

A long-term EU greenhouse gas emissions reduction strategy

Comments from Norway

12.10.2018

Norway appreciates the close collaboration with the EU to address climate change and welcomes the opportunity to provide its views on the EU's long-term emissions reduction strategy.

Norway recognises the importance of developing long term emission reduction strategies to contribute towards the collective goals of the Paris Agreement.

Norway will submit its long-term emissions reduction strategy by 2020 as called for in the Paris Agreement, article 4.19, and invited in paragraph 35 of 1/CP.21. The strategy will be based on the 2050 target as reflected in the Norwegian Climate Act from 2017 and its preparatory writings.

Our input highlights what we consider to be some important areas for the EU's low emission strategy for 2050. While recognising the importance of a broad policy framework for 2050 covering all sectors, greenhouse gases and pools, our comments focus mainly on areas related to energy.

Key messages:

- Without efficient policies and measures, it will be more difficult to fulfil the long term goals of the Paris Agreement and reach the UN sustainability goals.
- Market based solutions and efficient energy markets are preconditions for energy security and for affordable and available energy in Europe. A well-functioning ETS, which provides credible long-term incentives for markets actors, is crucial for a successful climate policy.
- Renewables and energy efficiency are central to support EU goals of reducing greenhouse gas emissions. Switching from coal to natural gas is an effective way of reducing emissions. Gas is also a good partner for intermittent renewables. In a decarbonized Europe beyond 2050, the established gas infrastructure could be used both for biogas and hydrogen made by natural gas reforming.
- Norway's electricity generation is almost entirely based on renewable hydropower. Trade of electricity, through current and future interconnectors, support additional renewable electricity production both in Norway and in Europe.
- Technology development and dissemination is vital to support GHG reductions in all sectors
- Low-emission technologies like carbon capture and storage are crucial to reach the targets in the Paris Agreement. International cooperation is necessary for these technologies to become commercially viable.

A well-functioning ETS and efficient markets

Emission pricing is generally the most efficient way of achieving climate targets. The EU Emissions Trading System (ETS) should continue to be a key driver for greenhouse gas mitigation in Europe for emissions within the scope of the EU ETS.

A strong emphasis on developing efficient energy markets is important. Market based solutions are preconditions for energy security, affordable energy and an overall effective climate policy in Europe.

The role of natural gas

Natural gas is an abundant and flexible source of energy, and a reliable partner for intermittent solar and wind power. One fast and inexpensive way to reduce emissions is to replace coal with gas, as natural gas emits up to 50 per cent less CO₂ than coal when combusted. It may be a zero emission energy source when equipped with Carbon Capture and Storage (CCS). In the long-term, CCS must be used in a large scale in the power sector.

As the share of intermittent energy generation grows, the need for accessible and flexible energy solutions will be all the more important. Gas can respond quickly and adapts well to seasonal fluctuations. Therefore, natural gas and renewables like wind and solar fit well together.

Norway accounts for a quarter of the EU's gas demand. As only a third of our gas resources have been produced, Norway will remain a large and reliable supplier of gas for Europe in the long term. Initiatives to make the EU's gas market more efficient, including new gas infrastructure projects to increase security of supply, are positive. Clear signals about the role of gas are important to ensure that Norway and other exporting countries make necessary investments to uphold gas deliveries.

In the longer term, hydrogen from natural gas combined with CCS could be a cost-effective option to decarbonize the energy sector – and would work well in combination with other zero-emission technologies. We think it could be worthwhile to further explore whether conversion of natural gas to hydrogen could be a long-term option to decarbonize energy use. A hydrogen value chain could utilize existing gas infrastructure, thus reducing requirements for new investments in infrastructure.

The points mentioned above illustrate that gas can have an important role to play in a strategy to decarbonise the European energy system.

Energy Efficiency, Renewable energy and renewable energy solutions

The EU is in the middle of an energy transition, developing a more sustainable energy system for Europe. Renewable energy and energy efficiency are important ingredients.

According to the EU 2050 Roadmap, emissions from the power sector must be almost zero by 2050. At the same time, emissions from other sectors must be reduced significantly, in part by using low-emission or emission free electricity.

Emphasis should therefore be placed on how to ensure a transition to a low-emission or emission free power system in 2050. In this regard, backup capacity for intermittent renewable energy and consumer flexibility is especially important.

Many households and industries in Europe base their energy needs on coal. Phasing out coal would give reduced emissions and improved air quality. Policies supporting energy efficiency and transition to a low emission energy system should be promoted.

Norway has decades of experience with a power sector built on renewable hydropower. The share of renewable energy is nearly 70 percent of total energy demand onshore. Well-functioning markets are the foundation for energy security, affordable energy and energy transition. In order to provide the right guidance, prices should reflect market conditions and environmental costs, and be allowed to vary in accordance with demand and supply. Thus, there should be strong emphasis on developing efficient energy markets, through good market design policies.

In addition to good market design, technology development is vital for efficient energy transition. Public support for research, development and deployment of clean energy technologies is important in renewable power production, increased electrification and energy efficiency, all of which are important elements of a strategy for long-term emissions reduction in Europe.

Carbon Capture and Storage (CCS)

Low-emission technologies like carbon capture and storage are crucial to reach the targets in the Paris Agreement. Collaboration is necessary if we are to succeed. Norway welcomes a close collaboration with the EU on the development of cost-efficient CCS technologies.

The recently published special report from the IPCC on global warming of 1,5 degree Celsius reaffirms that there is a need for implementation of CCS at a large scale globally in most scenarios. Energy intensive industries account for a quarter of the EU's CO₂ emissions. For some industries, like cement, there is no known alternative to CCS to achieve significant emissions reductions. The IPCC special report points out that CCS is particularly relevant in industries with high process emissions. For other industries, like waste incineration or use of biomass, CCS can provide negative emissions. The importance of BECCS is also highlighted in the IPCC report. CCS could represent an opportunity for Europe to preserve and create new businesses and new jobs. An example is the cement industry in Europe that provides jobs to more than one million Europeans.¹ With a predictable and beneficial framework for CCS, European companies can establish themselves as frontrunners and become market leaders.

¹ <https://cembureau.eu/cement-101/key-facts-figures/>

CCS has the potential for widespread dissemination, but is still commercially immature and costly. Hence it represents financial risk both for private companies and countries involved. Substantial investment and operational costs mean that it is too costly for a single country to take a project forward by itself. Norway is developing a new full-chain CCS demonstration project, including capture, transport and storage solutions. The focus is on industries with few other options for large reductions of emissions, and includes both cement and waste incineration. Plans involve transportation of CO₂ from the industrial sites and stored in a large reservoir offshore. The reservoir will have access capacity that allows for more CO₂ than the amounts planned from the Norwegian sources. With large European companies participating on both storage and capture, the project is well suited for European cooperation.

In our work on developing a new full-chain CCS demonstration project, we build on more than 20 years of experience with CCS. Annually, more than 1 million tons of CO₂ are captured and stored in saline aquifers under the seabed in the North Sea. The Norwegian Sleipner and Snøhvit projects have demonstrated that CO₂ storage is safe. Extensive monitoring programs are in place and none of the monitoring programs show any indication of seepage.

CCS has the potential for widespread dissemination, but is still commercially immature and costly. Hence it represents financial risk both for private companies and countries involved. Substantial investment and operational costs mean that it is too costly for a single country to take a project forward by itself. There are also other barriers to CCS. The London Protocol prohibits cross-border transport of CO₂ for geological storage under the seabed. The EU could play an important role in facilitating for more parties to ratify the amendment.