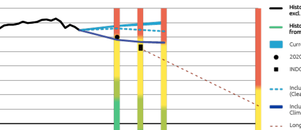
CLIMATE ACTION TRACKER

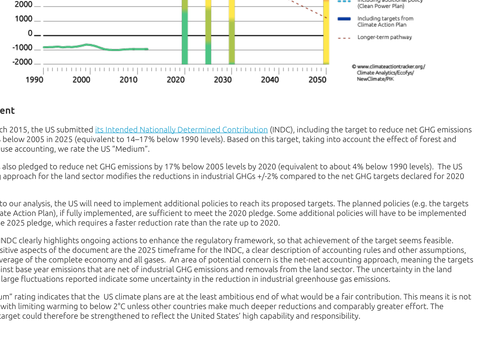
USA

History: 2017 2016 2015 2014 2013 2011

Page last updated: 31st March 2015

Rating





Assessment

On 31 March 2015, the US submitted its Intended Nationally Determined Contribution (INDC), including the target to reduce net GHG emissions by 26–28% below 2005 in 2025 (equivalent to 14–17% below 1990 levels). Based on this target, taking into account the effect of forest and other land use accounting, we rate the US "Medium".

The US has also pledged to reduce net GHG emissions by 17% below 2005 levels by 2020 (equivalent to about 4% below 1990 levels). The US accounting approach for the land sector modifies the reductions in industrial GHGs +/-2% compared to the net GHG targets declared for 2020 and 2025.

According to our analysis, the US will need to implement additional policies to reach its proposed targets. The planned policies (e.g. the targets in the Climate Action Plan), if fully implemented, are sufficient to meet the 2020 pledge. Some additional policies will have to be implemented to reach the 2025 pledge, which requires a faster reduction rate than the rate up to 2020.

The USA's INDC clearly highlights ongoing actions to enhance the regulatory framework, so that achievement of the target seems feasible. Further positive aspects of the document are the 2025 timeframe for the INDC, a clear description of accounting rules and other assumptions, and the coverage of the complete economy and all gases. An area of potential concern is the net-net accounting approach, meaning the targets are set against base year emissions that are net of industrial GHG emissions and removals from the land sector. The uncertainty in the land sector and large fluctuations reported indicate some uncertainty in the reduction in industrial greenhouse gas emissions.

The "Medium" rating indicates that the US 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 unless other countries make much deeper reductions and comparably greater effort. The reduction target could therefore be strengthened to reflect the United States' high capability and responsibility.

Pledge and post-2020 contribution

After an initial announcement in November 2014, on 31 March 2015, the US submitted its INDC, proposing that by 2025, it would aim at reducing emissions by 26% to 28% below 2005. This level is consistent with a linear interpolation between the 2020 pledge and the national long-term target and is set on a net-net accounting basis [1].

There is some uncertainty surrounding the consequences of these targets on reductions of industrial GHG emissions (all emissions excluding the land sector) due to uncertainties in the estimation of land sector removals and in the projections for these removals in 2020 and 2025. Based on the data in the US Sixth National Communication [2], we estimate this uncertainty as plus or minus 2%, meaning that a 26% reduction target in net emissions would likely result in 24–28% reduction in industrial GHG emissions, depending on whether the sink is at the high or low end of the projections, respectively.

The United States is not a Party to the Kyoto Protocol. While a target of a 7% reduction below 1990 was originally negotiated, the US never ratified the Protocol and the target never came into force.

Under the Copenhagen Accord, the US announced an emissions reduction target of 17% below 2005 levels, around 4% below 1990 levels, by 2020. The USA stated this was in line with the US long-term goal of reducing emissions by 83% below 2005 by 2050 (United States Department of State, 2010).

Kyoto Protocol	
Member of KP CP1	not ratified
Member of KP CP2	no
Convention	
Copenhagen pledge	-17% by 2020
Reference for pledge	2005
Equivalent to –4% reduction from 1990	
Conditions	none
INDC	
Reduction	26%–28% in 2025
Reference year	2005
Equivalent to –14 - –16 % reduction from 1990	
National goals	
Long term goal(s)	83% by 2050 below 2005 levels
Equivalent to –80 % reduction from 1990	

Fair share

We rated US' INDC "medium". The target for 2025 is in line with some effort sharing approaches that focus on capability and costs. Approaches that focus on equal cumulative emissions and historic responsibility would require much more stringent reductions and partially result in negative emission allowances in all years. This presents an update to previous assessments (see earlier years), where those approaches were not taken into account. The rating for the 2020 pledge is "inadequate", as it is in line only with least stringent of categories (capability/costs).

Current policy projections

With currently implemented policies, the US is expected to achieve emissions levels of approximately 6,770–6,820 $MtCO_2e$ in 2020—around 6% below 2005 or 9-10% above 1990; between 6,950 and 7,090 MtCO2e in 2030—around 2–4% below 2005 or 12–14% above 1990 (excl. LULUCF). With a linear interpolation, this would mean a level between 6,860 and 6,960 MtCO2e in 2025, or around 4–5% below 2005 or 10–12% above 1990.

Under this scenario the US would need to implement further policies to achieve its pledge. With additional measures as outlined by the Obama government in "The President's Climate Action Plan" (CAP) in June 2013 (Executive Office of the President 2013), the 2020 pledge could be achieved. The scenario does not yet include the Executive Order from 19 March 2015 on "Planning for Federal Sustainability in the Next Decade", which aims at reducing GHG emissions of the Federal Government by 40% by 2025 compared to 2008 (The White House, 2015a).

The pledge achievement can also depend on the level of sinks from LULUCF: the National Communication projects that in 2020, the US LULUCF sector's sinks will absorb between 614 and 898 MtCO2e, and for 2025 573 to 917 MtCO2e. The uncertainty is high and the final level in 2020 could have an impact on whether the pledge will be achieved as well.

Historically, US emissions constantly increased between 1990 and 2007. The financial crisis from 2008 saw emissions drop. In 2010 they began to increase again, but 2011 and 2012 saw a downward pressure, mainly resulting from a strong shift to natural gas as an energy source and a decrease in total energy demand. In the US, a variety of activities are taking place both on state and federal levels and in all sectors. Nevertheless, a more comprehensive approach with adequate coverage and momentum could more substantially reduce emissions.

The "Clean Power Plan," announced in 2014 and currently being finalised after a longer phase of public consultation, aims to reduce emissions from the power sector by 30% below 2005 levels by 2025. This policy is an important step and the effective and stringent implementation of the plan can contribute significantly to moving towards the pledged emissions level. This policy may prevent a reversal of the shift from coal to gas in case of changing market conditions, together with the New Source Performance Standard – a regulation in the pipeline to limit specific emissions of new power plants.

Another important aspect of the Climate Action Plan (CAP) is its aim to increase energy efficiency in demand sectors, where it foresees, for example, energy efficiency standards for appliances and federal buildings, different financial incentives and energy saving measures in federal agencies. Not all activities in the plan have been clearly defined. Two overarching targets included in the plan are to double renewable energy generation by 2020 and double energy productivity by 2030 compared to 2010 levels.

The CAP also mentions reducing methane emissions. In January 2015, the US EPA introduced a target to reduce methane emissions from oil and gas production by 40% to 45% by 2025 below 2012 levels and outlined a set of actions to achieve this target building on prior activities by the Administration (The White House, 2015b). According to our assessment, complying with these targets would reduce emissions to 5820 MtCO2e/a in 2020 – (about 19% below 2005 or 6% below 1990), 5660 to 5670 in 2025 (about 22% below 2005 or 9% below 1990) and 5610 to 5640 MtCO2e/a in 2030 (about 22% below 2005 or 9-10% below 1990). This would put the US on a trajectory to meet its 2020 target, and close to achieving the target level resulting from the announcement the INDC for 2025. Further, the plan mentions controlling HFCs and emissions from LULUCF, which need further refinement and have not been evaluated at this time.

A few areas targeted by the CAP have already seen concrete activities in 2013 and 2014. The process to permit installations of renewable energy systems on public land has been modified, making it less complicated to prioritise renewable energy (U.S. Department of the Interior 2013b). Also, the auctioning of renewable energy is now an established process, which can be accelerated or kept moving (see for example U.S. Department of the Interior 2013a).

Further, the Government has issued various energy efficiency standards (Office of Energy Efficiency and Renewable Energy, 2015) whose effects are not yet in the current policy projections, but may have an important impact on emissions especially in 2030. For example, the Department of Energy estimates cumulative emissions reductions of 48 MtCO2 through 2030 from the Energy Conservation Standards for Commercial Refrigeration Equipment (DoE, 2014). The standards for volatile organic compounds from oil and gas industry issued already in 2012 contribute to achieving the methane target and are included in the scenario including implemented policies.

The planned activities are not included in our projections of emissions with implemented policies, as these will depend on future decisions and actions. However, the framework being created at the moment is crucial for the US to prepare future actions, and demonstrates that the US government is creating opportunities to push forward climate change policies. Further, state action is an important driver of US climate policies, and dynamics on that level may lead to further reductions.

Date of pledge: 31 March 2015

Assumptions

Pledge

Targets for 2020 and 2025 were calculated from the most recent national inventory submissions (CRF, 2014).

The US has announced that it prefers a comprehensive, land-based approach that takes advantage of the broadest scope of mitigation actions. For the post 2012 period (2013-2020), we calculated LULUCF accounting using a land-based approach that assumes net-net accounting relative to 1990, using data from the national inventories (CRF, 2014).

Current policy projections

For the projections, we sum up energy-related emissions projections from EIA's Annual Energy Outlook 2014 (US Energy Information Agency, 2014), and non-energy emissions from the 6th National Communication (US Department of State, 2014). For the scenario including the Clean Power Plan, we assume a 30% reduction of emissions from the energy sector in 2005 by 2030.

Comparison with the US national assessment

In its 6th National Communication, the US provided emissions projections that included all policies until the end of 2012, and projections including the planned activities of the CAP. The data provided shows that the pledge may be met, but that there is substantial uncertainty around the effect of the CAP and sequestration removals. The resulting emissions are in a range between 4900 and 5600 MtCO2e/a incl. LULUCF in 2020 (5,520 – 6,500 MtCO2e/a excl. LULUCF). For the lower end of the range, the emissions reduction pledge will be achieved. This means that using this data, the US will need to fully implement the CAP and reach the high end of sequestration removals in order to meet the pledge.

The National Communication used AEO2013 as the basis for projections of energy related CO2 emissions and adjusts the values to match international reporting requirements. That scenario includes policies implemented until December 2012. The EPA prepared data for non-energy related and non-CO2 emissions.

The total emissions in 2020 under the reference scenario with policies implemented until December 2012 are 6,815 MtCO2e/a excl. LULUCF in the National Communication, a 5.3% decrease in comparison to 2005 according to the document. The CAT current policy projections end up at 6,770 - 6820 MtCO2e/a excl. LULUCF. The small difference results mainly from the update of the AEO to the 2014 version used by CAT, which includes the effect of policies implemented until December 2013.

The CAT defines "currently implemented policy" as any sort of regulation or legislation that is in place. Most of the activities under the President's Climate Action Plan (CAP) do not fall into this category and are therefore excluded from the CAT "current policy scenario." This does not mean that their implementation is less likely – indeed depending on how the initial ideas are eventually translated they may turn into very effective policies. One example of important action may be the reduction of HFCs. However, the CAP does not spell out concrete activities regarding those, nor has legislation or regulation to address HFC's been implemented.

The CAT considers additional scenarios to reflect some of the planned policies. When we include the Clean Power Plan, the CAT analysis results in emissions of 6600 MtCO2e/a in 2020 excl. LULUCF. With the targets laid out in the Climate Action Plan to double renewable energy electricity generation (excl. large hydro), to double energy productivity and to reduce methane as announced in January, the CAT estimates emissions of 5,820 MtCO2e/a in 2020. This is within the range of the National Communication and would be sufficient to comply with the 2020 pledge.

Sources

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Footnotes

[1] The INDC states that the USA "intends to include all categories of emissions by sources and removals by sinks, and all pools and gases, as reported in the Inventory of United States Greenhouse Gas Emissions and Sinks; to account for the land sector using a net-net approach; and to use a "production approach" to account for harvested wood products consistent with IPCC guidance. The United States may also exclude emissions from natural disturbances, consistent with available IPCC guidance."

[2] Table 5-6 projections of net carbon sequestration.