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# Engineering the politics of Europe's energy transformation – what will it take?

*Leiv Lunde, Director , FNI*

The Energiewende – is there a Nordic way?

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# My task is ambitious

‘Engineering the politics of Europe’s energy transformation – what will it take?’

Or rather?

‘A few humble thoughts on Europe’s daunting energy challenges from a small country outside the European Union’



# Where I come from

- Independent social science/international law research institute based in Oslo, Norway
- Effective and responsible management of natural resources – international level
- Main research areas:
  - European energy and climate change policies
  - Management of Arctic natural resources
  - Russian and Chinese energy and environmental policies
  - Biodiversity and genetic resources
  - Ocean and fisheries management
  - Effectiveness of international environmental cooperation



# Structure of presentation

- The Nordic model – relevance to energy and climate change
- The role of Norway – frozen fossil or dynamic player in new energy age?
- The merits of Germany and Europe's achievements so far
- Political barriers to green energy transformation
- Input to political strategy for the future



# Is there a Nordic energy model?

- Nordic countries differ in significant ways
  - Each offer unique contributions to Europe's energy and climate change equation
- Integration of electricity markets source of inspiration across countries and continents
- Trust-based political systems a good starting point for radical energy change
- Nordic ability to formulate and implement ambitious energy strategies
- Heritage and current surplus status demands much of Nordic energy strategists – are we up to the challenge?



# Norway, an energy nation

- Norwegian characteristics:
  - The world's second largest gas exporter and seventh largest oil exporter
  - Provides Germany, France, UK with 25-30% of their gas imports; second only to Russia in Germany
  - Major player in the emerging Arctic energy adventure, and NCS gave major new finds in 2011 / 2012
  - Key European player also in hydro power; half of Europe's hydro reservoir capacity; Statkraft Europe's largest renewable energy company
  - Provides important «green battery» functions to Denmark, the Netherlands and soon Germany and UK
  - The world's (second?) largest sovereign wealth fund, currently at USD 600 billion
  - The world's largest Oil for Development Programme



# The Norwegian achievement

- Norway hailed as model in new Canadian report on resource politics & governance
  - «The nine habits of highly effective resources economies» (Canadian International Council, October 2012)
  - «Norway is a model for Canada, indeed for any country that wants to find out how the proceeds from winning the geological lottery can be used for the best, long term interests of its citizens»
- Relevance for European energy challenge
  - The ability to set goals and muster the whole society behind comprehensive strategy for how to make petroleum a blessing and not a curse for Norway



# The Norwegian challenge I

- Norway 2012 to 2030 to 2050: part of the problem or part of the solution?
- Norwegian contributions to Europe's sustainable energy transformation:
  - Continue long term gas sales to Europe, in support of Europe's efforts to reduce coal consumption
  - Incentivise world leading low carbon performance across full range petroleum production cycle
  - Invest heavily in CCS, nationally but also in Europe and globally
  - Work to eliminate gas flaring and to minimise emissions from Arctic energy production (black carbon)





# The Norwegian challenge II

- From petroleum partner to sustainable energy partner for Germany/ Europe?
  - Already major clean electricity provider to Northern Europe
  - Strategy to provide «green battery» functions to Germany, UK and Europe more broadly
  - Implement EU's renewables directive; green certificates
  - Exploit comparative edge in support of offshore wind
  - Mobilise capital through sovereign wealth fund?
- Europe key in present and even more so in future Norwegian energy strategy
  - Not sufficiently appreciated in Norway today



# German/European leadership

- German contributions to energy transformation:
  - Germany a leading renewable energy industry player
  - Impressive long term low carbon strategy
  - Energiewende sustains German low carbon ambitions
  - But major obstacles ahead – is coal making a return?
- EU's pioneering role in integrating energy and climate change
  - EU continues to be driving force for low carbon future
  - ETS in rough weather today, but hugely important
  - Moved climate concerns from PR office to boardrooms in key European industries



# Barriers and bottlenecks I

- Energy & climate outlook per October 2012  
– where is the good news?
  - Global emissions increasing , coal makes a «return»
  - New oil & gas bonanza – can anything stop/limit the exploitation of new fossil fuel provinces/sources?
  - Global negotiations stalled, low expectations for Doha
  - Looming trade wars over renewable energy
  - CCS stumbles ahead, setbacks and limited progress
  - Financial crisis axes renewables support schemes
  - ETS in rough weather as carbon price sinks further; and is undermined by renewable subsidies (?)
  - Voters/consumers get frustrated and confused



# Barriers and bottlenecks II

- Why global Energiwende is so demanding
  - Fossil fuel sources ready for harvesting are
    - already far beyond the goal of 2 percent degree warming
  - Who can stop the fossil fuel supertanker?
- Impressionistic example of barrier:
  - Apple earned net income of \$25,9 billion in 2011
  - Apple's property, plant and equipment worth 7,8 billion
  - Exxon earned net income of \$41,1 billion in 2011
  - Exxon's property, plant and equipment worth \$215 billion
- Where will energy innovation come from?
  - («the ancien regime will not abdicate without a fight)



# What will it take?

- A robust emissions reduction platform
  - Sustainable crisis consciousness is needed – but a contradiction in terms?
  - Continue investing in credible science and science/politics interfaces
  - Fairness and effectiveness favours targeting carbon consumption and not production (?)
  - Acknowledge current crisis of confidence in climate regimes – new thinking needed
  - Stay the course on market-friendly reforms
  - Embrace China, resist protectionist pressures



# What will it take? II

- Progressing towards a low carbon energy path
  - Get serious on coal to gas transition – reform electricity and ensure predictable policy frameworks for gas
  - Accelerate CCS investments, but be frank and humble about costs and other uncertainties
  - «Lines of contention» – paradigmatic change of speed needed in building cables and transmission lines
  - Don't panic, but no place for complacency over current ETS system crisis – time to rethink the carbon tax option?
  - Support current renewable technologies in ways that do not lock them in and deter essential new developments
  - Invest massively in new research and technology development – current technologies do not add up
  - energy/communication technology, improved battery functions, electrification of transport, new electricity generation technology



# What will it take? III

- The politics of sustainable energy transformation
  - It's about people, consumers, voters – prioritise vision, honesty, transparency, consultation
  - Be honest about uncertainties, costs and trade-offs – there is no free low carbon lunch
  - Be tough and brave on the NIMBY phenomenon – transmission lines are beautiful and sexy !!!!
  - Invest in global climate diplomacy /confidence – find new ways of engaging Chinae and the other BRICS

