Facing up to our responsibilities

By ÅSLAUG HAGA
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ÅSLAUG HAGA was born in Akershus in 1959. She served as a Member of the Storting (Parliament) for Akershus from 2001-2005 and was elected leader of the Centre Party in 2003. She held the post of Minister of Cultural Affairs from 1999-2000 and that of Minister of Local Government and Regional Development from 2005-2007. She was appointed Minister of Petroleum and Energy in September 2007.

When ministers gather in Rome for the International Energy Forum meeting in April, we will have many important topics to discuss.

Oil prices are at unprecedented levels. The vulnerability of the poor is evident. There is risk of damage to global economic growth. There is concern about the security and reliability of energy supplies on the background of geopolitical tensions. There is concern about increasing exploration and production costs and whether investment in new production capacity will be sufficient to meet the growing demand for energy in time.

Perhaps even more urgent is the need to address the threat of climate change and the efforts and actions governments and the energy industry need to undertake in this respect. The world is increasingly on an unsustainable path in terms of the volume and character of energy consumption. Greenhouse gas emissions continue to grow rapidly and there are signs that the climate is changing faster even than previously feared. Economic and social development is needed for a large part of the global population. This cannot happen without increased use of energy and that is why we need to act now.

According to the International Energy Agency (IEA) and other prognoses, the bulk of new energy supplies will have to come from fossil energy sources – coal, oil and gas. These fuels account for about 80 per cent of global energy needs today, and 25 years ahead their share have probably not declined much due to increased demand overshadowing development of renewable energy sources. Thus, growing CO_2 emissions will follow, if we only use the technologies of today. I do not want to question the forecast. However, I hope human innovation will prove them wrong.

Increased efficiency in energy use is needed. The potential is huge, even with well-known and tested methods, and we can use these to reduce the need for future growth in energy demand.

Renewable energy – such as wind, bio and solar energy – has a bright future. The technologies are maturing, and business interest is strong. Costs, resources and technology imply that these energy sources cannot meet our needs fully for a long time yet.

Thus, the world needs more energy and it needs cleaner fossil fuels. The global challenge is to reconcile the use of fossil energy and the need to curb global greenhouse gas emissions. Norway will contribute on several fronts. We will continue to produce oil and gas, we will contribute to develop bridging energy technologies such as CCS and we will contribute to renewable energy development. Internationally, we are diverting more of our development aid into energy and environmental assistance and we have committed about US$500 million to combat deforestation in rainforest regions.

Norway is a large oil and gas exporter and there are significant remaining resources on our continental shelf. In a world that needs more energy, I think resource owners have a responsibility to, in a sustainable manner, explore and produce the resources they possess.

Tackling climate change is vital to safeguard the future of our planet. The rich countries must take the lead. According to the IEA and the UN IPCC more efficient use of energy, more renewables, more nuclear power, switching from coal to natural gas and carbon capture and storage are key elements in the global struggle to curb future emissions.

By 2020 Norway will undertake to reduce global greenhouse gas emissions by the equivalent of 30 per cent of its own 1990 emissions. About 2/3 of emission reductions in 2020 will be cuts in domestic emissions, putting Norway on the path to a low carbon society. In the context of a global ambitious agreement, where other developed countries undertake substantial commitments, Norway intends to cut global emissions equivalent to 100 per cent of our emissions, thus becoming a carbon neutral nation by 2030.

Norway bases the main part of its electricity on renewable energy: 99 per cent of our electricity production stems from hydropower. This constitutes about half of our total energy consumption. The Government has concrete targets for new and environmentally benign energy production and energy efficiency. We are convinced that it is necessary to welcome and promote all technologies that will help the mitigation of greenhouse gases. From the Norwegian Government's point of view, this requires increased focus on renewable energies such as hydropower, wind power, sun power, ocean power and biomass. However, it is also important to meet the challenge of securing a sustainable future energy supply by reducing the emissions from production and use of fossil fuels.

In its Special Report on Carbon Capture and

Storage, as well as in the Fourth Assessment Report, the IPCC describes carbon capture and storage as a key technology for mitigating climate change. The technology is applicable in the industrial, fuel transformation and power generation sectors, with the greatest potential in power generation. The IEA agrees. According to the IEA, carbon capture and storage has the potential to reduce CO_2-emissions by 20-28 per cent. The trouble is that we do not have commercial technology as of now. The technology is in its infancy. There is no commercially sustainable market. Therefore, the Norwegian Government has identified carbon capture and storage as a key area where we will contribute financially, by developing technology and expertise and by implementing full-scale projects. It is critical to speed up the process to reach the stage where it is possible to reduce the costs, which is vital for the global deployment of this technology.

Norway has extensive experience in storing CO_2. Currently, there are four large scale carbon capture and storage projects in operation or under development: Since 1996, one million tons of CO_2 per year has been separated from the gas production on the Sleipner Vest field in the North Sea and stored in a geological formation 1,000 metres below the seabed. Multinational research projects have collected relevant data in this formation, and the data confirms that the CO_2 is confined securely within the storage reservoir.

In the Snøhvit field in the Barents Sea, 700,000 tonnes of CO_2 will be separated annually from the natural gas, re-injected and stored in a geological formation 2,600 metres under the seabed.

We have a full-scale carbon capture project planned in conjunction with the gas-fired power plant at Mongstad in the Western part of Norway. The project will develop in two stages. The CO_2 technology Test Centre Mongstad will be in place in 2011. In this first stage, technological solutions will be tested in parallel. The second stage of the project implies the construction of a full-scale carbon capture plant. The capture and storage facility is planned to be operational in 2014. The objective is to gain experience and develop solutions that can contribute to reducing cost and technical and financial risks related to large scale CO_2 capture.

Moreover, full-scale capture is planned at the gas-fired power plant at Kårstø in the Southwestern part of Norway. The capture plant is planned to be operational as soon as possible. The plan is to make the investment decision in 2009. The aim of the project is to further develop our knowledge on CCS-technology and the up-scaling of such technology.

Internationally, Norway works on gaining acceptance for carbon capture and storage projects under the Clean Development Mechanism. Norway has also had an active role in developing relevant framework under the OSPAR Convention and the London Protocol and stands behind the compromises reached in these contexts.

Moreover, Norway has contributed in relevant processes in the EU and has a close dialogue with the EU on carbon capture and storage. The EU and Norway have shared interests regarding the early demonstration of these technologies with a view to their commercial deployment. Thus, Norway welcomes the plans of the Commission to create a network of up to 12 demonstration plants in this respect. Norway also welcomes the Commission's recent proposal for a directive on the geological storage of carbon dioxide.

Furthermore, Norway is active in the North Sea Basin Task Force, which aims to develop broad, common principles that could form a basis for regulating the storage of CO_2 in the North Sea and to provide a consistent basis for managing this activity. The task force is made up of the representatives from governments and industry in Norway, the UK, and the Netherlands.

Norway has also established a dialogue with important petroleum producing countries such as Saudi Arabia, Kuwait, Qatar, and the United Arab Emirates on how to facilitate the dissemination and implementation of low carbon technology and CO_2 reductions from petroleum production. These countries have showed a clear willingness to address and contribute to solutions by way of environmental technologies, not the least by setting up a fund for that purpose with 750 mill. USD in November 2007. We will encourage other petroleum producing countries to identify how they can cooperate and contribute on combating climate change. ■

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Platforms at StatoilHydro's Sleipner gas and condensate field