

## Trump's climate policies would see US climate action rating drop from "medium" to "inadequate"

### Climate Action Tracker

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March 31, 2017

### Summary

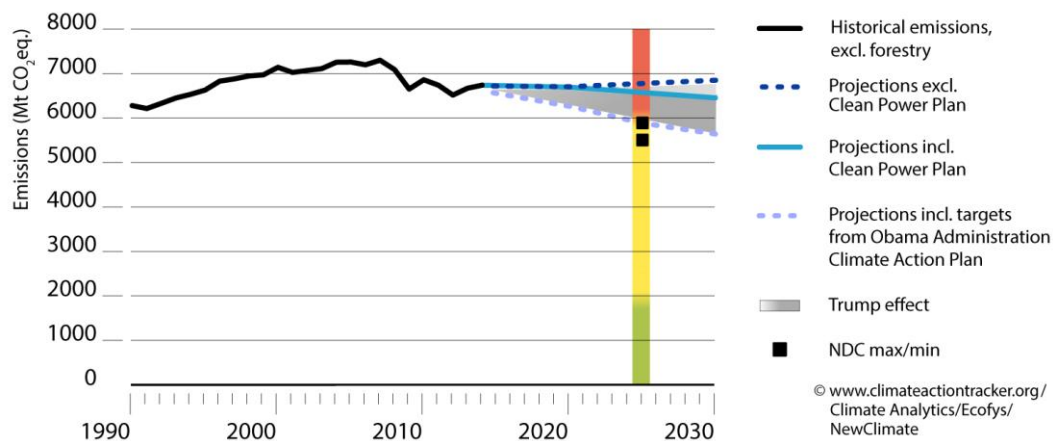
US President Donald Trump's 28 March Executive Order formalises his pre-election commitments to unwind science based climate action in the United States, but this will not stop the clean energy transition now underway globally.

President Trump's Executive Order, if codified as a commitment under the Paris Agreement, would downgrade the US CAT rating to "inadequate"—a level of action that, if followed by all other countries, would warm the world by around 4°C, leading to a warming not seen on the planet for 55 million years. This would relegate the United States to the bottom of the global climate action league.

The Executive Order sets the US on a path to miss its Paris Agreement commitment (NDC) for 2025 by a large margin. Under President Trump, emissions in 2025 and 2030 are expected to be roughly similar to today, instead of the 13% decrease from 2014 levels needed to meet its commitment in 2025.

The Executive Order will not easily reverse the trends that have driven down US emissions in recent years. Although the order begins the process of "suspending, revising, and rescinding" currently implemented policies, these steps are likely to be subject to legal disputes over the coming years and will therefore have a delayed impact on emissions. In addition, unstoppable market pressures (e.g. the low cost of renewables) and actions at state and local levels (e.g. a separate car fuel efficiency standard in California) will continue to drive developments that decrease greenhouse gas emissions.

But it is almost certain that, as a consequence of the order, the USA will miss its NDC target for 2025 because it will prevent the implementation of new policies previously planned by the Obama administration.



**Figure 1. Emissions projections for the USA: The grey shading shows the possible “Trump effect,” as the administration moves away from emissions reductions that the Obama Administration had planned. The dark blue dotted line shows emissions based on current policies, but excluding the Clean Power Plan (CPP). The solid blue line shows the expected emissions trajectory with the CPP. The purple dotted line shows the emissions level the Obama Administration was striving for with the CPP and the Climate Action Plan (CAP). The rescission of the Climate Action Plan means the US will overshoot its Paris Agreement target (black squares).**

## Impact of new Executive Order

US President Donald Trump’s Executive Order (EO) on “Promoting Energy Independence and Economic Growth,” (The White House, 2017a), which includes rescinding the Executive Order “Preparing the United States for the Impacts of Climate Change,” (The White House, 2013a) formalises his pre-election commitments to unwind climate action in the United States.

### What are the impacts on the US energy system and policy landscape?

It seems unlikely that President Trump’s Executive Order will reverse the trends that have driven down US emissions in recent years for two reasons:

First, although the Executive Order begins the process of “suspending, revising, and rescinding” currently implemented policies, these steps are likely to be subject to legal disputes over the coming years and therefore will have a delayed impact on emissions. In addition, a large number of US states and cities (Hess, 2017)—and utility companies (Pyper, 2017) are committed to implementing the Clean Power Plan provisions, separate car fuel efficiency standards (e.g. California) or other clean energy and climate action plans, and seem set to continue irrespective of the Order at this time.

Second, unstoppable market pressures will continue to drive development that decreases GHG emissions. Clean energy installations—wind and solar—have grown rapidly in recent years in the United States and account for the largest share of new electricity capacity in 2016 (U.S. Energy Information Administration, 2017), a pattern set to continue in future years.

Along with this, employment in these sectors has also grown to the point where wind energy alone employed 88,000 people in the US in 2016 (IRENA, 2016), a number that approaches the 100,000 (and declining) employed in the coal industry. It is very unlikely that the Executive Order will reverse the decline in coal mining employment as ongoing automation in the industry will continue to reduce the number of workers needed and the

coal industry is not going to be able to compete with cheap gas or renewables (Tabuchi, 2017).

### **What are the consequences for US emissions?**

The Executive Order sets the US on a path to miss its Paris Agreement commitment for 2025 by a large margin. Emissions in 2025 and 2030 are expected to be roughly similar to today, instead of the 13% decrease from 2014 levels needed to meet its Paris Agreement commitment. This is similar to previous Climate Action Tracker estimations under currently implemented policies.

The biggest difference is that the EO stops previous attempts to implement additional policies such as several measures under the Obama Administration's Climate Action Plan. The full implementation of this plan would have reduced emissions close to the NDC target in 2025.

### **What does this mean globally?**

The Climate Action Tracker rates the US NDC target that was submitted by the Obama Administration to the Paris Agreement as 'Medium'—not yet consistent with limiting global warming to 2°C, let alone 1.5°C, unless other governments made much deeper reductions. President Trump's EO, if codified as an NDC, would warrant a rating of "inadequate"—a level of action that, if followed by all other countries, would set the world on a pathway expected to lead to 4°C global average warming.

The effects of the EO on global climate action are likely to be limited. The centre of action on climate change is now very much in China, the EU, India, Canada and other countries. With declining prices of energy technologies, energy storage systems and electric vehicles, it seems very unlikely that anything that the Trump Administration does in the US will slow down this transformation at global level.

In a broader sense, a retreat by the United States from a science-based approach to climate policy appears to diminish expanding economic and technological support in many US regions, and might be the longest lasting consequence of President Trump's initiatives.

## **Threats to individual elements of US climate policy under Trump**

### **Clean Power Plan**

*Action: The executive Order directs EPA Administrator Scott Pruitt to review final rules and as soon as practicable "suspend, revise, or rescind the guidance."* (The White House, 2017a)

The Clean Power Plan (CPP) is a hallmark element of the Obama Administration's climate policy, introducing national standards to reduce carbon pollution from power plants. The Supreme Court stayed the plan in 2016, so it has yet to be fully implemented. However, the EPA is currently legally required to regulate GHGs under the Clean Air Act, meaning that in order to repeal the CPP, they will have to replace it with something else. A new rule needs to undergo a phase of public comment of a minimum of 120 days, meaning the overall process is expected to take at least a year, and that does not include the legal challenges promised by many. The Clean Power Plan received over four million comments and was the result of more than two years of work (U.S. Department of State, 2016).

Full implementation of the CPP would have reduced US GHG emissions to 9% below 2005 levels in 2025, making it necessary—but inadequate—to achieve the US Paris Agreement commitment.

Market pressures will continue to drive the increase of renewable energy in electricity production, with or without the Clean Power Plan. Costs of renewable energy continue to fall, with wind and solar energy already showing lower marginal costs than nuclear, coal, and gas in some areas of the country (Enernoc, 2017).

States and cities will also continue to increase their share of renewables: 29 states and DC have renewable mandates and 25 cities have a target to source 100% of their power from renewables. Other state-level policies include cap-and-trade systems and energy efficiency mandates. Many utilities were already including carbon emissions in their planning process and will continue to do so. In addition, the Executive Order states that it is “in the national interest to promote clean and safe development of our Nation’s vast energy resources...including renewable sources.” Harnessing the US’s significant renewables potential would indeed contribute to an energy secure and sustainable US energy system.

## Coal Regulations

*Actions: rescinding Presidential Memorandum on Power Sector Carbon Pollution Standards, reviewing CPP rules, lifting moratorium on coal leases on federal lands (The White House, 2017a)*

The Executive Order rescinds the presidential memorandum that preceded the CPP and lifts the moratorium on coal leases on federal lands. On paper, this is in line with Trump’s deregulatory agenda and stated aim to “revive America’s coal industry” (The White House, 2017b). The true effects are less clear—coal is currently economically unviable as compared to cheap natural gas, and prices of renewables continue to fall. Many utilities have already switched to gas-based infrastructure, and are unlikely to turn back. Trump’s actions alone do not change that picture.

## Oil and Gas Sector Regulations

*Actions: Executive Order directs Secretary of the Interior Ryan Zinke to review final rules on a number of oil and gas regulations and as soon as practicable “suspend, revise, or rescind the guidance” (The White House, 2017a). Separately, Trump has now permitted the Keystone XL pipeline, which would link oil production in Alberta, Canada to the US Gulf Coast (Under Secretary of State for Political Affairs, 2017)*

The Executive Order includes a directive to suspend regulations on methane emissions from the oil and natural gas sector. The final EPA standards were predicted to reduce methane emissions by 11 MtCO<sub>2e</sub> by 2025 (EPA, 2016), which may only partially occur if the rule is walked back.

The Keystone XL pipeline, which could transport up to 830,000 barrels of oil per day, could lead to an upswing in oil production from oil sands in Canada. However, it is unclear whether this would actually happen, leaving great uncertainty on the actual impact of the pipeline on GHG emissions. Emissions estimates range from near nothing to 110 MtCO<sub>2e/a</sub> (Erickson and Lazarus, 2014).

## The Obama Administration’s Climate Action Plan

*Action: Executive Order rescinds both the President’s Climate Action Plan and the Climate Action Plan Strategy to Reduce Methane Emissions (The White House, 2017a)*

President Trump’s Executive Order rescinds Obama’s Climate Action Plan (CAP), having already put forth his own “America First Energy Plan” in January (The White House, 2017b). The CAP provided overarching guidance for the direction of US climate policy under Obama (The White House, 2013b), and a number of elements have already been implemented, for example fuel efficiency standards for vehicles, and efficiency improvements in the building sector. The policies that have already been implemented would have to undergo a separate process to be rescinded, but the targets that were set out under the CAP will now not be reached. Our analysis shows that if the US had met the targets set out in the CAP, it

would have also met its NDC commitment (Figure 1). Without these targets in place, the US is likely to miss its commitment by a wide margin.

## Light Duty Vehicle Emissions Standards

*Action: EPA and NHTSA will reconsider the standards for light duty vehicles (EPA, 2017)*

The Environmental Protection Agency (EPA) and National Highway Traffic Safety Administration (NHTSA) will reconsider federal standards for light duty vehicle emissions, which were expanded under the Obama administration. Current standards are finalised until 2021. CAT calculations show that if industry fleet wide standards of 134 g CO<sub>2</sub>/km in 2021 are reached, and the fleet stays at that level, total GHG emissions from light duty vehicles in 2025 will be 31 MtCO<sub>2</sub> higher than they would have been if additional planned standards for 2025 had been implemented (101 g CO<sub>2</sub>/km). This is only 0.4% of total 2005 US GHG emissions. By 2030, this difference increases to 101 MtCO<sub>2</sub>, or 1.4% of 2005 emissions.

California has the ability to set its own standards, and the State Government has now voted to align with the new Obama federal standards that the Trump Administration is reviewing (Megerian, 2017). China also continues to put forward stronger regulations. Since cars are sold on a global market, automakers would have to comply with those standards to stay competitive, while still being able to sell more inefficient cars in states where relaxed standards apply. Therefore, it is likely that relaxation of the federal standard could—to some extent, but not completely—slow down efficiency improvements of vehicles in the USA and beyond.

## Social cost of carbon

*Action: Executive Order withdraws guidance on using the social cost of carbon for regulatory impact analyses (The White House, 2017a)*

The social cost of carbon monetises carbon emissions, allowing them to be included in cost-benefit analyses and helping to evaluate projects by bringing the impact of emissions into the equation. The social cost of carbon is an important marker when crafting regulations that reduce emissions. Removing this cost from regulatory decision making makes it more difficult to implement regulations involving calculations of costs and benefits, leading to a possible future increase in emissions where different mitigation options are being examined. Recent reviews of the social cost of carbon taking into account climate change induced economic damages point to “a social cost of carbon several times larger than previous estimates” (Moore and Diaz, 2015). Whilst the additional impact of this part of the Executive Order may be limited, as the Trump Administration was not expected to use the social cost of carbon in policy, it reflects a further erosion of science based action by the Trump Administration.

## Climate change preparedness

*Action: Executive order revokes (The White House, 2017a) Obama’s executive order: “Preparing the United States for the Impacts of Climate Change” (The White House, 2013a)*

Obama’s executive order was intended to “prepare the Nation for the impacts of climate change by undertaking actions to enhance climate preparedness and resilience” (The White House, 2013a). It created a Council on Climate Change Preparedness and Resilience to coordinate climate change adaptation efforts across government agencies. By revoking this order, Trump makes it more difficult for the government to prepare for the natural disasters that climate change will cause.

## Paris Agreement and NDC

*Action: Withdrawal from the Paris Agreement is still being discussed by the Administration but has not yet been addressed in any Executive Order or legislation; the proposed budget would cease payments to UN climate change programs (Greenfieldboyce, 2017)*

Although the Trump Administration is still discussing whether to pull out of the Paris Agreement entirely, the measures laid out in the Executive Order are clear: President Trump has no intention of meeting the United States' NDC commitments.

As its Nationally Determined Contribution (NDC) under the Paris Agreement, the Obama administration pledged to reduce its greenhouse gas (GHG) emissions by 26–28% below 2005 levels by 2025, including LULUCF (19–24% below 2005 excluding LULUCF). Until it is retracted, it stays the official NDC of the United States. Under Trump, emissions in 2025 are likely to be only 6% below 2005 levels, excluding LULUCF, and potentially even higher if he succeeds in rolling back currently implemented policies that reduce GHG emissions.

Our analysis shows that even the full implementation of the Clean Power Plan would not have been enough to meet the NDC targets. It would have been necessary to meet the targets set forth in the CAP, including doubling energy productivity by 2030 over 2010, doubling electricity generation from solar, wind, and geothermal sources by 2020 over 2013, and reducing methane emissions from oil and gas production.

Although some progress will be made, driven by unstoppable market forces and non-federal action, meeting these targets would have likely required additional policies.

The Climate Action Tracker rates the US NDC target as 'Medium,' meaning that even if it were to be reached, it would not be consistent with limiting global warming to 2°C, let alone 1.5°C, unless other countries made much deeper reductions. The new Trump Administration's policies would mean a downgrade of that rating to "inadequate." This is a level of action that, if followed by all other countries, would warm the world by around 4°C, leading to a warming not seen on the planet for 55 million years (Zeebe et al., 2016).

President Trump's budget proposal will also have impacts outside of the US: payments to UN climate change programmes like the Green Climate Fund will be stopped, depriving other countries of much-needed funding to implement their own mitigation and adaptation plans.

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