

## Norwegian climate change policies

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### Experiences with policies and measures adopted and implemented

Norway started to introduce specific policies to control emissions of greenhouse gases in the early 1990s. The first measure to directly address GHG emissions was a tax on CO<sub>2</sub> emissions introduced already in 1991. This tax is still in force and today it covers about 69% of the CO<sub>2</sub> emissions. The rates vary with sector. The highest rate is presently about NOK 330 (USD 55 or EUR 40) per tonne of CO<sub>2</sub>. It is applied to petrol and to activities on the continental shelf. In addition to the CO<sub>2</sub> tax, GHG emissions are controlled through:

- a licence system under the Pollution Control Act,
- agreements with industry,
- taxes introduced to reduce emissions of methane from landfills,
- taxes to reduce emissions of HFC and PFC, and
- a system for emissions trading.

In the third national communication, we concluded that by year 2000, the total effect was 8-10 million tonnes CO<sub>2</sub> equivalents, which implies that emissions would have been 15-20% higher without the implemented measures. We are now in the process of updating the quantitative estimates for the fourth national communication.

From 1 January 2005 an emissions trading system has been introduced for the period 2005-2007 (covering about 10-15% of Norway's greenhouse gas emissions). The system is very similar to the EU trading system. Efforts are underway for linking the Norwegian system to the EU system to create a larger market. The trading system includes CO<sub>2</sub> emissions from industries not subject to the CO<sub>2</sub> tax and will reduce CO<sub>2</sub> emissions by about 1 million tonnes in the three-year period.

Norway also has a comprehensive policy for energy efficiency and increased use of renewable energy sources, as well as for research and development. Special attention is paid to the prospects of carbon capture and storage in North Sea geological structures, as well as to hydrogen technology. CO<sub>2</sub> capture and storage has been applied at a gas field in the North Sea for some years, depositing about 1 million tonnes of CO<sub>2</sub> every year. Significant research and development activities are underway. We consider carbon capture and storage to be a very promising technology with the potential to be an important mitigation measure.

### Future challenges

Business-as-usual projections show increasing GHG emissions in Norway. Stronger policies are therefore needed. Norway's policy mix for the period 2008-2012 has not yet been decided. It is likely that the same elements as today (taxes, licences, agreements and emissions trading) will form the building blocks of the strategy, but the "strength" of the various elements will be further evaluated.

We do envisage that significant cuts in GHG emissions will be necessary in the coming decades. To stimulate our work on that issue, the Norwegian Government recently appointed a commission to consider how Norway could become a "low emitting society" with 50-80% reductions by 2050. It is expected that studying the possibilities for deployment of new technologies will play an important role in the work of the commission, which has been given 18 months to complete its work.

#### Importance of international cooperation and commitments

Norway considers climate change as the most serious environmental challenge that the world is facing. The results of the recent Arctic Climate Impact Assessment (ACIA) has given us a strong signal that climate change is already taking place at an alarming rate and that mitigation efforts are needed.

We do not today have a clear answer on what should be the future stabilization level of atmospheric concentrations to avoid dangerous interference. It may take time before we have the final answer for that (and when we have the final answer it may be too late for us to prevent dangerous interference). From available knowledge we believe that the global temperature should not increase above 2 degrees and that this could be used as guidance for our future work.

Norway's emissions of GHG amount to less than 0.2% of the global anthropogenic emissions. Thus, we find ourselves in the same situation as most other countries: Our own efforts to reduce emissions will have a negligible impact on the global problem. It is only through concerted action with global participation that we can solve the problem. And we will take an active part in finding a global solution. For small and open economies it is important that we can find solutions that are fair and create a level playing field.

The end of the first commitment period of the Kyoto Protocol is only 7.5 years away. Industry is planning for 20-30 years ahead and the society planners normally have an even longer time horizon. Their choices frame future emissions. We owe the concerned sectors more clarity on international climate policy issues. It is about time that we as government officials start exchanging views on the future in an open dialogue where we listen to each other and discuss the future in a constructive way. We have with interest participated in various side events where research institutes and other think tanks present ideas on how we might approach future climate change regimes. We therefore know that there are many ideas available for us to build on.

Norway does not yet have a fixed position on what is the best solution. That is why we want to engage in an open and constructive dialogue to find an adequate response to the challenge we are facing. At present we believe that the following elements could guide our work: More countries than in the Kyoto Protocol should participate with some type of emission commitment; keep the good elements of Kyoto (differentiated commitments, flexibility ("all" gases, multiyear period, market mechanisms), reporting and review systems); be perceived to support sustainable development in all countries; be perceived as fair by governments and private sector (level playing field, competitiveness, leakage); take into account the need for adaptation; include technology research, development and deployment.

Norway is convinced that governments now have to start serious talks about the future, making full use of, but not limited to, ideas that have been presented by the research community.