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Multilateral assessment
Questions and answers Kazakhstan

The quantified emission reduction target is reducing 15% of GHG emissions between 1990 and 2020

During the period of economic stagnation, that is until 1999, greenhouse gas emissions decreased to 165.68 million tons of CO2eq. without LULUCF, that is by 57%. With LULUCF, emissions decreased to 174.81 million tons of CO2 eq., or 47%. In 2000 when industrial production was revived, GHG emissions started to grow in Kazakhstan: by 2013 they reached 313.44 million tons of CO2eq. without absorption in LULUCF sector, and 302.56 million tons of CO2eq. with absorption in LULUCF

According to the projections, only in the scenario with additional measures it is possible to achieve by 2030 the goal to reduce emissions by 15% of the 1990 level.

Does it mean that Kazakhstan will not achieve the 2020 target?

Answer by Kazakhstan, Friday, 28 April 2017

Kazakhstan intends to reduce GHG emissions by 15% by 2020 compared to the level of 1990, primarily through the implementation of the State Program for the Development of the Agro-Industrial Complex adopted within the framework of the Concept for the transition to a Green economy, adopted by the Presidential Decree in 2013 , which sets the following goals and objectives in power sector by 2020:

- increase the share of solar and wind energy not less than 3% by 2020 in electricity production;

 - to increase the share of gas power plants to 20%, including switching of power plants from coal to gas in large cities;

 - reduce the level of CO_2 emissions from electricity generation;

 - to reduce energy intensity of GDP by 25% (by 10% by 2015) from the level of 2008;

According to the latest national GHG inventory of the Republic of Kazakhstan in the category "Energy Industry" in 2015, there is a tendency to reduce GHG emissions.

Based on the results of the Green Economy Concept Implementation Plan, at present the following indicators have already been achieved in the electric power industry:

 - the share solar and wind energy sources in electricity generation in 2015 was 0.77%, and in 2016 - 0.98%;

 - The share of gas power stations in electricity generation increased to 21.2% and 21.4% in

2015 and 2016, with a plan of 20% by 2020;

 - Gasification of the regions reached 42.98% and 46.35% in 2015 and 2016, respectively.

At the end of 2015, the reduction of GDP energy intensity compared to the level of 2008 was 28.2%. Thus, this goal was completed ahead of schedule.

Then, until 2030, it is planned to keep the level of greenhouse gas emissions at a level of 15% below the base 1990 level. By the results of the emission reductions in 2020, it may be proposed to increase this indicator within the framework of the Paris Agreement.

Question by European Union at Tuesday, 28 February 2017

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

Type: Before 28 February

Title: Impact of mitigation actions

> According to the information reported in BR2, total GHG emissions excluding emissions and removals from land use, land-use change and forestry (LULUCF) decreased by 19.4 per cent between 1990 and 2014, whereas total GHG emissions including net emissions or removals from LULUCF decreased by 9.3 per cent over the same period. Under the Convention, Kazakhstan made a commitment to reduce its GHG emissions by 15.0 per cent by 2020 below the 1990 level

- Could Kazakhstan provide additional information on how its mitigation actions to-data have had an impact on emissions reductions?
    - Could Kazakhstan provide additional information on how believes its future implementation of actions will ensure it achieves its targets?

Answer by Kazakhstan, Friday, 28 April 2017

Current trends in reducing the dependence of the world economy on fossil fuels are also evident in Kazakhstan. The prices for oil, gas and coal will be relatively low and will not ensure the payback of many oil and gas projects, while the activity of companies developing renewable energy sources (RER) increases sharply. At present, in Kazakhstan, the main prerequisites for the transition to a green economy and for reducing GHG emissions are the tasks to reduce the consumption of coal and fuel oil, as well as the transition from coal to gas and renewable energy sources. According to Kazakhstan experts, the technically possible potential of renewable energy in Kazakhstan in the long-term perspective significantly exceeds the projected level of electricity consumption in the country.

 - According to the results of the latest national GHG inventory in Kazakhstan in 2013, GHG emissions from the category "Energy Industry" in 2013 were 115.510 million tons, in 2014 -

114.780 million tons, and in 2015 - 100.631 million tons. T CO2-equivalent.

- The future implementation of Kazakhstan's actions to reduce greenhouse gas emissions is already implemented on the basis of the Concept on the transition of the Republic of Kazakhstan to a "green" economy through the State Program for the Development of the Agro-Industrial Complex. In order to implement the Concept, the Government approved the Action Plan in 2017. Updating of the Action Plan is held annually. Currently, the Plan contains 141 events. One of the objectives of the Concept is the development of renewable energy production. The current system of state support for the development of renewable energy sources is enshrined in the legislation of the Republic of Kazakhstan since 2009, and from 2013 it is implemented through a fixed tariff system, which assumes the initial certainty for investors in the form of guaranteed purchase of the whole amount of electricity from RES at fixed reduced tariffs.

This mechanism allowed to quickly launch the RES market and implement the following types of renewable energy sources: wind, solar, small hydropower (stations with a capacity of less than 35 MW) for the production of electrical energy. Specific target indicators for the development of renewable energy have been adopted, which envisage achieving by 2020 the share of RES in the total electricity production of 3%, and by 1030 by 10%.

Question by China at Tuesday, 28 February 2017

Category: Progress towards the achievement of its quantified economy-wide emission reduction target
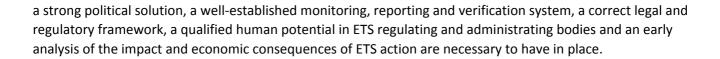
Type: Before 28 February

Title: national ETS

The national ETS of Kazakhstan has been suspended last year, could Kazakhstan provide further information on the reasons for the suspension? Is there any experiences or lessons that Kazakhstan would like to share regarding the development of a national emission trading scheme?

Answer by Kazakhstan, Friday, 28 April 2017

The national ETS and the carbon market started in Kazakhstan in 2013. Currently, the ETS is suspended till 2018, January 1, in order to improve GHG emissions inventory reporting by companies, national legislation, national information system of the cadaster and the GHG emission registry, to ensure its protection, which includes legal, organizational and technical (program-technical) measures aimed at preventing unauthorized actions and increasing the information security.

The main lessons of the pilot phase of the ETS action are as follows. For effective operation of the national ETS

a strong political solution, a well-established monitoring, reporting and verification system, a correct legal and regulatory framework, a qualified human potential in ETS regulating and administrating bodies and an early analysis of the impact and economic consequences of ETS action are necessary to have in place.

Question by China at Tuesday, 28 February 2017

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

Type: Before 28 February

Title: Target for pre-2020

According to the emission data reported in the BR2, Kazakhstan has over achieved its quantified economy-wide emission reduction target by 2014. Does Kazakhstan plan to formulate more ambitious target for pre-2020 period to further stimulate domestic low-carbon transition?

Answer by Kazakhstan, Friday, 28 April 2017

Perhaps you did not take into account that currently the trend of emissions in Kazakhstan is upward. To keep emissions at the achieved level, in order to increase the indicators of social and economic development, Kazakhstan needs first of all to achieve the goals set in the "Green Economy Development Concept of the Republic of Kazakhstan" adopted by the decree of President Nazarbayev in May of 2013, and to further improve the national policy on transition to low-carbon development. Today, for Kazakhstan, the main directions for the transition to a low-carbon economy are to reduce the level of combustion and consumption of fossil fuels containing carbon, primarily coal and fuel oil. At the same time, according to expert judgments, the long run technically possible renewable energy potential in Kazakhstan may significantly exceed the projected level of electricity consumption in the country. Therefore, in order to further stimulate the transition to a low-emission economy and to increase the level of its socio-economic development, Kazakhstan needs to remain at a level that does not exceed its quantified economy-wide emission reduction target (15% less than the 1990 base level).

Question by Thailand at Monday, 20 February 2017

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

Type: Before 28 February

Title: IPCC Guidelines

Did KZN apply the 2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands (Wetlands Guidelines) ?

Answer by Kazakhstan, Friday, 28 April 2017

Kazakhstan did not apply the 2013 Supplement to 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands (Wetland Guidelines). For estimating CO2 and CH4 emissions from land conversion to permanently flooded lands in Kazakhstan with the using of Wetland Guidance, it is necessary to define national emission factors that can be obtained after conducting special studies in national conditions. In the annual inventory for wetlands, only CO2 emissions are calculated for lands converted to artificial reservoirs in the first year of their completion, according to the 2006 IPCC Guidelines, using national biomass data for these lands before their flooding according to the methodological Tier 2.

Question by Thailand at Monday, 20 February 2017

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

Type: Before 28 February

Title: IPCC guidelines

In the beginning of BR2, it is not clear that which IPCC GLs used for estimation of GHG inventory.

Answer by Kazakhstan, Friday, 28 April 2017

For estimation of GHG inventory in Kazakhstan the Guidelines for National GHG Inventories, IPCC 2006, were used.

Question by Thailand at Sunday, 19 February 2017

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

Type: Before 28 February

Title: Industrial Process

In Section 5.1.2. Projections in the industrial processes sector, Since Production is a function of GDP only, how do demands affect the Production ?

Answer by Kazakhstan, Friday, 28 April 2017

In Section 5.1.2, a simplified formula for the level of production calculation, where production depends on GDP, was given. The demand indirectly (through GDP) affects the level of industrial production through the anticipated future GDP growth rates, as the consumption and the net exports are the components of GDP.

Question by Thailand at Sunday, 19 February 2017

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

Type: Before 28 February

Title: Emissions with measures

In Figures 5.1 and 5.2, the increasing rate of GHG emissions with measures after 2020 (until 2030) is higher than without measures (WOM). WHY?

Answer by Kazakhstan, Friday, 28 April 2017

In the process of forecasting GHG emissions in the scenario with measures, a number of policies and measures that were in place in Kazakhstan at that time of the preparation of DD2 were laid. One of the key measures aimed at reducing emissions was the emission trading system. Since at that time the emission limits after 2020 were unknown, it was decided not to lay restrictions on ETS after 2020. This decision led to the fact that after 2020, when the ETS action had to stop, the growth rate of emissions in the scenario with measures exceeded the GHG emissions in the scenario without measures.

Question by Thailand at Sunday, 19 February 2017

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

Type: Before 28 February

Title: In Section 5: Projection in Figures 5.1 & 5.2, Unit of GHG emissions (Y-Axis)

In Section 5: Projection in Figures 5.1 & 5.2, Unit of GHG emissions (Y-Axis) should be provided.

The unit of GHG emissions in Figures 5.1 and 5.2 is megaton of CO2-equivalent.

Question by Thailand at Sunday, 19 February 2017

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

Type: Before 28 February

Title: With measures

In Table 4.9. exchange rate should be provided for prices of feed-in-tariff

The exchange rate of the US dollar was 180.87 tenge (national currency) at that time (in November 2014). Therefore, the tariffs in US dollars in the last column of Table 4.9 are, respectively: 0.12; 0.33; 0.36 0.09; 0,18 USD / kWh.

Question by Thailand at Sunday, 19 February 2017

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

Type: Before 28 February

Title: GHG Emissions

What are the results of key category analysis of the inventory ?

As a result of the technical error under the using of the new electronic common reporting

format (CRF) of the national greenhouse gas inventory in 2016, the CRF tables for Key Source Categories (KSC) were empty although the key category analysis was performed. Its results are shortly describes on page 26 and in the Annex 4 of the NIR 2016.

The total number of KSCs in 1990 by level without LULUCF is 23, and 26 with taking LULUCF into account. The number of key sources on the emission level for 2014 without LULUCF is 21, and 23 with taking into account LULUCF sector.

Analysis of key sources by trend without LULUCF for 2014 identified 21 KCS, and 23 KCS including LULUCF.

The greatest contribution to the total emissions of 1990 was made by the subcategory "1.A.1 Fuel combustion - Energy - Solid fuel" ($_2$), which shares in the base year are 26.5% and 25.4% excluding and including LULUCF sector, respectively. The same category is on the first place among the KSC by level in 2014. Their contribution is 27.9% and 23.4% for the level without LULUCF and with LULUCF, respectively.

On the second place in the list of KSC by level in 1990 is the category "1.B.1 - Fugitive emissions from the combustion of solid fuel, CH_4". Its contribution is estimated as 12.9% and 12.4%, excluding LULUCF and including LULUCF, respectively. When analyzing key sources in the 2014 inventory, this source ranks the second (8.6%), excluding LULUCF, and the third, including LULUCF (7.2%). The subcategory "4.B.1 Cropland, remaining cropland, CO_2" is on the second place, taking into account LULUCF in 2014 with the share of 11.4%.

In Figure 2.3, please give specific names of emission sources for the share of 15%.

Figure 2.3 of the NIR2016 shows the contribution of individual gases to total greenhouse gas emissions in Kazakhstan from 1990 to 2014. In the text of the relevant section, it is stated that in the composition of emissions by GHGs in the national cadaster, the greatest contribution is made by $_2$, the share of which were in total emissions changed in the range of 68 to 78% for the whole period. The second place in terms of the composition of greenhouse gas emissions in Kazakhstan is methane (from 18 to 25%) and the third one is occupied by nitrous oxide (from 3% to 9%). The share of fluoride gases is less than 1%. The only source, whose share is more than 15%, is subcategory 1.A.1. "Combustion of fuel, 2 emissions". It is shown in the figure in the appendix to the answer to this question in pdf format.

Question by Thailand at Sunday, 19 February 2017

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

Type: Before 28 February

Title: Time series of greenhouse gas emissions by sectors in Figure 2.1

Time series of greenhouse gas emissions by sectors in Figure 2.1. It is not clear that F-gas has been presented in the inventory since 1990.

Answer by Kazakhstan, Friday, 28 April 2017

Kazakhstan is not a producer of F-gases. They are imported from other countries, mainly from Chinese and European manufacturers. As substitutes for ozone-depleting substances, they have been used in Kazakhstan since 1995 and only HFC-134a was presented in the amount of 228.8 tons of CO2 equivalent. Their share in total national emissions from 1995 to 2014 in CO_2 -equivalent is hardly exceed 1% of the total national emissions.

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