

Deputy Minister Ms. Liv Monica Stubholt's speech at the First Annual Offshore Wind Conference Westbury Hotel, Dublin, Ireland, September 12th 2008

- Norway is endowed with rich natural resources, including energy resources – oil, gas, wind and water. 99 per cent of our electricity production is based on hydropower, which puts Norway in a unique position when it comes to renewable energy. 62 per cent of Norway's energy consumption is covered by renewable energy.
- But we still need to do more to meet the climate challenges. We need to make changes to our national transport sector and the way buildings are heated. We need to be more energy efficient, and we need to develop more green renewable energy, not only to meet Norwegian targets, but also to assist our fellow European colleagues in meeting their ambitious targets in the future.
- In Norway there is a broad political agreement to boost national climate efforts. A cross party agreement on climate policy was signed at the beginning of this year and is a sign of Norway's willingness to move forward the target year for becoming carbon-neutral from 2050 to 2030. The agreement also means that Norway can pursue a long-term climate policy that is not affected by changes of government.
- My vision is that Norway shall become an even larger supplier of renewable energy to Europe. This implies using the Norwegian Continental Shelf as a lab for offshore wind turbine testing and deployment. The ultimate goal is to develop offshore wind farms for large scale electricity production.
- Based on our unique position in hydropower, where we have almost 50 per cent of the reservoir capacity of Europe, I believe that Norway can contribute with an increased share of peak power to balance the European market. This matches the vision for wind development, and I would go so far to say that the intermittent wind power production needs the flexibility of the reservoirs to meet the needs of the European electricity-market. This will be an important contribution in order for the European Union to reach its ambitious goals of 20 per cent renewable energy by 2020. Market mechanisms that should accommodate this and put a premium on peak-power capacity must be further developed. I strongly believe that this could be a valuable Norwegian contribution to the climate solution.
- My vision of Norway as an exporter of "green energy" is shared with the national high level advisory group on energy, constituted by the key actors in the Norwegian energy sector. The subgroup they established delivered a report to the Minister of Petroleum and Energy in May. The report concluded that there was a huge potential for developing offshore wind resources in Norway.
- The report envisages a considerable need for investments to reach ambitious targets in 2025 with respect to new installed offshore wind capacity (5000 – 8000 MW). The

report also highlights the different challenges that must be overcome if offshore wind is to be realised on a large scale.

- The situation in Norway differs from some of our neighbouring countries. We still have space onshore for wind projects. Also, the deep waters outside the coast of Norway limits the possibilities of wind turbines located on the seabed, compared to other North-European countries. As a response to this the Norwegian industry has launched several models of floating wind turbines, located in deep waters where the conflict potential is lower and the wind conditions are excellent. This is still an immature technology, which implies higher costs, and will only be viable some years into the future.

Technology & R&D

- Thus, my vision of Norway as an exporter of offshore wind power still has a way to go. A considerable effort on R&D (on materials, to reduce weight, to reduce costs, improve reliability etc.) and demonstration of new technologies and concepts will be needed (as described in the Energy21 research strategy). Nevertheless, we have a crucial advantage in that we can utilise our offshore petroleum and marine competence in order to make offshore wind relevant and commercially viable.

Climate agreement – research allocations

- In the climate agreement signed earlier this year we agreed to allocate considerable funds in order to promote increased use and production of renewable energy. This includes increased public R&D spending on renewable energy and carbon capture and storage by almost 8 million Euros in 2008, an additional 37 million by 2009 and up to an annual level of minimum 75 million Euros by 2010.

Legal framework

- We have started developing the necessary regulatory framework to create a stable framework for the developers, and to ensure a government controlled development of areas allocated for offshore wind. We want to take the best from the offshore regulatory framework where we have a long tradition of close follow up and allocation of areas, and we also want to take the best from the onshore regulatory framework for energy production, where the experiences with public involvement and balancing of interest is very relevant to the offshore wind development.

Parallel interests

- The petroleum industry is Norway's largest industry. In 2006 the petroleum sector stood for 26 percent of the added value in the country. In 2006 Norway was ranked the fifth largest oil exporter and the tenth largest oil producer in the world. The petroleum industry is regulated by my ministry, and it is evident that the development of offshore wind needs to be coordinated with petroleum exploitation, both when it comes to identifying areas but also in terms of regulatory framework and balancing of interests.
- There is also a potential of wind turbines supplying the petroleum installations with electricity, replacing the current gas turbines. As we see it, this might assist the birth

of some initial offshore wind projects, but we don't foresee a large scale electrification of the petroleum platforms, as the costs are high and the remaining time of operation is limited in a number of platforms. The large scale development of wind offshore is based on the connection to the grid in Norway and other countries.

- Norway is also a large scale exporter of fish. We acknowledge that fisheries interests might conflict with offshore wind. There is also ship traffic along the coast of Norway that must be accommodated. Similarly there are environmental values that we need to consider when we plan where to develop offshore wind.
- We have a long coastline in Norway with large sea areas. We also have a long history of balancing the energy development with other interests, so I am confident that we will manage to co-exist with these interests, also when it comes to offshore electricity production.

European co-operation

- We have been participating in some European events on offshore wind. There are a number of workshops where we are taking part in order to learn from our neighbours.
- Denmark, Sweden and Germany have signed a joint declaration on "cooperation in the field of research on offshore wind energy deployment". Norway is invited to join this cooperation, and the government is currently considering this.

Grid

- The development of an offshore transmission grid is crucial for a large scale offshore wind development. This also needs to be seen in connection with the capacity and the development of the onshore grid. But this is a huge task and an expensive investment.
- Statnett SF is the TSO for the main Norwegian power grid and the power lines and subsea cables to other countries. The close and important link between the development of the onshore and the offshore grid makes it therefore natural to consider a role for Statnett also in the development of the offshore grid
- We think the development should be stepwise and controlled. But it is important that such a stepwise approach must not be a barrier for a large scale grid in the future.

Cooperation between Norway and Ireland

- We have noted with considerable interest the focus which the Government of Ireland, Irish organisations and companies has placed on development of renewable energy during the last 18 months. Your aspirations and determination are impressive. Ireland has proven before that it is able to develop new industries and businesses. Our understanding is that the decision to concentrate on renewable

resources in the years to come is a strategic one, a decision which will have considerable consequences for the Irish economy.

- There is a lot of sea and wind in both our countries. We will, I am certain, benefit from close contacts and collaboration between our governments, institutions, organisations and companies involved in research and development of renewable energy, not least offshore wind power. As some of you will know, prominent Norwegian companies, with considerable experience both from the offshore and power producing sectors, are seeking partners in Ireland. I welcome that, believing that we have a lot to offer one another.
- On an official level we will have a unique opportunity to discuss future cooperation in the energy sector when the President of Ireland travels to Norway on a State Visit in October. During the visit, the President will open a conference on renewable ocean energy. Minister Ryan will accompany the President during the visit.