Session SBI49 (2018)

Session starts: 01-09-2018 00:00:00 [GMT+1]
Session ends: 30-11-2018 23:59:59 [GMT+1]

Exported from Session final result section

Multilateral assessment
Questions and answers Norway

Question by Brazil at Monday, 01 October 2018

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: After 30 September

Title: Consistency

Page 317 states that "*mechanisms under the Kyoto Protocol will be used to meet the target. The net contribution of units acquired through the mechanisms could be about 75 million tonnes for the whole 2013-2020 period excluding possible contributions from LULUCF. This includes actual carry-over of 2.25 million CERs and 0.74 million ERUs to Norway's party holding account and planned carry-over of 5.98 million AAUs*".

However, CRF table 4b does not present estimates to units of market-based mechanisms.

Please clarify.

Answer by Norway, Friday, 30 November 2018

The question cites information that Norway has provided in CTF table 2(e)I with regards to the possible number of units from market-based mechanisms under the Convention. Norway will only use Kyoto units. The 75 million tonnes is an estimate for the whole period 2013-2020 and includes actual carry-over of CERs and ERUs and planned carry-over of AAUs to party holding account, actual purchase and planned purchase. The estimate for the total use of units through market mechanisms is explained in chapter 4.4.3 and supplementary table 4.2 in the Biennial Report.

In CTF Table 4(b), Parties are asked to report on the amounts of units surrendered that have not been previously surrendered by that or any other Party. Norway's accounting for the whole 2013-2020 period is likely to occur in 2022/2023 and consequently no units have been surrendered pursuant to our commitment under the Kyoto Protocol, including in 2015 and 2016.

In CTF Table 4b Norway has chosen to present estimates for the net use of units from the Kyoto mechanisms based on inventory estimates for 2013-2016 and projections for the remaining period. These figures exclude contribution from LULUCF, where the contribution to be accounted is expected to be small and probably negative (accounting figures 2013-2015 varied from 0.0 to emissions of 0.3 Mt/year (see also Table 4.4). The split between CERs and AAUs has not been carried out, as the rules for net transfers of AAUs pursuant to Norway's cooperation with the EU in the ETS are not yet (ultimo November 2018) decided for 2013-2020. The acquisitions for 2013-2020 are only expected to be of AAUs and CERs. The only expected use of ERUs will be of the small amount (0.7 millions) carried over.

Question by Brazil at Monday, 01 October 2018

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: After 30 September

Title: Mitigation actions impacts estimates

"*CTF Table 3 – Progress in achievement of the quantified economy-wide emission reduction target: information on mitigation actions and their effects*" lists a number of mitigation actions. We would like to commend the Party for doing so. However, mitigation impacts were not estimated for the majority of the related actions. We kindly request further information on:

- the reasons for not reporting mitigation impact estimates for the majority of mitigation actions;
- any difficulties/barriers for such;
- improvements, if any, on providing estimates for mitigation actions compared to previous BRs; and
- current estimates, if any, of mitigation impacts other than those related to 2020/2030.

Answer by Norway, Friday, 30 November 2018

For the second Biennial Report, our interpretation of the biennial reporting guidelines was that the reporting should focus on policies and measures that had been implemented or were planned to be implemented since the last National Communication or Biennial Report. In CTF table 3, we therefore identified twenty important mitigation actions that were new or changed since our sixth National Communication and first Biennial Report was reported in 2014. We estimated effects for four of these while we for the remaining 16 mitigation actions used the notation NE (not estimated). There are methodological difficulties in estimating the isolated mitigation effect of a marginal change or adjustment in a policy instrument. For mitigation actions that increase funds or budgets, the actual effects will be a result of the specific measures taken pursuant to the actual funding, which may not necessarily be possible to accurately identify at the time the budget is increased. Thus identification of the relevant action may have to be subject to further reporting during and after implementation.

In the third Biennial Report, Norway reported on the full scope of our policies, measures and mitigation actions like we did in our seventh National Communication (NC7). We included 55 mitigation actions in CTF table 3 and we provided estimates for the effects of 24 mitigations actions in 2020 and/or 2030. For three we used the notation key IE (included elsewhere) and for another two we used the notation key NA (not applicable). For the remaining 26 mitigation actions, we used the notation key NE (not estimated) or signalled that the effect was positive, but magnitude difficult to estimate.

Chapter 4 of the NC7 explains to the extent possible the reasons why an effect was not estimated for the mitigation action (or policy and measure). Although no numerical effect has been estimated, the various policies and measures are likely to have an impact in terms of GHG reductions. It should also be noted that as most of the stationary energy consumption in Norway is based on electricity and the

electricity supply in Norway is almost entirely based on renewable energy, enhancing stationary energy efficiency and encouraging the use of new renewable energy sources usually do not have an impact on domestic emissions.

Question by United States of America at Monday, 01 October 2018

Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target

Type: After 30 September

Title: Lessons learned with tax policies

Norway notes that one of the most significant mitigation actions in terms of impact is the CO2 tax. Are there any lessons learned from experience in design and implementation of this and other tax policies that Norway can reflect on?

Answer by Norway, Friday, 30 November 2018

Norway introduced GHG pricing in the form of a CO2-tax in 1991, as one of the first countries in the world. 27 years' experience through evolving circumstances is not possible to cover in a brief response, but we will provide at least some insights.

In 2018, about 80% of our GHG emissions are subject to pricing. About half of Norway's emissions are covered by the EU ETS, where the price currently is about 20 EUR/ton. These emissions are as a rule exempt from the CO2 tax. Except for oil and gas extraction and aviation that are covered both by the EU ETS and the CO2-tax.

In the non-ETS sectors the CO2-tax applies to nearly all use of mineral products (i.e. petrol, diesel, mineral oil, natural gas, LPG, etc.) in all sectors, with a tax rate equivalent to NOK 500/tCO2 (approximately EUR 50/tCO2). The Government has abolished several reduced rates and exemptions from the CO2-tax on mineral products, making the tax more cost efficient. Today, fisheries have reduced rate and natural gas used in green houses are exempt. Some exemptions and reduced rates can be politically more difficult to abolish than others, depending on expected consequences for the sector concerned. Introducing pricing on other emissions than CO2 can prove difficult both politically and technically.

Consistent price signals over a long period has made the investors factor in carbon costs into their investments decisions, and thus is believed to have caused significant reductions in emissions, as

shown in the estimates for ia. effects of policies and measures in the petroleum sector. This is particularly true in sectors where the tax represents a significant portion of the price of the commodities used. See for example the development in use of mineral oils for stationary use over the last decades.

In 2018, the total revenue from the CO_2-tax on mineral products and the CO_2-tax on petroleum extraction is expected to be 1.0 percent of total tax revenue. In addition, there are some revenue from auctioning of emission allowances. The revenue makes it possible to some extent limit other taxes that are more harmful to the economy. Adverse effects on ia. industry have been limited, owing in part to careful design and gradual phase in for some sectors. The design has also reflected features of the energy and industry structure. Pricing significant emissions from heavy industries was only politically possible in the context of the European ETS which included allocation of allowances for free.

The CO2-tax, together with other taxes on GHG emissions and the emissions trading system, put a price tag on GHG emissions, which implies that the polluter pays a price for the damage inflicted on the environment, and hence is in conformity with the «polluter pays» principle. Putting a price on emissions provide financial incentives for curtailing environmentally harmful activity. A higher price will reduce the demand for environmentally harmful products, which will serve to scale back the production of such products. A tax on environmentally harmful inputs implies that enterprises choose to use such inputs less intensively in their production. Moreover, environmental taxes will stimulate the development of new technology (including carbon capture and storage) by creating demand and a market for environmental technology.

Environmental taxes and the emissions trading scheme ensures that emissions are reduced at the lowest possible cost to society. Cost effectiveness considerations also suggest that activities causing the same environmental damage should be subject to the same tax, irrespective of sector or activity. For emissions of CO_2 from the use of fossil fuels outside the scope of EU ETS, Norway is almost there today with extensive coverage and similar price. For other gases, the picture is more diverse.

When designing the CO2-tax, it’s important to consider the administrative costs. In Norway, the liability to pay the CO2-tax is for practical purposes applied to operators of the facilities for producing and distributing petroleum and importers of mineral products. The number of enterprises liable to direct payment of the CO2-tax is thus very low, making the administrative costs of the tax also low compared to the revenue. In 2004, the administrative costs was estimated to 0.02% of the tax revenue.

It’s also important to keep the tax structure simple, by avoiding reduced rates and exemptions. Especially reduced rates or tax exemptions through tax refunds have high administrative costs. In addition to keeping the administrative costs down, avoiding reduced rates and exemptions is in line with the polluter pays principle and makes the tax cost efficient.

Question by China at Sunday, 30 September 2018

Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target

Type: Before 30 September

Title: enhanced ambition

According to Decision 1/CP.19, developed country Parties are urged to revisit its quantified economy-wide emission reduction target and periodically evaluate the continuing application of any conditions associated with quantified economy-wide emission reduction target. How did/will Norway implement those specific resolves of the Warsaw decision?

Answer by Norway, Friday, 30 November 2018

Norway responded to this request through a submission sent to the UNFCCC secretariat in May 2014. Reference was made to the process towards Paris and the need for a global and comprehensive agreement where major emitting Parties agree on emissions reductions in line with the 2 degrees target. Norway's minister for climate and environment at the time also participated in the ministerial session on the subject held in June the same year in the context of the Kyoto Protocol. Our conclusion was that conditions at that time were not met for going beyond the target for 2020, as translated into our commitment for 2013-2020 under the Kyoto Protocol. In 2015, we communicated our (i)NDC with a reduction of at least 40% in 2030 compared to 1990, which represents a progression beyond the target we took for 2020/2013-2020.

Question by China at Sunday, 30 September 2018

Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target

Type: Before 30 September

Title: market mechanism

Could Norway indicate its plan on using international market mechanism to meet its emission reduction commitment in the context of a single-year target?

Answer by Norway, Friday, 30 November 2018

Norway made its 2020-target of reducing emissions by 30% operational through its commitment for 2013-2020 under the Kyoto Protocol. Documentation of how this was done was provided to the Parties in the negotiations leading up to Doha and has also been presented in previous Multilateral Assessments. For Norway the use of mechanisms will thus be in relation to the emissions budget represented by the 16%reduction on average for 2013-2020 and not only the target year 2020.

Question by China at Sunday, 30 September 2018

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 30 September

Title: overall progress

According to the projections reported in the BR3, Norway is not on track to meet its 2020 target. Does Norway have any plan to strength its domestic effort in reducing GHG emission? Please provide further information on possible additional measures.

Answer by Norway, Friday, 30 November 2018

Norway is on track to meeting its commitment under the Kyoto Protocol, which is derived from the 2020 target (see previous answers). More than 5 of the 8 years are already history and the need to aquire units is relatively well know. Moreover, the climate policy is constantly evolving and emissions are going down. This is also reflected in our projections were the estimated gap has been reduced over the years, from about 100Mt in 2012 via 90 Mt in the first Multilateral assessment to 75Mt in NC7/BR3.

Question by Thailand at Friday, 28 September 2018

Category: All emissions and removals related to its quantified economy-wide emission reduction target

Type: Before 30 September

Title: GHG inventory

3) Norway has reported Black Carcon biannually to the Arctic Council since 2015. What are experiences and lessons learned for the data collection of Black Carbon emissions and methodologies used in the estimation of emissions?

In 2013, the Norwegian Environment Agency (NEA) published the first Norwegian emission inventories for black carbon (BC) and organic carbon (OC) in cooperation with Statistics Norway. The methodology is documented in the report “Emissions of Black Carbon and Organic Carbon in Norway 1990-2011" (Aasestad, 2013, https://www.ssb.no/en/natur-og-miljo/artikler-og-publikasjoner/emissions-of-black-carbon-and-organic-carbon-in-norway-1990-2011). These climate forcers are always co-emitted, but have the opposite effect on climate. In general, BC warms the climate, while emissions of OC leads to a cooling. The emissions are primarily estimated based on shares of BC and OC of fine particulate matter (PM2.5). Specific emission factors are available for two sources, namely wood combustion in the residential sector and flaring of natural gas onshore and off-shore. Wood combustion from households is the largest emission source for PM2.5 in Norway, and we therefore had several measurement programs in order to obtain emission factors relevant to national circumstances for this sector. Emission factors for flaring were to obtain from the literature. Uncertainties have not been quantified, but are anticipated to be high relative to uncertainties in other more “mature inventories”.

Norway continuously strives to improve emission data, and the updates to the inventory made on an annual basis has also taken into account information on BC in the EEA/EMEP emission inventory guidebook (https://www.eea.europa.eu/publications/emep-eea-guidebook-2016), which became available in 2016. The development of an emission inventory for BC has made it possible to also develop projections and measures to reduce BC emissions. In 2013 The Norwegian Environment Agency, on behalf of the Ministry of Environment, prepared and proposed an action plan to reduce short-lived climate forcers (SLCF) by 2030 (http://www.miljodirektoratet.no/en/Publications/2014/March-2014/Summary-of-proposed-action-plan-for-Norwegian-emissions-of-shortlived-climate-forcers/). The report identified measures to reduce Short Lived Climate Forcers (SLCFs) and estimated the short-term (10 years) climate effect and possible health effects of the measures identified. One main conclusion was that in Norway, reductions of CO2 has the largest climate impact also in the short-term. Further, measures targeted to reduce SLCFs can give large health benefits which can strongly reduce the socioeconomic cost of the measures. In recent years, the Norwegian Environment Agency has also assessed the short-term climate effect and health effects of measures aimed at reducing greenhouse gases. The summary report "Climate mitigation measures up to 2030" (http://www.miljodirektoratet.no/no/Publikasjoner/2016/Mars-2016/Climate-mitigation-measures-up-to-2030/) discusses the identified climate measures that have the greatest overall benefit on short-term climate forcers and health .

For further information, please also consult NEA's web page (http://www.miljodirektoratet.no/en/Areas-of-activity1/Climate/Short-Lived-Climate-Pollutants/) with information on work done on climate effect in the short term and health effects.

Norway has since 2015 reported emissions of BC annually on a voluntarily basis to the Convention on Long-range Transboundary Air Pollution (LRTAP), and reported emissions of BC and methane to the Arctic Council in 2015 and 2017. Norway is an active member of the Climate and Clean Air Coalition (CCAC), and has since 2017 been co-chair in the Pathway task team. The team has recently developed

a communication strategy to support the implementation of CCAC's Talanoa submission (http://ccacoalition.org/en/resources/talanoa-statement-and-joint-submission-climate-clean-air-coalition-partners). The key message that the temperature path the world choose to follow from today and the next decades are crucial both for the attainment of the UN Sustainable development goals by 2030 and for the long-term Paris commitments. Abatement of CO2 emissions is of highest importance, but reduction of warming climate forcers which limited atmospheric lifetime (from days up to 15 years) will reduce the rate of warming relatively quickly and help avoid dangerous feedbacks in the climate system.

Question by Thailand at Friday, 28 September 2018

Category: All emissions and removals related to its quantified economy-wide emission reduction target

Type: Before 30 September

Title: GHG inventory

2) Norway is the world's 3rd largest exporter for natural gases and the total length of gas pipeline network is about 8,800 kilometres . Could Norway explains in more detail on how to estimate the leakage of CH_4 emission from oil and gases extraction and during the transportation from the sources?

Answer by Norway, Friday, 30 November 2018

Venting and fugitive emissions/gas leaks from oil and gas extraction

A bottom up-approach, using specific emission factors and gas flow as activity data, is generally used for quantifying methane (CH_4) emissions from oil and gas extraction. However, a lot of work has been done over the last years to improve the bottom-up methods used for quantifying vented- and fugitive emissions of methane.

To improve the understanding of direct emission of methane (i.e. operational emissions and fugitive emissions/gas leaks in the processes) from the oil and gas facilities on the Norwegian Continental Shelf (NCS), Norway conducted a survey in October 2014 to March 2016. (http://www.miljodirektoratet.no/no/Publikasjoner/2016/Juni-2016/Cold-venting-and-fugitive-emissions-from-Norwegian-offshore-oil-and-gas-activities--summary-report/)

The survey demonstrated that using processed gas volumes as an activity factor (the approach taken by the current methodology) is inadequate for most emissions sources/processes. Emissions are controlled by other conditions and parameters, making the real emission inventories from some of the sources substantially different from those previously reported.

Based on the outcome of the survey, new methods have been established from 2017 and shall be used by the operators for quantifying and reporting to the Norwegian authorities. Dedicated methods are recommended for the individual emission sources and sub-sources identified. Generic methods are recommended for the dominant proportion of the emission sources. These methods reflect the parameters which control the emissions. The use of generic methods will ensure consistency in the calculations over time and across facilities and make it possible to obtain consistent data trends year by year. None of the installations on the NCS have emissions from all the identified sources, but all facilities have emissions from some of them. The proposed emission quantification methodology will therefore apply only to those installations which possess the relevant potential emission source. Future reporting of national emissions from Norway (i.e. oil and gas extraction) will be based on the use of the new methods.

Quantification methodologies used in other countries were investigated as a part of the study on the NCS. The status in countries with a comparable industry to Norway, such as the UK, Denmark, the Netherlands, the USA, Canada and Australia, were studied. The investigation showed that methodologies used in these countries correspond to some extent with the "old" Norwegian approach in terms of relevance and accuracy.

Loading of crude oil on shuttle tankers

When shuttle tankers are loaded with crude oil from offshore installations, the atmosphere originally present in the empty cargo tanks will be evacuated as the oil is filled. The evacuated gas contains mainly Non-methane VOC-gases (NMVOC) but also smaller concentrations of methane.

A considerable effort has been made in reducing the evacuated VOC-gas to be emitted to atmosphere. A VOC Industrial Cooperation to reduce the emissions of Non-methane VOCs was established in 2002, the VOCIC. This has resulted in several technologies implemented for VOC treatments on the ships. Such active VOC treatment technologies include condensation and separation to retrieve the VOC-gas, and passive systems for reducing the amount of VOC-evaporation. The selected system varies from ship to ship. A comprehensive programme on measurement and calculation of methane and NMVOC emissions from the loading operations has also been established.

Annual emissions of methane and NMVOC from loading and storage of crude oil on the Norwegian shelf shall be reported through the VOC industrial cooperation (VOCIC) within March 1st of the year after the discharge took place. The annual reports explain in more detail how the emissions are measured/calculated. Uncertainty in reported values shall also be estimated and commented.

Subsea gas transport

Total gas production (i.e. total exported volumes from producing assets) in Norway was 116 million Sm^3 o.e. in 2016. The pipelines utilized for subsea gas transport are constructed from sections of steel

pipe welded together and coated to decrease friction and resulting pressure fluctuations. The pipelines are also designed to tolerate high pressures. As there are a very limited number of connections and flanges in the subsea pipeline system, the risk of methane leakage is very low. The pipelines are also subject to visual inspections by Remote Operated Vehicles. No leakages have been reported by the responsible companies.

Question by Thailand at Friday, 28 September 2018

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 30 September

Title: Mitigation

1) How does the tax on HFCs in Norway perform and make the HFCs emission reduce since 2003?

Answer by Norway, Friday, 30 November 2018

The tax on import and production of HFCs was introduced in 2003 in order to curb the expected exponential growth in HFC emissions due to the phase-out of ozone-depleting substances. In 2004, this tax was supplemented with a refund scheme, which prescribes a similar refund when gas is destroyed. The tax was initially NOK 180 (appr. 19 Euro) pr. GWP-tonnes, but is in 2018 NOK 500 (appr. 50 Euro) after relatively large increases in 2014 and 2018. The tax approximately equals the CO_2 tax rate on mineral oil. Combined and over time, the tax- and refund schemes amount to a proxy tax on emissions of HFC.

The tax applies both to HFC imported in bulk and also HFC pre-charged in products that are imported to Norway.

The tax and reimbursement scheme has resulted in better maintenance and improved routines for discarding old equipment. It also provides a strong incentive for choosing HFCs with the lowest GWP possible and has resulted in the increased use of natural refrigerants and alternative processes (for example indirect systems) in new installations. The tax has had very significant effects on new, bigger installations, where low-GWP alternatives are often available and the tax might represent a significant share of the investment costs. On smaller mass-produced units the development in international legislation (such as the EU F-gas regulation and the Montreal Protocol) is likely the main driving force influencing emissions and choice of refrigerant.

The tax has significantly reduced growth in emissions compared with pre-tax scenarios, which

forecasted very strong growth due to substitution of CFCs and HCFCs with HFCs. Estimates show that the tax has reduced the HFC emissions in 2005, 2010 and 2011 by 0.3, 0.6 and 0.7 million tonnes of CO_2-equivalents, respectively.

Question by New Zealand at Friday, 28 September 2018

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 30 September

Title: Transport and Agriculture Funding

In its NC7 Norway reports “funding for low-emission-research was strengthened with NOK 71.5 million, focusing on technologies for transport and agriculture”. Can Norway clarify the proportion of funding allocated to transport as distinct from agriculture?

Answer by Norway, Friday, 30 November 2018

Approximately 20 per cent have been allocated to agriculture and 50-60 per cent to transport.

Question by New Zealand at Friday, 28 September 2018

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 30 September

Title: CO2 Tax for Agriculture

In its NC7 Norway notes the appointment of a Committee to explore “the possibility of introducing a gradually increased CO_2 tax for agriculture”. Can Norway provide further details of the CO_2 tax for agriculture being considered and, if possible, the date the Committee intends to deliver its proposals?

Answer by Norway, Friday, 30 November 2018

The CO2 tax is levied on mineral products (i.e. petrol, diesel, mineral oil, natural gas, LPG, etc.). In 2018, the general rate is equivalent to NOK 500/tCO2. There are very few reduced rates or exemptions from the CO2-tax. The only exemption from the CO2-tax on mineral

products that are relevant for agriculture is the exemption for natural gas as LPG used in green houses.

Emissions of greenhouse gases from agriculture include methane (CH4) and nitrous oxide (N2O), in addition to emissions of CO2 from fossil fuels. A committee was appointed in June 2018, consisting of representatives from the farmers associations and the government. The overarching mission being to agree on a numeric target for the reduction of greenhouse gasses from agriculture (year 2021 – 2030). This target should also include the agricultural sector's contribution to reduction in other sectors like transport, LULUCF (forest land excluded) and energy. The committee will look at instruments on how to reach the target, taxes included. The committee will conclude its work by April 1, 2019.

Question by Republic of Korea at Friday, 28 September 2018

Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target

Type: Before 30 September

Title: Accounting for 2020 target

How is your Party going to account for the GHG reduction target for 2020?

Is the accounting done based on the headline indicator %? or based on the converted absolute emissions figure in 2020?

If the accounting is done based on the converted absolute emissions figure, the quantified target year emissions will keep being changed until the final target year (2020) because the base year (mostly 1990) emissions change every year (although it is generally a slight change) in the National Inventory Report after recalculation.

Please provide a clear explanation about your accounting process for the 2020 GHG reduction target.

Thank you.

Answer by Norway, Friday, 30 November 2018

By 2020, Norway is committed to reduce global emissions of greenhouse gases equivalent by 30% relative to Norway's emission level in 1990. In 2012, this target was made operational through the legally binding commitment for 2013-2020 under the Kyoto Protocol where average emissions in 2013-2020 shall not exceed 84% of the 1990 level. Compliance with the commitment under the Kyoto Protocol will also imply that the 30% target for 2020 is achieved.

Chapter 4.4.3 in the BR3, including table 4.2 explains how Norway will fulfill its commitment for 2013-2020 under the Kyoto Protocol. The emissions estimate for our base year (1990 for all gases except NF_3 which has 2000 as a base year) change due to recalculations. However, under the Kyoto Protocol it remains fixed at 51.9 million tonnes CO_2 equivalents as the basis for determining the number of assigned amount units (AAUs). The number of AAUs Norway can issue for the period 2013-2020 pursuant to the commitment under Article 3.1 has been determined through the review process of Norway's initial report for the second commitment period. Norway will issue 348.9 million AAUs for the period 2013-2020, or in average 43.6 million AAUs annually. Thus, Norway's accounting is based on absolute emission figures.

Question by European Union at Thursday, 27 September 2018

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 30 September

Title: Incentives vs mitigation effects from electric vehicles and co-benefits

Norway reported in its NC that the government has identified five priority areas for its climate policy: one of these priorities is reducing emissions from the transport sector. Norway has many incentives linked to the deployment of electric vehicles. Electric cars in Norway are exempt from VAT, road tax, registration tax, have a reduce rate in the annual tax on motor vehicles, have free tool passage, access to bus lanes, rebates on ferry crossings and even free public parking. According to the NC, electric vehicles should represent 50 per cent of the new total car sales in 2030.

What lessons have you learned and can share regarding the introduction and maintenance of such strong incentives vis a vis the mitigation achieved and its potential? Have you estimated the co-benefits of more electric vehicles, powered by renewable energy, on local air quality or noise?

Answer by Norway, Friday, 30 November 2018

We wrote at page 114 in the NC that:

"Without the incentives, EVs share would probably be more in line with what is observed in other countries without incentives. We estimate the stock of EVs in Norway to be about 120 000 in 2030 without incentives as opposed to 820 000 in our projections. Emissions would thus have been about 0.1 million tonnes higher in 2015, 0.4 million tonnes higher in 2020 and 1.2 million tonnes higher in 2030 without the measures."

EV incentives have, for the most part, been long term and predictable. In addition, the Government has for some time signalled that incentives will need to be phased out with time (Revised National Budget 2015). The EV tax incentives implies an income loss to the state. In 2018, the value of the special tax advantages for EVs has been estimated to 8 bill. NOK. In addition, there are income losses due to the reduced rates on toll roads and ferries. The income loss from reduced rates on ferries was estimated to 20,9 mill. NOK in 2017, while the income loss from reduced toll rates is estimated to be between 800 and 1100 mill. NOK in 2018. This income loss will grow as the number of EVs increases.

The Norwegian Environmental Agency have estimated the co-benefits with regard to local air quality of more electric vehicles and other identified measures for reducing CO2 emissions. The estimates of health effects, derived from improved local air quality, are uncertain. Furthermore, the value of noise reduction as a result of more electric vehicles or other measures to reduce CO2 emissions has not been quantified. The Environmental Agency also estimates the effect of electric vehicles and other measures for reducing CO2 emission on short-lived greenhouse gases.

Question by European Union at Thursday, 27 September 2018

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 30 September

Title: Role of CER credits in reaching 2020 target

Norway will need to procure carbon credits in order to meet its commitments for 2020 under the Kyoto Protocol second commitment period. Norway's 7th National Communication provides that the programme for the procurement of CERs from the CDM aims at acquiring 60 Mt for the period 2013-2020 and has contracted most of this volume.

Does Norway apply additional sustainability criteria to its purchases of CERs?

Answer by Norway, Friday, 30 November 2018

The additional criteria Norway uses for the state's purchases of CERs are related to how our funding can make a difference – for 2013-2020 we purchase CERs from new project activities or existing project activities which would not operate without such funding. A thorough due diligence assessment is carried out for each activity before entering into a purchase agreement (ERPA).

Norway respects that host countries of CDM projects provide an assessment of how these projects contribute to sustainable development through the process of granting letters of approval. Further, we emphasize that local and global stakeholder consultations are part of the CDM process, as well as a high degree transparency in the documentation of the project activities, both crucial elements that would promote sustainability.

Question by European Union at Thursday, 27 September 2018

Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target

Type: Before 30 September

Title: Model for projections

Could Norway provide an explanation of the key differences between the SNOW model used for projections for BR3 and the modelling done previously for the BR2 and how these have affected the resulting estimates of net emissions? What are the key improvements to projected estimates brought by the SNOW model?

Answer by Norway, Friday, 30 November 2018

Statistics Norway develops and maintains most of the models the Ministry of Finance uses. Their decision to move the CGE model used for emission projections and climate policy analysis to a new programming platform was motivated by practical concerns. The previously used MSG model had become large and heavy to update, and moreover was programmed in a dying computer language TROLL, on which little expertise and support are available. For all practical purposes the SNOW model is equivalent to the old MSG model. They are both CGE models specially developed for studying impacts of economic development and policy on energy and emissions with a disaggregated sectoral classification, diverse energy inputs and with emissions of all Kyoto gasses. The model structure (with nested CES-trees) and elasticities are also more or less equal.

The key improvements are that it is easier to program, update and run. Also making it more transparent.

Question by Australia at Thursday, 27 September 2018

Category: Progress towards the achievement of its quantified economy-wide emission reduction target

Type: Before 30 September

Title: use of international units

Is Norway planning to acquire more international units such as Certified Emission Reduction to contribute to meeting its 2020 target? What criteria does Norway use in determining which units to acquire?

Answer by Norway, Friday, 30 November 2018

In NC7/BR3 Norway estimates the gap between our emissions and the commitment for 2013-2020 to be around 75 Mt. Most of this period is now history. The gap is likely to be covered by some further emission reductions in Norway in the remaining years of the period and the rest through acquisition of Kyoto units. Like for 2008-2012, we expect to acquire a number of units based on our cooperation with European countries though the ETS. This number can only be calculated after the next iteration of the European registry regulation has been adopted, which is expected by the end of 2018.

Currently, Norway's procurement program is targeting 60Mt. Expected delivery from current contracts are somewhat less. 22 Mt are already in the state's holding account and the rest will be delivered by the end of the KP true up period, as was also the case for the first commitment period.

Regarding criteria, please see our answer to question from the European Union with the title “Role of CER credits in reaching 2020 target”.

Question by Australia at Thursday, 27 September 2018

Category: Assumptions, conditions and methodologies related to the attainment of its quantified economy-wide emission reduction target

Type: Before 30 September

Title: LULUCF accounting

Can Norway confirm it is using a “forest management reference level” approach for both its 2020 target under the Convention and its Kyoto Protocol second commitment period target?

Answer by Norway, Friday, 30 November 2018

By 2020, Norway is committed to reduce global emissions of greenhouse gases equivalent by 30% relative to Norway’s emission level in 1990. In 2012, this target was made operational through the legally binding commitment for 2013-2020 under the Kyoto Protocol where average emissions in 2013-2020 shall not exceed 84% of the 1990 level. Compliance with the commitment under the Kyoto Protocol will also imply that the 30% target for 2020 is achieved.

Since we are implementing the 2020 target through a commitment under the KP, we are using an activity-based approach with the accounting rules as applied under the Kyoto Protocol. Norway is using a "forest management reference level" approach for the second Kyoto Protocol commitment period target and thus implicitly also for the 2020-target. The forest management reference level for 2013-2020 is still the 1990 figure, which has been revised from -11.4Mt for 2008-2012 to –13Mt for 2013-2020. However, there are no practical implications of this revision for the figures which will be used in the accounting, since the KP CP2 cap of 3.5% of the 1990 emissions from forest management represents only about 1.8 Mt CO2/year. In total the accounted contribution from the LULUCF sector is expected to be very small, and it is not yet clear whether it will be a positive or negative number.

Session SBI49 (2018)

Session closes at 30-11-2018

UNFCCC - LAST PAGE OF EXPORT