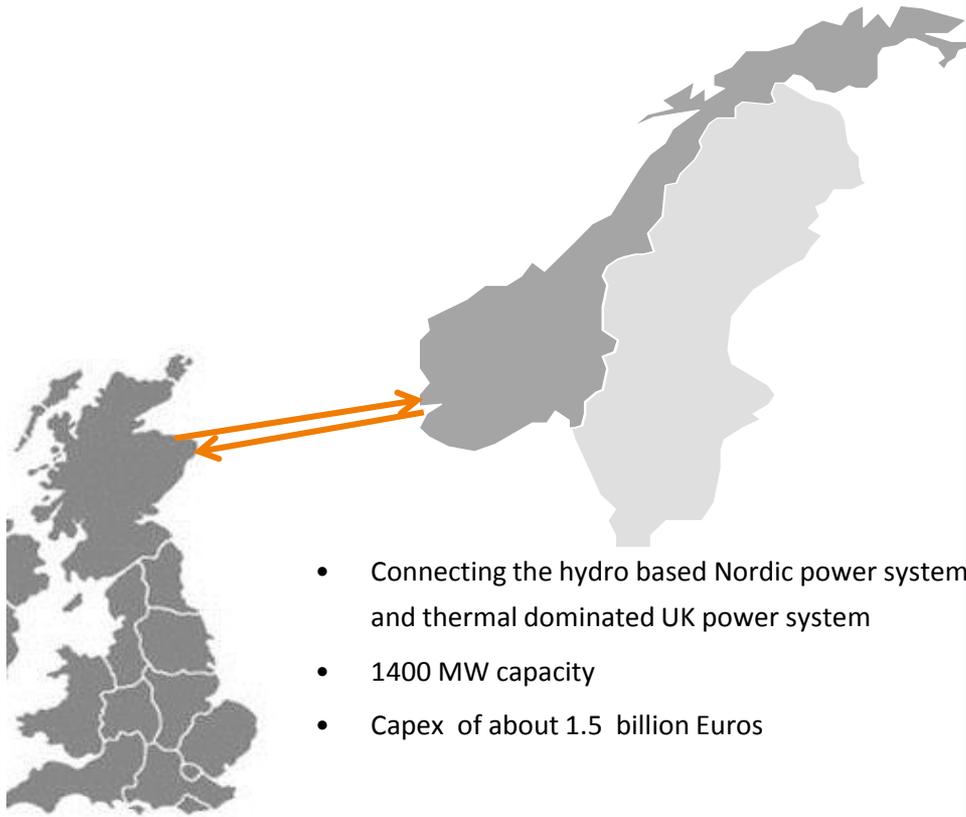
# Northconnect - A practical example of electricity market integration

Tommy Løvstad  
CEO of NorthConnect JV

«Electricity Market Integration – A North European Perspective»  
3rd of March 2015, Stockholm

# NorthConnect is developing a power interconnector between Norway and the UK

NorthConnect (NC) will enable a more efficient power system and improve security of supply in both markets as well as reduce emissions .



- Connecting the hydro based Nordic power system and thermal dominated UK power system
- 1400 MW capacity
- Capex of about 1.5 billion Euros

Strong industrial owners....



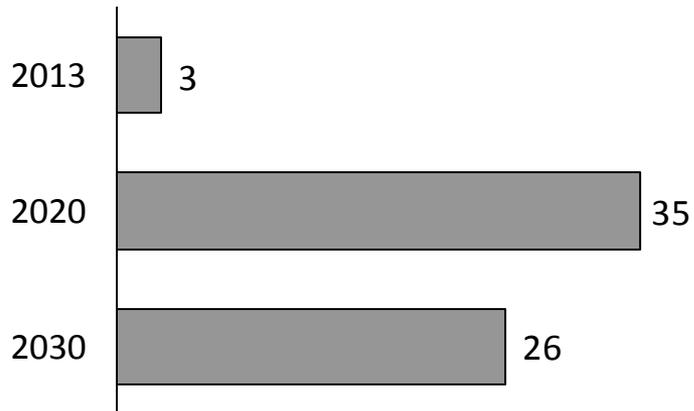
Efficient decision structure due to the owner structure

Owners with deep market knowledge

..and strong capabilities for developing large energy infrastructure projects

# The Nordic region is approaching a large power surplus situation..

## Projections of Nordic Surplus (TWh)



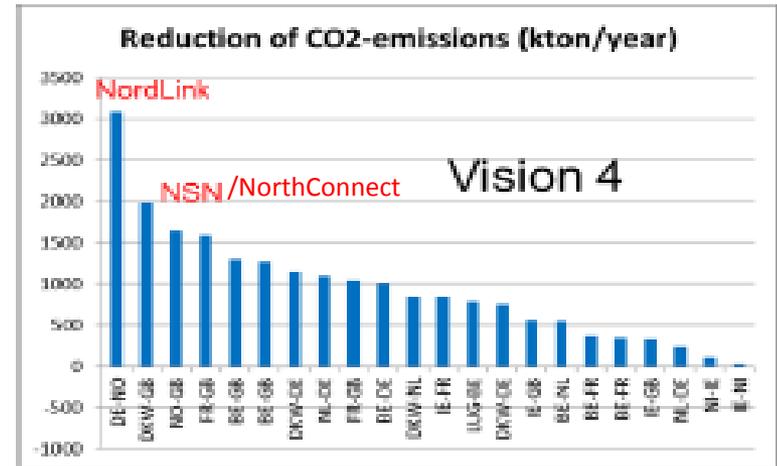
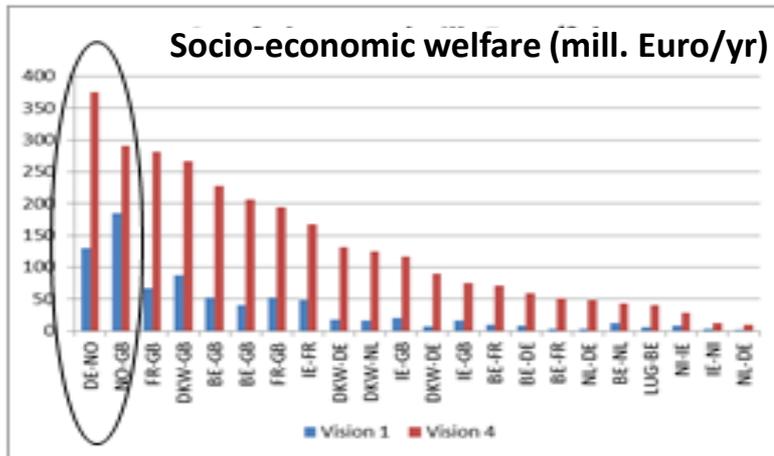
Source: Statnett presentation of key assumptions for Grid Development Plan 2015-2035 August 2014

## Surplus driven by renewable targets and weak consumption growth

- The ongoing work on Statnett's Grid development plan (2015-2035) has not included any new interconnectors after 2020 ...
- The lead time for an interconnector project is typically + 10 years
- Should trigger the need for a pipeline of interconnector options
- NorthConnect is the only interconnector option from Norway after 2020 and feasible to be ready for operation during 2022

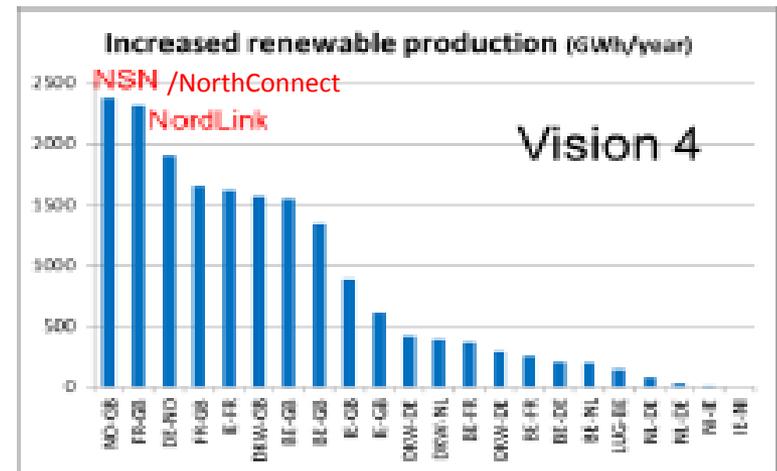
**Strong rationale for NorthConnect**

# NorthConnect has got status as a Project of Common Interest and is among the projects with highest score...



## Supported by numerous studies:

- OfGem/Poyry (Dec 2014) Cap and Floor - Initial project assessment for NSN
- National Grid & UK Govt (Apr-14), IC Report
- ENTSO-E (Mar-14), TYNDP14 Interim Results
- NorthConnect Modelling (Apr-13 to Mar-14):
- Stanett NSN (May-2013) Concession application
- DECC-Redpoint Baringa (Dec-13), *GB Interconnection:*
- DECC-Pöyry (Dec-12), *EMR & ICs*
- Thema (May-12), *Renewables & IC's Towards 2020*



**Strong socio-economic and climate case**

Source: PCI-assesment as part of TYNDP 2014 studies

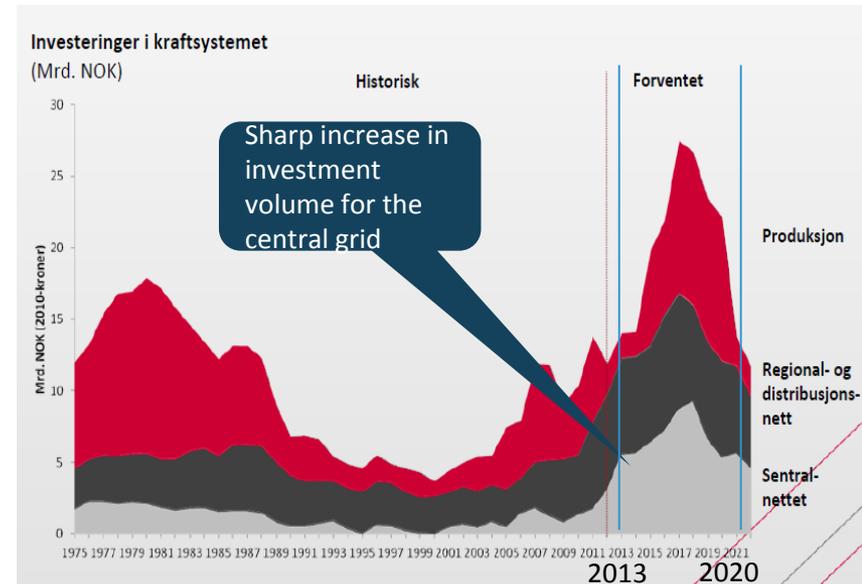
# Massive transmission investments necessary to meet European Energy policy targets ...

The scale of the investment challenge is large...

- EC estimates over € 200 bn of investment required in transmission projects by 2020
- Projections from TYNDP 2014 give an investment volume of €150 bn in transmission projects of 'pan-European significance'
- €50 bn relates to subsea cables - a boost for interconnectors

But will the TSO be able to deliver?

- Not certain that regulated TSOs will be able to allocate enough:
  - management time
  - resources
- 1 of 3 European transmission projects delayed<sup>1)</sup>...



Source: Statnett presentation Energy Days NVE Oct. 2012

Should trigger interest for 3rd party projects and private capital as supplements

... however, the appetite for merchant interconnectors seems to be modest in EU

Some exemptions approved but with reduced returns



- Exemption approved...
- ...but with capped returns at 1% above IRR
- Exemption approved...
- ...but share their return above a certain threshold

High administrative hurdles for merchant investment

- Considerable interaction necessary with national regulators
- Need to apply for exemption to meet a large number of relatively unclear criteria in relation to
  - Competition;
  - Ownership;
  - Technical



**EC should support merchant interconnectors as a necessary supplement to TSO interconnectors**

# EU targets, regulations and directives support NorthConnect, but there are some serious issues ....

## Key issues related to enhanced market integration

- The principle of subsidiarity in the EU means each member state develops its own processes and requirements under the overarching EU legislation
- Each member does it differently due to focus on national interests and priorities

## ...and associated implications

- The different national processes do not fit together and make cross-border interconnector development extremely complex
- The major initiatives are happening on a national basis:
  - UK Electricity Market Reforms
  - Cap and floor in UK
  - Nordic Green Certificate Market....
- The different national initiatives may end up going against the aim of enhanced market integration

#EnergyUnion

# UK government is generally very supportive for IC and NorthConnect, but we face a liability challenge ...

## Key issues in UK

- Huge underwriting liabilities for grid reinforcements

## Evaluation

- Potential huge underwriting liabilities due to unrealistic grid reinforcement assumptions
- Creates unnecessary risk and prevents development of cross border interconnectors
- The principles of 3<sup>rd</sup> package mean that the grid should be facilitating the flow of the cheapest power
  - The TSO should be giving priority to the cheapest sources of power when there are grid constraints
  - That means that the Interconnector may displace more expensive UK generation

# But the really hard obstacles come from Norway...

## Key issues in Norway

- The former government decided to amend the Norwegian Energy Act and created an interconnector monopoly for Statnett SF
- The new government promised to repeal this monopoly, but has not indicated any timeline ...



- Interconnectors from Norway have to be granted a Foreign Trade Licence (FTL) pursuant to the Norwegian Energy Act
  - criteria lacks transparency
  - fully dependent upon input from the TSO

## Evaluation

- The Minister has confirmed that the government will repeal the interconnector monopoly
  - However, MOPE has also stated that there is a need for operational experience with the new interconnectors and capacity studies first..
  - This creates uncertainty for the further development of NorthConnect
  - Crucial for NorthConnect owners to get a timeline for the repeal of the interconnector monopoly
- 
- Lack of transparency in the FTL process and conflicts of interest with the TSO as project developer are major concerns
    - Implementation of the 3rd Energy package will improve this concern, but no timeline is defined

# Conclusions..

Strong socio-economic and climate case for NorthConnect

- Among the top ranked interconnector projects by the EU assessment of Projects of Common Interest...
- both from a socio economic welfare as well as climate perspective
- .... and NorthConnect provides the same socio economic welfare as a TSO interconnector

But further development hampered by...

- Each member state develops its own requirements and processes under the overarching EU legislation without distinct requirements and harmonised EC processes for cross border Interconnectors
- Lack of EC support for 3<sup>rd</sup> party projects as a necessary supplement
- Potential extremely high liabilities in UK due to unrealistic grid reinforcement assumptions

...and risk to be blocked by slow repeal of the Norwegian interconnector monopoly

- Lack of clarity about timeline for repeal of the interconnector monopoly
- Potential grid constraints in the domestic grid should not be a valid reason for blocking development of new cable options beyond 2020, but be addressed in the new Norwegian Grid Development Plan (2015-35)
- A timeline for repeal of the interconnector monopoly is necessary to secure further development of NorthConnect

- 
- **NC will provide benefits to the citizen of EU and Norway**
  - **A swift removal of barriers should be supported by the industry and politicians**

## Contact details

Tommy Løvstad

CEO

NorthConnect JV

Email: [tommy.lovstad@northconnect.no](mailto:tommy.lovstad@northconnect.no)

Mobile: +47 971 77 845

