CLIMATE ACTION TRACKER

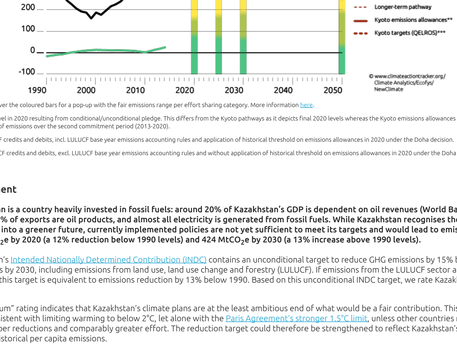
Kazakhstan

History: 2017 | 2016 | 2015 | 2014 | 2013 | 2012 | 2011

Page last updated: 2nd November 2016

Rating





Note: Hover over the coloured bars for a pop-up with the fair emissions range per effort sharing category. More information here.

* Emissions level in 2020 resulting from conditional/unconditional pledge. This differs from the Kyoto pathways as it depicts final 2020 levels whereas the Kyoto emissions allowances consider the average level of emissions over the second commitment period (2013-2020).

** Incl. LULUCF credits and debits, incl. LULUCF base year emissions accounting rules and application of historical threshold on emissions allowances in 2020 under the Doha decision.

***Excl. LULUCF credits and debits, excl. LULUCF base year emissions accounting rules and without application of historical threshold on emissions allowances in 2020 under the Doha decision.

Assessment

Kazakhstan is a country heavily invested in fossil fuels: around 20% of Kazakhstan's GDP is dependent on oil revenues (World Bank, 2016), around 60% of exports are oil products, and almost all electricity is generated from fossil fuels. While Kazakhstan recognises the need to transition into a greener future, currently implemented policies are not yet sufficient to meet its targets and would lead to emissions of 331 MtCO$_2$e by 2020 (a 12% reduction below 1990 levels) and 424 MtCO$_2$e by 2030 (a 13% increase above 1990 levels).

Kazakhstan's Intended Nationally Determined Contribution (INDC) contains an unconditional target to reduce GHG emissions by 15% below 1990 levels by 2030, including emissions from land use, land use change and forestry (LULUCF). If emissions from the LULUCF sector are excluded, this target is equivalent to emissions reduction by 13% below 1990. Based on this unconditional INDC target, we rate Kazakhstan "medium".

The "medium" rating indicates that Kazakhstan's climate plans are at the least ambitious end of what would be a fair contribution. This means it is not consistent with limiting warming to below 2°C, let alone with the Paris Agreement's stronger 1.5°C limit, unless other countries make much deeper reductions and comparably greater effort. The reduction target could therefore be strengthened to reflect Kazakhstan's high levels of historical per capita emissions.

In addition, Kazakhstan has a conditional target of reducing emissions (including LULUCF) by 25% below 1990 levels by 2030 (equivalent to 25% below 1990 levels excluding LULUCF by 2030). This target is subject to "additional international investments, access to low carbon technologies transfer mechanism, green climate funds and flexible mechanism for country with economy in transition" (Republic of Kazakhstan, 2015b).

For the second phase of the Kyoto Protocol (CP2), Kazakhstan proposed average annual emissions to be at the level of 95% of 1990 levels during the period of 2013–2020, subject to the possibility of using the surplus from the first commitment period and other conditions. However, as of October 2016, Kazakhstan has not ratified the Doha Amendment to the Kyoto Protocol establishing the second commitment of the Kyoto Protocol, meaning that this commitment is not yet binding under international law on Kazakhstan.

Kazakhstan's Copenhagen pledge was to reduce emissions by 15% below 1992 levels including LULUCF by 2020 (equivalent to 12% below 1990 levels excl. LULUCF). This pledge was also rated "medium".

Pledges and targets

Paris Agreement target

Kazakhstan signed the Paris Agreement on 2 August 2016 and, at the High-level Signature Ceremony for the Paris Agreement in April 2016 signalled its intent to ratify the Agreement by the end of 2016 (Climate Analytics, 2016).Kazakhstan's unconditional INDC target aims to reduce GHG emissions by 15% below 1990 levels (including LULUCF) by 2030. After accounting For LULUCF, using projections from the latest National Communication and UNFCCC inventory data, Kazakhstan's target is equivalent to 13% below 1990 levels excluding LULUCF (CRF, 2016; Republic of Kazakhstan, 2013).

The INDC does not specify the LULUCF accounting method that it will use. For simplicity, and in the absence of other information, this assessment assumes a net-net approach to accounting

For LULUCF activities. The size of Kazakhstan's removals from the LULUCF sector are projected to remain at around 2012 levels in the future (Republic of Kazakhstan, 2013). From this trend, LULUCF removals are expected to have a minor impact in the future.

In addition, Kazakhstan also has a conditional target to reduce emissions (including LULUCF) by 25% below 1990 levels by 2030 (equivalent to 25% below 1990 levels, excluding LULUCF, by 2030). This target is subject to "additional international investments, access to low carbon technologies transfer mechanism, green climate funds and flexible mechanism for country with economy in transition" (Republic of Kazakhstan, 2015b).

Kazakhstan has stated that it may use international market mechanisms to meet its INDC target, and that it "will consider adequately discounting international units for compliance to ensure a contribution to net global emission reductions" (Republic of Kazakhstan, 2015b). The impact of international market mechanisms on Kazakhstan's INDC is not taken into account in this analysis.

Kyoto Protocol (KP)	
Member of KP CP1 (2008–2012)	No
Member of KP CP2 (2013–2020)	Yes
KP CP2 target (below 1990)	5%
Copenhagen pledge	
2020 target	15% below 1992 by 2020 [19% below 1990 by 2020 excl. LULUCF]
Conditions	Carry-over of full surplus from the first commitment period, environmental integrity, access to mechanisms for both periods, mid-term 2013-2015 review to increase the level of ambition.
Paris Agreement target	
Ratified	No
Unconditional 2030 target	15% below 1990 by 2030 incl. LULUCF [10% below 1990 by 2030 excl. LULUCF]
Conditional 2030 target	25% below 1990 by 2030 incl. LULUCF [20% below 1990 by 2030 excl. LULUCF]
Coverage	Economy-wide
Long term goal(s)	
Long-term goal(s)	25% below 1992 by 2050 [33% below 1990 by 2050 excl. LULUCF]

2020 pledge and Kyoto target

Under the Copenhagen Accord, Kazakhstan proposed to reduce emissions by 15% below 1992 levels (incl. LULUCF) by 2020 (equivalent to an emission reduction of 12% below 1990 levels excluding LULUCF).

Kazakhstan submitted a QELRO [1] (Quantified Emission Limitation or Reduction Objective) level of 95 for Kyoto Protocol's second commitment period (CP2). This means that Kazakhstan's average annual emissions from 2013–2020 are proposed to be 5% below 1990 levels. Kazakhstan's intention to commit to this QELRO was conditional on being allowed to carry over its full surplus from the first commitment period, environmental integrity of the Kyoto Protocol, access to mechanisms for both periods and on a mid-term 2013–2015 review to increase the level of ambition in terms of emissions reductions among others.

However, paragraph 3.7ter of the Doha Amendment imposes a more ambitious emission reduction target on Kazakhstan, as countries joining CP2 need to at least stabilise emissions in 2013–2020 to the average historic emission level over 2008–2010.[2] This leads to a Kyoto pathway which is almost 77 MtCO$_2$e per year lower than the direct translation of their target for the period 2013–2020. Kazakhstan has not ratified the Doha Amendment.

Long-term goal

Kazakhstan has proposed a 2050 target of 25% reduction below 1992 levels excluding LULUCF (equivalent to an emission reduction of 34% below 1990 levels excluding LULUCF).

Footnotes

[1] The QELRO, expressed as a percentage in relation to a base year, denotes the average level of emissions that an Annex B Party could emit on an annual basis during a given commitment period.

[2] This is part of the Doha decisions and constitutes part of the amendments to the Kyoto Protocol. Amendments only come into effect once they are ratified by Parties.

Fair share

We rate Kazakhstan's unconditional INDC target "medium." This rating indicates that Kazakhstan'sclimate plans are at the least ambitious end of what would be a fair contribution. This means it is not consistent with limiting warming to below 2°C, let alone with the Paris Agreement's stronger 1.5°C limit, unless other countries make much deeper reductions and comparably greater effort. The reduction target could therefore be strengthened to reflect Kazakhstan's high levels of historical per capita emissions. Kazakhstan's Copenhagen pledge for 2020 and long-term target are also rated "medium".

Current policy projections

Kazakhstan is a country heavily invested in fossil fuels: around 20% of Kazakhstan's GDP is dependent on oil revenues (World Bank, 2016), around 60% of exports are oil products and almost all electricity is generated from fossil fuels. Coal accounts for 76.1% of electricity generation and natural gas for 14.7%. These sources of energy are complemented by hydro energy, which accounts for 8.4%. Other renewables have started to make a contribution in recent years (IEA, 2015).

While Kazakhstan recognises the need to transition into a greener future, currently implemented policies are not yet sufficient and would lead to emissions of 331 MtCO$_2$e by 2020 (a reduction of 12% compared to 1990 levels) and 424 MtCO$_2$e by 2030 (an increase of 13% above 1990 levels).

Kazakhstan's "Concept for Kazakhstan's Transition to Green Economy" adopted in 2013 sets the target of providing 50% of total energy supply by alternative and renewable energy sources (including nuclear) and decreasing energy intensity of GDP by 25% by 2020 compared to a 2008 baseline by 2050 (Republic of Kazakhstan, 2015a). The government estimates that the transition to a green economy will be accompanied by substantial economic and societal benefits: GDP is expected to grow by 3%, more than 500 000 jobs will be created, new industries would be developed and living standards would be improved. The costs are valued at USD 3-4 billion or about 1% of GDP per year (IEA, 2015).

The Action Plan for the Development of Alternative and Renewable Energy for 2013–20 adopted in January 2013 proposed 31 renewable energy projects with a combined capacity of 1 040 MW (IEA, 2015). In August 2013, Kazakhstan adopted a feed-in tariff law which aims to increase the share of renewable electricity generation in line with the targets from the Concept of supplying 3% of electricity by wind and solar in 2020. The tariffs were set in June 2014. By growing its clean energy portfolio Kazakhstan is tapping into its abundant renewable potential, estimated at more than 1,000 TWh per year, including wind potential at 1,300 TWh (not all viable), biomass at 35 TWh of electricity and 44 gigacalories (Gcal) of heat, solar at 30 Bt of reference fuel equivalent, and hydropower potential at 170 TWh (62 TWh technically feasible) (IEA, 2015). Yet, as a country richly endowed with fossil fuels, the transition has been slow in the past, and more stringent efforts will need to be undertaken in order for Kazakhstan to achieve its climate targets.

The Emissions Trading System that was enacted in 2011 through an amendment of the 2007 Ecological Code of the Republic of Kazakhstan has been temporarily suspended until 2018 (icap, 2016), when it is expected to re-start with new allocation methods and trading procedures for all market participants. At this point we refrain from estimating these additional emissions, which would drive emissions even higher as the already very high current policy emissions levels. We will closely follow the process and regularly revisit this decision.

Besides the undergoing efforts to transform its energy mix, Kazakhstan further recognises the need for energy efficiency. The law on Energy Saving and Energy Efficiency (implemented in 2012) guides this transition that envisions a 10% reduction in energy intensity by 2015 and a 25% reduction by 2020 (EBRD, 2014). Measures are cross-sectoral in nature, and range from initiatives for district heating to thermal renovation of houses, to various energy standards and energy efficiency categories for buildings and household appliances.

Assumptions

Pledge

The INDC, 2020 and 2050 targets were calculated from the most recent national inventory submissions (CRF, 2016). As the INDC and 2020 targets include LULUCF, these were converted to values excluding LULUCF for comparability purposes.

The Kyoto pledge is calculated based on the official documentation provided by the UNFCCC (Republic of Kazakhstan, 2012a; Republic of Kazakhstan, 2012b). We calculated Kazakhstan's LULUCF accounting quantities in 2020 for afforestation, reforestation and deforestation using the current Kyoto Protocol's rules. Forest management was calculated also with current Kyoto rules, with the cap set at 3% of base year or 15% of forest management, whichever is lower.

Current policy projections

Historical data are based on most recent national inventory submissions (CRF, 2016). Current policy projections stem from the "with measures" scenario from the BR CTF submission workbook Table 6(a). Growth rates from the "with measures" scenario were applied to the most recent historical data.

The "with measures" scenario includes measures and policies to reduce greenhouse gas emissions that have been taken and are planned to be adopted in the near future. These measures include the National Allocation Plan for 2016–2020 (includes the ETS), the Law 'On energy saving and energy efficiency' and the Law 'On administrative violations'. There is no straightforward way to exclude the two-year suspension of the ETS. For time being we refrained from estimating these additional emissions, which would drive emissions even higher as the already very high current policy emissions levels. We will closely follow the process and regularly revisit this decision.

Sources and Footnotes

CRF. (2016). UNFCCC AWG-KP Submissions 2016. Common Reporting Format.

Climate Analytics (2016). Projected Paris Agreement total ratifications in 2016.

EBRD (2014). Commercial laws of Kazakhstan An assessment by the EBRD.

icap (2016). Kazakhstan ETS suspended until 2018.

IEA. (2015). Eastern Europe, Caucasus and Central Asia: Energy Policies Beyond IEA Countries, 476.

Republic of Kazakhstan. (2013). Sixth National Communication of the Republic of Kazakhstan to the UN Framework Convention on Climate Change.

Republic of Kazakhstan. (2015a). Concept for transition of the Republic of Kazakhstan to Green Economy. http://doi.org/10.1017/CBO9781107415324.004

Republic of Kazakhstan. (2015b). Intended Nationally Determined Contribution. http://doi.org/10.1017/CBO9781107415324.004

Republic of Kazakhstan. (2015c). THE SECOND BIENNIAL REPORT submitted in accordance with the Decision 1 / ??. 16 of the Conference of the.

Republic of Kazakhstan. (2016). BR CTF submission workbook.

World Bank. (2016). Oil rents (% of GDP) | Data.

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