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The United States' Contribution to the Fight Against Climate Change

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*The United States released yesterday details of its **[national contribution](#)** to the ongoing international negotiations on climate change, which should be concluded with a new agreement at the end of the year in Paris. This step follows similar recent announcements from Switzerland, the EU, Norway and Mexico. Since the US is the world's largest economy and second largest emitter of greenhouse gases, its contribution*

gives an important fillip to the negotiations, at a time when other major emitters are preparing their own contributions.

1. Does the INDC represent a strengthening of the ambition of climate action in the country?

Accordant with the US-China announcement published last year, the US is committing to reduce “its emissions by 26-28% by 2025 compared to 2005 levels and to make best efforts to reduce its emissions by 28%”. These targets are still compatible with a goal of a 83% reduction by 2050 (which was announced in Copenhagen), that is consistent with scenarios to stay under the 2°C limit, as the IPCC report shows. The DDPP US report shows that a 26-28% reduction of emissions in 2025 is a correct milestone to reach a 80% reduction by 2050. This does not mean that the measures implemented to reach the 2025 target are sufficient as such, but they would lay the necessary groundwork for deeper emissions reduction to happen after 2025 if supplementary policies and measures are introduced in an adequate and timely manner.

This announcement constitutes a significant increase in ambition compared to recent trends and past pledges by the US. In particular, total US net emissions fell by 11% between 2005 and 2011, meaning that the US has much work to do in order to reach its 2020 target of -17%. The current announcement thus constitutes a reaffirmation and a deepening of the 2020 commitment.

Moreover, as highlighted in the INDC, “achieving the 2025 target will require a further emissions reduction of 9-11% beyond [the] 2020 target compared the 2005 baseline and the substantial acceleration of the 2005-2020 annual pace of reduction, to 2.3-2.8% per year, or an approximate doubling.” The US will not be able to reach such a level of ambition by solely relying on the continuation of current trends, such as low gas prices brought about by the shale gas revolution.

The US' choice not to mention adaptation in this INDC is consistent with the position it holds in the negotiations. However, many federal, state and local measures have been taken, such as the 2013 Executive Order Preparing the United States for the Impacts of Climate Change. It could have been interesting to see more of these climate-resilient policies in the INDC.

Likewise, it is quite surprising not to see any mention of finance. Even if the US did not consider the INDC to be the proper place to discuss this topic, a simple acknowledgment of the needs and efforts required to deal with finance, technology transfer and capacity building would have sent a positive signal to other countries. One can hope that the upcoming months will provide opportunities for the US to clarify these points.

Regarding transparency, the US INDC specifies the timeframe, scope, and coverage of its commitment (indications on gases and sectors, all emissions and removals, for the base year 2005) and provides details on assumptions and methodological approaches used, including for the land sector and for the (non-)use of international markets mechanisms. The fact that the INDC highlights the consistency of its approach with the US Greenhouse Gas Inventory, and invites readers to find additional information on the Environmental Protection Agency website is an encouraging step to fully make accessible its methodologies: calculations, models, data, etc. These two elements make the US INDC rather transparent, providing a good example on how countries could transparently describe—and in the future, report on—their emissions.

Interestingly, the country does not truly justify on which basis its contribution might be considered as fair. It only refers to its emission pathway, and claims that these targets are consistent with the 2°C target, while recognizing that

"substantial global emission reductions" will be needed to stay below 2 degrees Celsius. In doing so, the US insists on the need for a "longer range, collective effort", rather than on domestic information (such as what previous contributions had presented: reduction of its emissions/capita, past reduction of emissions etc.) that could have informed the fairness of its contribution.

2. How does the country plan to reach the objective of the INDC?

It is interesting that alongside its INDC, the country publishes "information provided in order to facilitate clarity, transparency, and understanding" which includes some more specific details regarding "*domestic laws, regulations, and measures*" that could be relevant for attaining its target. It also lists some of the actions undertaken by the Obama administration, but stays rather vague on long-term actions. This communication is an encouraging step for moving away from a discussion exclusively centered on GHG-emissions towards a greater attention to the implementation of the target, i.e. policies and measures.

In previous official communications, in particular in the 2013 Climate Action Plan, the US has been reasonably clear in detailing the policy measures that would be triggered mainly by the President's executive power, and by provisions of the Clean Air Act as well as some parts of the Energy policy Act and the Energy Independence and Security Act.

The main elements of this policy package are regulations on new and existing power plants, which aim to accelerate the decrease of emissions from electricity production beyond the 16% decrease on 2005 levels that has already occurred (for other reasons, notably shale gas). The Clean Power Plan, which will establish a flexible framework for states to reduce their carbon emissions, should reduce US electricity sector emissions by 30% by 2030 compared to 2005 levels.

The second pillar consists of norms and regulations for the road transport sector (27% of current US emissions from fossil fuel combustion), which prove the only real leeway to affect transport-related emissions in the context of low oil prices and a structural inability to pass higher energy taxes through Congress. The administration has already passed regulations aiming to more than double the efficiency of the light-duty vehicle fleet by 2025. In 2011, it also established the first fuel efficiency and greenhouse gas standards for medium- and heavy-duty vehicles built up to the 2018 model year (one of the very few programs globally to regulate trucks and buses), which are due to be revised in 2015 to extend them to 2025.

A third pillar concerns regulations on the building sector (through standards on energy conservation for example) and energy conservation standards on appliances. The household and services sector accounts for 77% of US electricity production and 34% of total US energy consumption. Improving the efficiency of energy using appliances is therefore crucial.

Long-term analyses explicitly articulating mitigation action at different time scales (like the US DDPP analysis) can also inform and help to assess the feasibility of the INDC goal. Indeed, a crucial question is to determine whether reaching the INDC target involves early retirement of installed capital, which would create a risk of potentially important costs. This is particularly important for long-lived infrastructure (notably power plants, industrial boilers or heavy duty vehicles) for which there will be a single replacement opportunity over the next decades. Long-term analyses prove that if appropriate decisions (based on economic and operational lifetimes of capital) are taken, this INDC target is consistent with the natural turnover rate of capital and therefore the target can be reached without facing the cost of early retirement of capital and stranded assets.

3. How does the INDC relate to other national policy priorities?

As is the case with some other countries, a full integration of the climate agenda into all domestic policies is not present in the US INDC. Even though many agencies and economic sectors have been integrated in the process, climate policies mentioned in the INDC are limited to the energy/environment sectors. However, a key element for the prevention of conflicts between climate policy and economic or social priorities is the forecasted energy price trend, and potential costs associated to a low-carbon transition. Economic assessments of scenarios corresponding to the level of ambition in the INDC demonstrate that these effects are in fact rather moderate.

4. What are the (national and international) blockages and opportunities to deeper emission reductions?

The 2025 timeframe is an important milestone in the low-emission trajectory, but the transformations to be implemented to reach this target must be envisaged in a longer-term perspective allowing a decarbonization of the energy system to be pursued towards 80% reduction in 2050, which raises specific challenges for short-term action defining ultimate potentials of action.

The US INDC plan targets reductions in the country's largest sources of emissions—power, transport, efficiency—and helps avoid the long-term lock-in of high emitting infrastructure (particularly in the power sector). But different routes can be taken to achieve this aim, notably the decarbonization of electricity (which depends on the relative importance of renewables, nuclear and Carbon Capture and Storage) and the implementation of deep efficiency progress. With this aim, the avoidance of new coal power plants lacking CCS or increasing the stringency of vehicles and appliances would be heading in the right direction. Thus, preparations for the next step must already be in place to ensure the availability of solutions to deliver further emission reductions after 2025. This implies that preparations be made to provide appropriate conditions for adequate technology development and market transformation capable of meeting ambitious targets such as almost zero-carbon electricity or the distribution of around 300 million alternative fuel vehicles by 2050.

Secondly, further reductions will be needed in some sectors, such as industry, that have not yet been addressed. In others, such as the power sector, regulations could probably be strengthened. However, significant opposition in Congress would probably prevent further action in this direction, as it would make retrofitting existing buildings difficult to activate at federal level.

While some blind spots remain in US policy, the most important point is that the US is able to establish this policy framework and demonstrates that decarbonization is economically and technically feasible. Many companies, cities and states are already engaged in this effort, and demographic and electoral trends point towards increasing concerns regarding climate change.