

# Climate Change Proposals in the EU, the US, and China

Date: March 2021

Opportunities and Challenges for Tackling Climate Change



# Table of Contents

<b>EU CLIMATE CHANGE PROPOSALS</b>	<b>2</b>
<b>THE STICK-BINDING CLIMATE TARGETS FOR STATES AND INDUSTRY</b>	<b>2</b>
<b>THE CARROT: A NEW DEAL AND FINANCIAL AID</b>	<b>3</b>
<b>KEY CHALLENGES</b>	<b>3</b>
<b>KEY OPPORTUNITIES</b>	<b>5</b>
<b>CHINA CLIMATE CHANGE PROPOSALS</b>	<b>6</b>
<b>KEY CHALLENGES</b>	<b>7</b>
<b>KEY OPPORTUNITIES</b>	<b>8</b>
<b>US CLIMATE CHANGE PROPOSALS</b>	<b>9</b>
<b>KEY CHALLENGES</b>	<b>11</b>
<b>KEY OPPORTUNITIES</b>	<b>12</b>
<b>SOURCES: EU PROPOSALS</b>	<b>13</b>
<b>SOURCES: CHINA PROPOSALS</b>	<b>15</b>
<b>SOURCES: US PROPOSALS</b>	<b>17</b>



## EU Climate Change Proposals

The EU's proposals to tackle climate change fall under its framework of a "European Green Deal", created and updated from its previous strategy after it declared a 'Climate Emergency' in November 2019.[1] Overall, this is a comprehensive policy package that operates on a joint reform and mitigation basis which might crudely be put as 'carrot and stick'.

### The Stick-Binding Climate Targets for States and Industry

On the one hand the EU seeks to enforce strict climate targets enshrined in law for its member states at successive stages. The Union aims to be by 2050 the "world's first climate-neutral continent" by successively increasing energy production from renewable sources and limiting greenhouse emissions.[2] The burden aims to be fairly shared through specific "national emission reduction goals" which will vary between Member states according to their ability, geographic circumstances and wealth.[3]

Concurrently, across the EU certain companies identified as being heavy polluters, such as airlines, and those operating industrial plants or power stations will be integrated into the EU's "Emissions Trading System" (ETS), the world's first and largest carbon market. The ETS operates by mandating polluting companies to purchase "emission allowances" to quantitatively match their emissions. They may also additionally purchase a limited number of "international credits" from emission-saving projects worldwide to increase their emissions allowance. If at each year's end their emission allowances do not cover all they have emitted, they face heavy financial penalties. Unspent allowances can be taken into the next year, encouraging emission-saving investment to keep long-term costs down. The ETS will thus force companies over-time to invest in ways to keep their emissions low to remain competitive within the single market.[4]

There are three key chronologically ordered policy plans and target dates for the EU to implement its vision of climate neutrality. The first is the 2020 Climate and Energy Package in which three key EU-wide targets are set. The objective is a 20% cut in greenhouse gas emissions from 1990 levels, a move to renewables, and improvement in energy efficiency.

The second is the 2030 Climate Target plan, in which the EU commits to cutting 55% of greenhouse gas emissions by 2030. This plan operates alongside a push to stimulate the creation of green jobs through extra financial packages, and an aim to convince external partners of the need to limit global temperature rises to the Paris Agreements ideal 1.5°C.[5]

The third, and most ambitious, is the 2050 long-term strategy. It aims for a climate-neutral Europe by 2050 [6] All plans are to be achieved through a fair distribution of member-state effort and cost, taking into account their specific contexts.



## **The Carrot: A New Deal and Financial Aid**

The EU seeks to meet these strict targets by providing a degree of financial encouragement to its Members. EU expenditure plans going forward will focus on the Paris Climate objective.[7] The EU also aims to reorientate its regional economy towards a green and sustainable footing that is globally competitive.[8]

It aims to maintain social cohesion and public support during this process through its “Climate Pact”, which aims to inform and support public discourse on the dangers of climate change as well as foster innovative ideas to tackle climate related challenges.[9] Concurrently, it hopes to materially support EU citizens and states via financial support, primarily through the “Just Transition Mechanism”. The burden of this shift to a new economic footing for governments and industries is to be shared among Members as needed in an attempt to limit the economic and social upheaval that comes with such a radical transition.[10]

## **Key Challenges**

### **Macro-level - Politics and Society**

Specific to states and stability;

#### **I. Consensus based political structure:**

Among the three states this report explores, the European Union’s Members retain most of their sovereignty over the vast majority of domestic and foreign policy issues. The EU itself is limited in only being able to provide an overarching framework that must be majority supported by its MEP’s and endorsed by its council, consisting of Members national representatives. The EU thus must carefully work alongside, and consider each of its individual states interests, contexts and aims. Currently negotiation over climate policy has seen one state, Poland, drop out of the legislative framework,[11] and others simply not fulfil their requirements [12] based partly on shifting individual national priorities. For instance, Poland is more concerned about energy independence than renewables with its strategic energy adviser estimating it will continue to get 40-50% of its energy from coal in 2040.[13]

#### **II. Geo-economic divides on climate change policy:**

The lack of consensus on climate change reflects the EU’s geo-economic divides on broadly East and West lines. Eastern Europe is comparatively less wealthy than its western counterpart, [14] with lower median income for citizens compared to the EU average. Eastern states have concentrated their comparatively limited economic and political capital in attempting to raise living standards and economic opportunities,[15] rather than modernizing their industry and power infrastructure on renewable lines. They subsequently continue to use more fossil fuels than elsewhere in the EU.[16] Poland’s largest utility company has highlighted that the EU 2030 target of a 55% cut in emissions is “impossible” for Poland, as it cannot bear the “technical, economic or social” costs of re-orientating its energy infrastructure and economy in such little time without a significant increase in EU funding.[17] It estimated that the process to achieve the EU’s 2050 target would cost Poland €206 billion to renovate its energy



infrastructure, while EU funds for that purpose fall far short of this sum, and have to be shared among all participants.[18] However, wealthier western EU nations who are net payers to the budget,[19] are not always able, or politically willing, to increase support.[20] A key reason for this is that eastern Members tend to be net beneficiaries of EU funding, Poland being the largest.[21]

### **III. Social divides give eastern Member states less scope for directly invasive climate policy:**

The East-West European geo-economic divide and its different political priorities filters through, and in turn informs, social and political outlooks which are also divided. While the EU's political entities and societies all broadly recognize climate change as a key issue,[22] opinion on the nature and targeting of legislation differ. On a scale of 0-10 with 0 being not at all and 10 being a great deal, citizens in eastern Member states respond with an average of 4 to the question of feeling personally responsible for reducing climate change. In wealthier western states, the answer averages at 7. This is informed by their differing personal and economic contexts and shapes the scope for government policy.

For instance, Poland has demanded more aid if it is to subscribe to the EU's 2050 climate targets to mitigate its wider perception (and greater risk) of the radical reforms causing social and economic upheaval among its citizens. This demand had a legitimate basis as the EU climate framework would force it to spend a significant proportion of its own state budget on attempting to meet the targets, leaving less to spend on far more popular electoral demands like addressing inequality or healthcare. [23] This caused tensions with the EU's western net contributors,[24] whose citizens are more comfortable with bearing directly some of the economic brunt of climate change policy due to their generally higher standard of living.

### **IV. Political 'Spill-over' from other disputes:**

A final issue that impacts all Members is that in the pursuit of their national interests elsewhere, EU climate policy is prone to becoming an easy arena for competition among rival states. Poland and Hungary for example, have threatened to veto the EU financial package for the next 7 years over a clause requiring respect for the "rule of law" in light of EU Commission criticism of policies in both states that "limit media freedoms and the independence of the judiciary".[25]

## **Micro-level - Businesses**

Specific to business;

### **I. Loss of export competitiveness:**

The EU's 'stick' approach of extra legislation, an expanding and more restrictive ETS, and demands that businesses put extra investment into becoming climate neutral, may mean that outside the EU single market the competitiveness of individual Members' exports declines. Non-EU rivals who do not face having to price these extra business costs into the products can more easily undercut or maintain their comparative prices while the price of EU exports increases.



1/3rd of all EU exports [26] are to countries outside the single market, and for export heavy Members like Germany these contribute almost as significantly to their economy as single market exports do.[27] If German exporters have to increase prices to cover the cost of the ETS and other EU mandated climate legislation, they put at risk not only Germany's position as a lead global exporter, but also the 28% of German jobs that are directly or indirectly reliant on their exports continuing to be globally competitive. Any downturn here due to climate legislation can quickly lead to major social and economic repercussions. [28]

### **Challenges Summary:**

With these factors in mind, the EU has performed admirably well so far. While it faced resistance, it was able to compromise with states through further financial incentives and while losing Poland for its 2050 target, it's possible for renegotiation to continue. However, as the EU's targets ramp-up, and as states begin to implement radical policies to meet them, we can expect there to be an increase in public awareness and tension as economic disruption and state social spending is affected in different ways among different states. EU businesses that are reliant on non-EU markets may find themselves with onerous regulations that allow competitors to undercut them, creating issues with stable employment for states reliant on industry and exports.

It is likely that eastern states will demand, and need greater financial support from the EU, while simultaneously western Members who are net contributors will become more resistant to further increases in aid, especially as they require greater self-investment to meet the EU's more radical targets approaching 2050. Compromises between meeting the needed radical targets, increased financial support, and flexible timelines may have to be made, lest the EU's approach fall apart, and more states follow the example of Poland.

## **Key Opportunities**

This is not to say the EU's climate policy will not be successful. For its 2020 aims, it has successfully met several key targets, including renewable energy and cutting emissions. While work is needed for its more ambitious 2030 and 2050 goals, they are possible provided greater focus and more radical policies are adopted by national governments.[29]

### **I. For investors and businesses:**

Two key points here will aid future business opportunities. First the EU is successively turning its loose policy framework, into an enforceable body of "climate law" applicable to all Members.[30] Secondly, it has committed that any further additions or changes to its climate policy must be discussed openly and in detail with public input. These moves will provide certainty and stability during a period which would otherwise be filled with disruptive and radical change, aiding investors and businesses expansion to make the best of the potential opportunities with a degree of certainty and so security.



The EU wants to integrate and leverage private investment and enterprise in its plans to create a green circular economy.[31] It hopes to do this alongside providing legal stability through a series of funds and investment support for companies. Indeed, it has earmarked 30% of its entire 2021-2027 budget for climate related projects.[32] This presents a myriad of opportunities for green tech development, renewable energy, and new market opportunities such as in carbon capture and electric cars, and state support for companies making a renewable transition.[33]

## **II. For new start-ups:**

The market disruption that will stem from EU member states pushing politically and legally to create ‘climate neutral’ economies will benefit a sleuth of new businesses that are able to be more flexible and dynamic than established companies who have long-standing commitments and practices. It may see a European Tesla-story arise in many industries, especially as the EU have specifically noted as wanting to lead the way globally, towards a green revolution.[34] The EU has committed state funding to the research and development of cutting-edge tech, which the private sector might find too risky to deliver without such support.

## **China Climate Change Proposals**

The Chinese government acknowledges the unsustainability of its growth path, and has attached great importance to pollution reduction, green growth and climate action in its policymaking. In September 2020, President Xi Jinping declared that China aims for CO<sub>2</sub> emissions to peak before 2030, and carbon neutrality to be achieved before 2060. <sup>[i]</sup> As the largest energy producer and consumer of fossil fuels, China’s actions to reduce emissions will be a keystone of global action towards limiting global warming to 1.5C above pre-industrial levels.

The Chinese government has positioned itself as a climate champion since the Paris Agreement, and has exercised considerable leadership in global climate governance especially in the absence of US engagement during the Trump administration. China has been highly proactive in carbon emissions reduction, meeting its 2020 NDC targets 3 years ahead of schedule. <sup>[ii]</sup> Environmental protection expenditure is also at a new high, at 744.357 billion yuan in 2019. <sup>[iii]</sup> Provincial authorities and industries have always responded enthusiastically in the implementation of central government directives. A combination of favourable investment conditions, policy incentives, subsidy removal, has led to a flurry of activity in renewables construction: in 2020, China added 72GW of wind and 48.2GW of solar power capacity. <sup>[iv]</sup> Furthermore, last year, a significant 57% of China’s overseas energy investment went into renewable energy rather than fossil fuels, compared to 39% in 2019. <sup>[v]</sup> The strong track record China has established thus far is testament to the likelihood that Xi’s ambition of peak emissions by 2030 will be credibly achieved.

The Chinese government has been progressively implementing policies and guidelines in its ambition to “win the blue-sky war”.



- On February 1<sup>st</sup>, China launched a carbon emissions trading market in its power sector, which covers around 30% of the country's emissions. Incentivising emissions reductions among China's coal-fired power plants will be crucial in its clean energy transition. In 2018, CO<sub>2</sub> emissions from coal plants reached 4.6 gigatons, surpassing the emissions from fossil-fuel combustion of the EU and Japan combined. <sup>[vi]</sup>
- On February 21<sup>st</sup>, the State Council issued a document titled "Guiding Opinions on Accelerating the Establishment of a Green Low-Carbon and Circular Economic System". <sup>[vii]</sup> In it, the government sets out two targets. Firstly, by 2025, there will be a "significant increase in the proportion of green industries" through an optimisation of industrial, energy and transportation structures towards a green circular economy. Secondly, by 2035, efficient energy and resource allocation in key industries and products will be expected to reach an "advanced international level". The decrease of carbon emissions will lead to an achievement of "building a beautiful China". <sup>[viii]</sup>
- On 7<sup>th</sup> March, a draft policy from the National Energy Administration suggests China to raise minimum renewable power purchase to 40% by 2030, from 28.2% in 2020. <sup>[ix]</sup> Of the 40%, the NEA suggests that non-hydropower renewable sources will reach a minimum of 25.9% by 2030.

These policies indicate China's rising ambition in its environmental policy and is a signal for what is to come in the country's upcoming 14th Five Year Plan (2021-2025). In the next few months, national-level targets and policies will be issued by the National People's Congress, followed by sectoral and regional plans. <sup>[x]</sup> Environmental policy will be high up on the government's agenda, with the Ministry of Ecology and Environment heading the effort in drafting the country's first national-level plan specific to climate change.

## Key Challenges

### I. National policy coordination

It is naïve to assume that national-level directives would always lead to consistent and top-down implementation of goals and rules. Although the central government and its policies reign supreme, policies can fall short of environmental goals as the regime cannot avoid powerful constituencies that build up within the system, such as local or provincial governments. For instance, Inner Mongolia, China's top coal province, approved twice the number of coal-fired power plants in 2020 than the year before as a measure of economic growth promotion, despite government directives to beat pollution and phase out coal fired plants. <sup>[xi]</sup> Eager to recover from pandemic-induced economic slumps, sub-national players such as Inner Mongolian authorities risk locking China into a high-carbon pathway, while justifying their actions as fulfilling another of the Chinese government's targets: economic growth. Furthermore, national-level directives cannot avoid the interests of powerful constituencies within the system, such as alignments between state agencies and state-owned companies, backed up by universities and think tanks. <sup>[xii]</sup> Conflicts could also emerge between energy companies and grid owners. These sub-national conflicts mean that low-carbon goals cannot necessarily be implemented in a straightforward manner.

Furthermore, issues have emerged in terms of policy implementation by state agencies. These can be divided into two key issues. Firstly, the disbursement of subsidies. While the central





government has offered financial incentives to the power sector for decarbonisation, a squeeze in finances due to COVID-19 has made it increasingly difficult for the government to hand out the feed-in tariffs. Over 90% of new renewable energy projects from the 13th Five Year Plan (2015-2020) have not received the subsidy. Secondly, inadequate enforcement by state agencies. In 2015, Xi Jinping created the Central Environmental Inspection Team (CEIT) to end local protectionism and increase environmental oversight. The CEIT launched an investigation against the National Energy Administration (NEA), and openly criticised it for failing to limit the country's expansion of coal power plants. The report revealed that from 2013-2017, the NEA approved 22 coal-mining projects without receiving comments from their environmental impact assessments; 11 of them did not undergo any assessment. [xiii]

## **II. Continued fixation with emissions-heavy growth**

Fossil fuels currently make up 85% of China's energy consumption, and around 60% comes from coal. [xiv] Despite government ambitions to increase the proportion of domestic renewable energy and overseas renewable energy investments, provincial governments across the country have been advancing coal power capacity, leading China to add more than 3 times as much new coal power capacity as all other countries combined in 2020. [xv] Approval for coal projects in 2020, reached 40.8GW in the first half of 2020 alone, and total capital expenditure on oil and gas projects in the works is estimated to be worth US\$173 billion. [xvi] The increase in coal plant development may be a result of the National Energy Administration (NEA) loosening restrictions on new coal project. At the end of January 2021, China's Central Environmental Inspection Team openly criticised the NEA for failing to limit the expansion of coal power plants in regions that are already severely polluted, prioritising a secure energy supply at the expense of the environment. [xvii]

In addition to the expansion of coal, China's pandemic recovery measures are highly energy-intensive, further compromising the government's determination to see low-carbon development. The stimulus package offered by the Chinese government was primarily driven by infrastructure investment, which is energy-hungry and carbon intensive. [xviii] Data from carbon-intensive sectors confirms that emissions are on the rise – output of energy-intensive construction materials such as cement and steel rebounded in March and April 2020. Such economic recovery measures have led emissions to bounce back, with a relatively small 1.4% decrease in carbon emissions in 2020, compared to a 6.4% global average decrease. [xix]

## **Key Opportunities**

### **I. Proactive green investment**

Beijing attaches high strategic value to green technologies, with governments at all levels providing financial and technical support to advance their development and use. China currently boasts the largest green finance market, with about US \$1.8 trillion in green credit and US \$190 billion in green bonds at the end of 2020. [xx] Based on the government's ambition to significantly increase the proportion of green industries by 2025, China will likely be much more proactive in promoting the harmonisation of domestic and global green standards so that international investors can invest in the country's green finance market. Currently, the People's Bank of China is working on a series of assessment measures to



evaluate green loans and bonds, as well as incentive policies to guide financial resources towards greater green development. [xxi] On March 7th, 2021, Wang Xin, Director of the bank's Research Institute, outlined the comprehensive dimensions of China's green financial market development. [xxii] These dimensions include: 1. A low carbon circular economy 2. Development of green finance 3. Improve international markets for green finance 4. Steadily open up account convertibility 5. Increase RMB-denominated green investments in BRI countries. According to Zhu Min, Chairman of the National Institute of Financial Research at Tsinghua University, it is expected that between 2021 and 2060, annual investment in renewable energy will exceed 1.5% of China's GDP. [xxiii] This would mean that in the next 5 years, RMB 1.5 trillion to RMB 2 trillion per year will have to be invested in renewable energy infrastructure, and after 2030 investments will increase to between RMB 4 trillion to RMB 6 trillion. These proactive developments will provide many opportunities for investors, domestic and foreign, to invest in innovative green finance tools, so as to boost green technology and power a green energy transition.

## **II. Expansion of the emissions trading market**

At the beginning of February this year, China launched a carbon emissions trading market in its power sector, which covers around 30% of the country's emissions. [xxiv] Unlike the EU ETS, which imposes a cap on carbon emissions, China's scheme imposes carbon intensity limits on every unit of electricity generated. [xxv] Under the scheme, provincial governments set caps for power businesses, and issue a certificate for every metric ton of greenhouse gas emission (carbon dioxide or equivalent) which a company is allowed to emit. Companies can either cut emissions or pay to pollute.

A significant measure is that companies involved in the trading system will have to make their emissions levels and pollution data public so as to facilitate the operation of the market. This is an unprecedented move to increase transparency, especially among China's state-owned enterprises. This move will likely foster greater compliance among companies, increase trust in the working of the market and allow prosecutors and the public to hold them more accountable. [xxvi]

At this early stage, the government has taken a cautious approach to the market, allocating emissions allowances for free and not allowing carbon finance derivative markets. It is expected that after this stage of the scheme runs smoothly, the emissions trading market will become more complex and also cover sectors of the Chinese economy beyond the power sector. The Chinese government must increase the stringency of the caps over time and maintain strict enforcement – with more teeth, it will more likely become an important tool of China's decarbonisation efforts.

## **US Climate Change Proposals**

The US despite being the world's second leading greenhouse gas emitter, [1], has the least fleshed out and most politically fragile climate change policy of all states explored in this



report. The US at time of writing has no climate neutrality target, though this is set to change under the new Biden Administration who wants to implement for the first time a 2050 net zero target.[2] However, he will need a significant degree of control over both the House of Representatives and the Senate to make this commitment stick. The fragility of US climate policy has stemmed from two factors:

- 1) **A partisan approach to climate change:** In 2019 there were 120 elected members of congress who denied, or doubted climate change, and decried the costs of climate legislation All but 1 are Republican.[3] This means that when control of the Presidency, House of Representatives or Senate shifts, so does the ability to pass legislation that will get approved by all three elements of the USA's political structure necessary for policy to become law, which would give the legislation extra protection and political longevity from any attempts to swiftly overturn it.. US elections over the last decade for the Presidency and Congress have been politically fraught, coming down to fairly close races and switching comparatively frequently. Obama won the 2012 Presidency, but the Democrats lost the House, and in 2014 lost the Senate [4]. Obama was thus unable to legislate his climate policy into law in the face of Republican opposition, and instead had to rely on executive orders to bypass Congress, instead of building a firm legislative agenda with staying power.
- 2) **The use of executive orders:** The use of executive orders, rather than Congressional legislation to enact climate change leads to a weak legislative framework, vulnerable to the whims of the next President. Obama's use of it to push through key US climate policy was a mistake when a partisan, non-climate concerned President had the revocation or adaption of his predecessor's executive orders totally within his gift. Trump subsequently repealed most of Obama's key climate legislation through his own executive power, bypassing Congress.[5]

In terms of detail, this has meant Obama put in place a flagship 2013 Presidential Climate Action Plan, which aimed to cut domestic carbon emissions by 17 percent below 2005 levels by 2020,[6] through targeting US pollution from power plants. It also aimed to increase energy efficiency and renewable energy sources and laid out a comparatively moderate \$8 billion loan package to support these efforts.[7] This was subsequently repealed by Trump who engaged in an aggressive unravelling of American climate policy. [8] His dismantling of over 100 regulations,[9] is estimated to have generated 3% more emissions by 2035 than if the rollbacks did not happen.[10]

During Trump's tenure, lacking any federal concern for policy that mitigates climate change, individual US states forged their own climate strategies. Many joined the U.S. Climate Alliance, a bi-partisan coalition of 25 states which aimed to commit to meeting their Obama-era Paris Climate targets, despite Trump taking the US out of the agreement. Overall though their efforts have been unsuccessful without Federal support and resources. By 2025 they will only have managed to lower their emissions by 18% below 2005 levels, when a reduction of 26-28% was needed to meet the Paris target.[11]

With Biden's election in 2021, the President is hoping for a full reversal of the Trump administration's withdrawal of Federal support for climate change mitigation policy. He has been vocally supportive of setting a target for net zero emissions before 2050, and is planning to leverage over \$5 trillion of climate investment in the next 10 years.[12] On the international



stage, Biden has used an executive order to rejoin the Paris Agreement, and has appointed John Kerry as a special climate envoy to tackle the climate as a “national security emergency”.<sup>[13]</sup> While US climate policy is not yet fully coherent, Biden’s actions so far indicate that climate change will be a top priority of the administration, bringing US Climate Policy full circle to rebuild and expand on the Obama administration's original efforts.

## **Key Challenges**

### **I. Climate scepticism**

Acceptance of climate change in the US is more controversial than in the EU or China. While 64% of adults think protecting the environment is a top priority for the president and congress, this conviction is heavily divided along partisan lines, where 85% Democrats agree climate change is a top priority, only 39% of Republicans do.<sup>[14]</sup> During the Trump presidency, his administration sowed mistrust towards climate action, calling it unfair and job destroying, and that climate change was a hoax created by the Chinese.<sup>[15]</sup> This plays into existing doubts among the American people about the detrimental social and economic effects of climate change policies. Although a just climate transition is generally agreed to be a job creator, many Americans have continued to buy into narratives, such as allegations that the Paris Agreement will cost 6.5 million jobs and \$3 trillion in economic growth by 2040.<sup>[16]</sup> There is not really a politically or socially stable consensus from which climate policy can be implemented, and Biden will need to devote substantial effort on education and policy promotion.

### **II. Strong fossil fuel lobby**

Biden is aiming for a carbon-free electricity grid by 2035. This could prove challenging because of the significant influence of the fossil fuel industry, across the country, on Republican lawmakers. In the 3 years following the signing of the Paris Agreement, the five largest listed oil and gas companies have reportedly invested over \$1 billion on misleading climate-related branding and lobbying to maintain a license to operate and expand fossil fuel operations.<sup>[17]</sup> In reaction to Biden’s series of executive orders, the lobby is attempting a series of obstructive actions against the climate agenda. At the end of January, 6 Republican attorneys wrote a letter to Biden warning him not to overstep his authority.<sup>[18]</sup> Republican lawmakers have attacked Biden’s orders, and the petroleum industry has revived advertisements to promote the drilling on federal lands. The financial clout and political influence of the industry will undoubtedly be a lingering thorn in Biden’s side.

### **III. Potential difficulties in passing climate legislation**

Climate change is a challenge requiring all levels of the US government working towards the same goal. The best way to coordinate efforts across government agencies, the federal government, individual states and local authorities, is through a comprehensive climate bill. However, climate policy does not enjoy bipartisan consensus. Despite Obama’s ambitious plans for climate action, upon losing his majority in the House in 2010, he was unable to gain legislative backing for his climate agenda, and instead had to rely on executive orders to take action.<sup>[19]</sup> Executive action often leaves policy at the mercy of the successor, in this case Trump, who undid most of Obama’s climate legacy. Biden currently has control over the



House, and a tenuous control over the Senate, with vice-president Kamala Harris acting as a tiebreaker in the event of a 50-50 partisan split. While this may be a favourable situation for Biden, as it is likely that even a thin majority for the Democrats will lead to more federal support for climate action, it is also quite precarious, and his success in passing climate policies are rather uncertain. US business groups plan on relying on maintaining a filibuster to block climate legislation they oppose. Given that 60 votes in the Senate are required for cloture (to end debate and move to a vote), Biden's legislative climate agenda may face considerable obstacles on Capitol Hill.[20] Until Biden can convince fossil fuel supporting lawmakers to support his agenda, he will have to rely on the issuing of new rules, which are vulnerable to being revoked.[21]

## **Key Opportunities**

### **I. The Biden administration is proactive, and can drive a lot of change through executive action**

Despite the tenuous nature of using executive action to ensure long-term policy, they do allow for quick short-term action to begin, that may cascade into something more substantial and harder to unpick.

Biden right off the bat has already used his executive powers to halt new oil and gas leases and suspend oil and gas drilling on federal land and waters. While it won't prevent all new oil and gas drilling as companies already privately own undeveloped plots of land.[22] The activity overall contributes around 25% of US greenhouse gas emissions,[23] and preventing this on federal lands will stall at least a quarter of US oil and 1/8 natural gas development.[24] Biden also immediately on taking office cancelled the Keystone XL pipeline and set federal agencies to review and reverse more than 100 actions taken by the Trump Presidency on environment.[25] There is thus clearly political will, at least in the White House to make serious inroads in implementing climate change proposals as soon as possible.

### **II. Industry activism driving the winds of change**

Implementing climate change policy is still precarious though for Biden, being through the use of executive action, rather than implementing legally binding legislation through Congress that successors would find more difficult to pick apart. However, luckily for the longevity of climate policy in the US, private enterprise has taken it upon itself to limit the excesses of industrial pollution.

A key example highlighting this was in November 2020 when the Trump administration opened the Federal-owned Arctic National Wildlife Reserve in Alaska to oil exploration and extraction hoping it would secure the USA's "energy dominance".[26] However, US business and industry viewed things differently, with all major US banks refusing to fund any company taking up the Presidents offer.[27] Likewise, the shareholders of insurers lent on their companies to refuse the provision of financial support to any such endeavours[28]. This refusal scared off the little interest there was to the extent the Trump administration threatened ineffectively to legally force the market to fund drilling.[29]



This was not the first such incident, famously and contextually informing the Alaskan oil failure by making industry wary of climate-concerned clients was the 2017 Dakota oil pipeline fiasco. Activists and concerned clients mass divested from firms associated with the controversial pipeline, costing companies around \$4.4 billion in losses.[30] This highlighted the sheer influence that climate activists can have over the market and how they need to be accommodated for businesses to not just be successful, but to not have their margins negatively impacted.

This change has been fostered by a growing ethical consciousness since at least early 2019 among US consumers and shareholders,[31] and among business management themselves who are becoming concerned about the impact of climate change.[32]

Absent Federal concern, it appears influential citizens have taken things into their own hands. This helps Biden in two key ways. Firstly, he can build on the work business and consumers are already doing and rely on market pressure as an ally to solidify an otherwise politically precarious position. Secondly, it means there is a possibility of mitigating the worst social unrest that a green transition may necessitate as the market is already creating and rewarding green-based economic opportunities and orientation, lessening the impact of more radical policy shocks to come as 2050 looms into view.

### III. Funding and Investment

Biden has promised a \$2 trillion spending allocation for investment in green technology, renewable energy, housing, agriculture, and transport.[33] There is vast scope here for new jobs for skilled and unskilled workers, industries and investments to be had that are to varying degrees state supported and so a more stable proposition than market alternatives. Importantly research and development into riskier, but potentially more lucrative environmentally friendly technologies for private companies is to be underwritten by the Biden Administration, easing the overall financial risks and increasing confidence in the private sector at pursuing challenging innovations.

## Sources: EU Proposals

[1] European Parliament News, “European Parliament declares climate emergency”, *European Parliament*, November 29 2019, <https://www.europarl.europa.eu/news/en/headlines/society/20180706STO07407/eu-progress-towards-its-climate-change-goals-infographic>

[2] “EU Climate action and the European Green Deal”, *European Commission*, Accessed January 27 2021, [https://ec.europa.eu/clima/policies/eu-climate-action\\_en](https://ec.europa.eu/clima/policies/eu-climate-action_en)

[3] “2020 Climate & Energy package”, *European Commission*, Accessed January 27 2021, [https://ec.europa.eu/clima/policies/strategies/2020\\_en](https://ec.europa.eu/clima/policies/strategies/2020_en)

[4] “EU Emissions Trading System”, *European Commission*, Accessed January 27 2021, [https://ec.europa.eu/clima/policies/ets\\_en](https://ec.europa.eu/clima/policies/ets_en)

[5] “2030 Climate Target Plan”, *European Commission*, Accessed January 1 2021, [https://ec.europa.eu/clima/policies/eu-climate-action/2030\\_ctp\\_en](https://ec.europa.eu/clima/policies/eu-climate-action/2030_ctp_en)

[6] “2050 Long Term Strategy”, *European Commission*, Accessed January 1 2021, [https://ec.europa.eu/clima/policies/strategies/2050\\_en](https://ec.europa.eu/clima/policies/strategies/2050_en)



- [7] General Secretariat of the Council Delegations, “Conclusions of the European Council”, *European Council*, July 21 2020, <https://www.consilium.europa.eu//media/45109/210720-euco-final-conclusions-en.pdf>
- [8] “A European Green Deal”, *European Commission*, Accessed January 29 2021, [https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal\\_en](https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en)
- [9] “European Climate Pact”, *European Commission*, Accessed February 2 2021, [https://ec.europa.eu/clima/policies/eu-climate-action/pact\\_en](https://ec.europa.eu/clima/policies/eu-climate-action/pact_en)
- [10] “The Just Transition Mechanism: making sure no one is left behind”, *European Commission*, Accessed January 29 2021, [https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/actions-being-taken-eu/just-transition-mechanism\\_en](https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/actions-being-taken-eu/just-transition-mechanism_en)
- [11] Jan Strupczewski and Gabriela Baczynska, “EU Leaves Poland out of 2050 climate deal after standoff”, *Reuters*, December 12 2019, <https://www.reuters.com/article/us-climate-change-eu-idUSKBN1YG01I>
- [12] “Communication from the Commission to the European Parliament, The Council, The European Economic and Social Committee and the Committee of the Regions”, *European Union Law*, September 19 2020, <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1600339004657&uri=COM:2020:564:FIN>
- [13] Patrick Lavery, “Polish government to prioritise energy independence over emissions reductions”, *International Flame Research Foundation*, October 14 2019, <https://ifrf.net/combustion-industry-news/polish-government-to-prioritise-energy-independence-over-emissions-reductions/>
- [14] “Europe is getting wealthier- and more unequal”, *European Data Journalism Network*, October 30 2018, <https://www.europeandatajournalism.eu/eng/News/Data-news/Europe-is-getting-wealthier-and-more-inequal>
- [15] Simon Tilford, “Is the EU’s Single Market Leading To Convergence Or Divergence?”, *Center for European Reform*, April 4 2017, <https://www.cer.eu/insights/eus-single-market-leading-convergence-or-divergence>
- [16] “Share of energy products in total energy available”, *Eurostat*, April 2020, <https://ec.europa.eu/eurostat/cache/infographs/energy/bloc-2a.html>
- [17] “Increased 2030 climate goal impossible for Poland: PGE”, *S & P Global*, March 5 2020, <https://www.spglobal.com/platts/en/market-insights/latest-news/coal/030520-increased-2030-climate-goal-impossible-for-poland-pge>
- [18] “Modernisation Fund”, *European Commission*, Accessed January 29 2021, [https://ec.europa.eu/clima/policies/budget/modernisation-fund\\_en](https://ec.europa.eu/clima/policies/budget/modernisation-fund_en); “The Just Transition Mechanism: making sure no one is left behind”, *European Commission*, Accessed January 29 2021, [https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/actions-being-taken-eu/just-transition-mechanism\\_en](https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/actions-being-taken-eu/just-transition-mechanism_en)
- [19] Katharina Buchholz, “Which Countries are EU Contributors and Beneficiaries”, January 13 2020, <https://www.statista.com/chart/18794/net-contributors-to-eu-budget/>
- [20] Jan Strupczewski and Gabriela Baczynska, “EU Leaves Poland out of 2050 climate deal after standoff”, *Reuters*, December 12 2019, <https://www.reuters.com/article/us-climate-change-eu-idUSKBN1YG01I>
- [21] “EU budget: Who pays most in and who gets most back?”, *BBC News*, May 27 2019, <https://www.bbc.co.uk/news/uk-politics-48256318>
- [22] “Citizens Support for Climate Action”, *European Commission*, April 2019, [https://ec.europa.eu/clima/citizens/support\\_en](https://ec.europa.eu/clima/citizens/support_en)
- [23] Marta Żerkowska Balas and James Wilhelm, “National over the European in Poland: Evidence from RECONNECT pre-election survey” *Reconnect*, May 22 2019, <https://reconnect-europe.eu/blog/pre-election-survey-poland-zerkowskabalas-wilhelm/>
- [24] Nikolaj Nielsen, “EU is ‘not a cash cow’, commission tells Poland”, *EU Observer*, May 2 2019, <https://euobserver.com/political/144774>



- [25] “Polish PM says extra summit may be needed to unblock EU budget”, *Euractiv*, 9 December 2020, <https://www.euractiv.com/section/economy-jobs/news/polish-pm-says-extra-summit-may-be-needed-to-unblock-eu-budget/>
- [26] “Single Market Scoreboard”, *European Commission*, Accessed February 3 2021, [https://ec.europa.eu/internal\\_market/scoreboard/integration\\_market\\_openness/trade\\_goods\\_services/index\\_en.htm](https://ec.europa.eu/internal_market/scoreboard/integration_market_openness/trade_goods_services/index_en.htm)
- [27] Mu Xuequan, “Germany’s 2019 exports and imports exceed previous year’s record highs”, *Xinhuanet News*, February 7 2020, [http://www.xinhuanet.com/english/2020-02/07/c\\_138764467.htm](http://www.xinhuanet.com/english/2020-02/07/c_138764467.htm)
- [28] “Facts about German Foreign Trade”, *Federal Ministry for Economic Affairs and Energy*, September 2019, [https://www.bmwi.de/Redaktion/EN/Publikationen/facts-about-german-foreign-trade.pdf?\\_\\_blob=publicationFile&v=8#:~:text=German%20exports%20to%20countries%20from,%25%20\(2017%3A%2036.9%25\)](https://www.bmwi.de/Redaktion/EN/Publikationen/facts-about-german-foreign-trade.pdf?__blob=publicationFile&v=8#:~:text=German%20exports%20to%20countries%20from,%25%20(2017%3A%2036.9%25)).
- [29] European Parliament News, “Eu progresses towards its climate change goals”, *European Parliament*, July 27 2020, <https://www.europarl.europa.eu/news/en/headlines/society/20180706STO07407/eu-progress-towards-its-climate-change-goals-infographic>
- [30] “European Climate Law”, *European Commission*, Accessed February 3 2021, [https://ec.europa.eu/clima/policies/eu-climate-action/law\\_en](https://ec.europa.eu/clima/policies/eu-climate-action/law_en)
- [31] Stella Damstra, “The European Green Deal Offers Massive Opportunities for Green Business”, *ClimateLaunchPad*, August 28 2020, <https://climatelaunchpad.org/the-european-green-deal-offers-massive-opportunities-for-green-business/>
- [32] “Climate Change: What the EU is doing”, *European Council*, Accessed February 3 2021, <https://www.consilium.europa.eu/en/policies/climate-change/>
- [33] “Innovation Fund”, *European Commission*, Accessed February 3 2021, [https://ec.europa.eu/clima/policies/innovation-fund\\_en](https://ec.europa.eu/clima/policies/innovation-fund_en); “Funding for Climate Action”, *European Commission*, Accessed February 3 2021, [https://ec.europa.eu/clima/policies/budget\\_en](https://ec.europa.eu/clima/policies/budget_en)
- [34] “EU climate action and the Green New Deal”, *European Commission*, Accessed February 3 2021, [https://ec.europa.eu/clima/policies/eu-climate-action\\_en](https://ec.europa.eu/clima/policies/eu-climate-action_en)

## Sources: China Proposals

- [i] Statement by H.E. Xi Jinping President of the People's Republic of China At the General Debate of the 75th Session of The United Nations General Assembly, Ministry of Foreign Affairs of the People's Republic of China, 22 Sept. 2020, [www.fmprc.gov.cn/mfa\\_eng/zxxx\\_662805/t1817098.shtml](http://www.fmprc.gov.cn/mfa_eng/zxxx_662805/t1817098.shtml).
- [ii] UN Climate Change News. “China Meets 2020 Carbon Target Three Years Ahead of Schedule.” United Nations Climate Change, UNFCCC, 28 Mar. 2018, [unfccc.int/news/china-meets-2020-carbon-target-three-years-ahead-of-schedule](http://unfccc.int/news/china-meets-2020-carbon-target-three-years-ahead-of-schedule).
- [iii] 北极星大气网. “2021年中国环保行业市场现状分析：行业快速发展北极星大气网.” 北极星大气网, 中商产业研究院, 15 Jan. 2021, [huanbao.bjx.com.cn/news/20210115/1129867.shtml](http://huanbao.bjx.com.cn/news/20210115/1129867.shtml).
- [iv] ReNEWS. “China Adds 72GW Wind in 2020.” ReNEWS, 21 Jan. 2021, [renews.biz/65926/china-adds-72gw-wind-in-2020/](http://renews.biz/65926/china-adds-72gw-wind-in-2020/).
- [v] Wang, Xiaojun. “Taking Its Climate Ambitions Abroad Will Make China a True Leader.” *South China Morning Post*, 7 Feb. 2021, [www.scmp.com/comment/opinion/article/3120834/be-true-climate-leader-china-should-commit-clean-energy-belt-and](http://www.scmp.com/comment/opinion/article/3120834/be-true-climate-leader-china-should-commit-clean-energy-belt-and).





- [vi] IEA. “China's Emissions Trading Scheme – Analysis.” IEA, June 2020, [www.iea.org/reports/chinas-emissions-trading-scheme](http://www.iea.org/reports/chinas-emissions-trading-scheme).
- [vii] State Council. “Guiding Opinions of the State Council on Accelerating the Establishment and Improvement of a Green and Low-Carbon Circular Development Economic System.” Teller Report, 22 Feb. 2021, [www.tellerreport.com/news/2021-02-22-%0A---guiding-opinions-of-the-state-council-on-accelerating-the-establishment-and-improvement-of-a-green-and-low-carbon-circular-development-economic-system%0A--.BJeVbSbWzd.html](http://www.tellerreport.com/news/2021-02-22-%0A---guiding-opinions-of-the-state-council-on-accelerating-the-establishment-and-improvement-of-a-green-and-low-carbon-circular-development-economic-system%0A--.BJeVbSbWzd.html).
- [viii] 齐鲁壹点 . “国务院：到2025年绿色产业比重显著提升 多行业绿色化改造.” 百度, 23 Feb. 2021, [baijiahao.baidu.com/s?id=1692453467634771066&wfr=spider&for=pc](http://baijiahao.baidu.com/s?id=1692453467634771066&wfr=spider&for=pc).
- [ix] Xu, Muyu, and David Stanway. “China Plans to Raise Minimum Renewable Power Purchase to 40% by 2030: Government Document.” Reuters, 10 Feb. 2021, [www.reuters.com/article/us-china-climatechange-renewables-idUSKBN2AA0BA](http://www.reuters.com/article/us-china-climatechange-renewables-idUSKBN2AA0BA).
- [x] Wu, Yixiu, and Zhe Yao. “Climate and Energy in China's 14th Five Year Plan – the Signals so Far.” China Dialogue, 15 Feb. 2021, [chinadialogue.net/en/energy/chinas-14th-five-year-plan-climate-and-energy/#:~:text=Over%20the%20decade%2C%20this%20measure,a%20target%20of%20around%2018%25](http://chinadialogue.net/en/energy/chinas-14th-five-year-plan-climate-and-energy/#:~:text=Over%20the%20decade%2C%20this%20measure,a%20target%20of%20around%2018%25).
- [xi] Xu Elegant, Naomi. “How China's Top Coal Province Is Defying Xi Jinping's 'Carbon Neutral' Pledge.” Fortune, 20 Jan. 2021, [fortune.com/2021/01/20/china-coal-power-plants-xi-jinping-carbon-neutral/](http://fortune.com/2021/01/20/china-coal-power-plants-xi-jinping-carbon-neutral/).
- [xii] Engels, Anita. “Understanding How China Is Championing Climate Change Mitigation.” Palgrave Communications, vol. 4, no. 101, 14 Aug. 2018, pp. 1–6., doi:<https://www.nature.com/articles/s41599-018-0150-4>.
- [xiii] Liu, Jianqiang, and Hongqiao Liu. “Q&A: Could an Environmental Inspector's Criticisms Accelerate China's Climate Policies?” Carbon Brief, 5 Feb. 2021, [www.carbonbrief.org/qa-could-an-environmental-inspectors-criticisms-accelerate-chinas-climate-policies](http://www.carbonbrief.org/qa-could-an-environmental-inspectors-criticisms-accelerate-chinas-climate-policies).
- [xiv] Xu, Sicong. “China's Path to Carbon Neutrality by 2060.” CGTN, 13 Nov. 2020, [news.cgtn.com/news/2020-11-13/China-s-path-to-carbon-neutrality-by-2060-VnrRh5Aha/index.html](http://news.cgtn.com/news/2020-11-13/China-s-path-to-carbon-neutrality-by-2060-VnrRh5Aha/index.html).
- [xv] “Rise in China's Coal Power Undermines Emissions Goal.” Argus Coal, 4 Feb. 2021, [www.argusmedia.com/en/news/2183751-rise-in-chinas-coal-power-undermines-emissions-goal](http://www.argusmedia.com/en/news/2183751-rise-in-chinas-coal-power-undermines-emissions-goal).
- [xvi] Pearl, Harry. “China's Carbon Neutral Pledge 'Incompatible' with Oil, Gas Expansion.” South China Morning Post, 2 Feb. 2021, [www.scmp.com/economy/global-economy/article/3120174/chinas-2060-carbon-neutral-pledge-incompatible-expansion-oil](http://www.scmp.com/economy/global-economy/article/3120174/chinas-2060-carbon-neutral-pledge-incompatible-expansion-oil).
- [xvii] Liu, Jianqiang, and Hongqiao Liu. “Q&A: Could an Environmental Inspector's Criticisms Accelerate China's Climate Policies?” Carbon Brief, 5 Feb. 2021, [www.carbonbrief.org/qa-could-an-environmental-inspectors-criticisms-accelerate-chinas-climate-policies](http://www.carbonbrief.org/qa-could-an-environmental-inspectors-criticisms-accelerate-chinas-climate-policies).
- [xviii] Wang, Yan. “China's Economy Is Recovering Quickly, as Are Its Carbon Emissions.” China Dialogue, 15 Feb. 2021, [chinadialogue.net/en/climate/chinas-economy-is-recovering-quickly-as-are-its-carbon-emissions/](http://chinadialogue.net/en/climate/chinas-economy-is-recovering-quickly-as-are-its-carbon-emissions/).
- [xix] Tollefson, Jeff. “COVID Curbed Carbon Emissions in 2020 - but Not by Much.” Nature News, Nature Publishing Group, 15 Jan. 2021, [www.nature.com/articles/d41586-021-00090-3](http://www.nature.com/articles/d41586-021-00090-3).



[xx] UN Climate Change News. “China Meets 2020 Carbon Target Three Years Ahead of Schedule.” United Nations Climate Change, UNFCCC, 28 Mar. 2018, [unfccc.int/news/china-meets-2020-carbon-target-three-years-ahead-of-schedule](https://unfccc.int/news/china-meets-2020-carbon-target-three-years-ahead-of-schedule).

[xxi] Chen, Jia. “Green Finance Gets Newfound Incentivization.” China Daily, 10 Feb. 2021, [global.chinadaily.com.cn/a/202102/10/WS602317b7a31024ad0baa86c0.html](https://global.chinadaily.com.cn/a/202102/10/WS602317b7a31024ad0baa86c0.html).

[xxii] 王信 . “【热点关注】央行研究局局长王信谈近期货币政策取向与如何发展碳金融市场.” 微信公众平台, 7 Mar. 2021, [mp.weixin.qq.com/s/-o8zRb6iBm0rBkAz10eSPA](https://mp.weixin.qq.com/s/-o8zRb6iBm0rBkAz10eSPA).

[xxiii] 朱民 . 朱民 : 2021, 拐点已至, 26 Feb. 2021, [finance.sina.cn/zl/2021-02-26/zl-ikftpny9774446.d.html?from=wap](https://finance.sina.cn/zl/2021-02-26/zl-ikftpny9774446.d.html?from=wap).

[xxiv] Shieber, Jonathan. “China Launched Its National Carbon Trading Market Yesterday.” TechCrunch, 2 Feb. 2021, [techcrunch.com/2021/02/02/china-launched-its-national-carbon-trading-market-yesterday/](https://techcrunch.com/2021/02/02/china-launched-its-national-carbon-trading-market-yesterday/).

[xxv] Farand, Chloé. “China Launches World's Largest Carbon Market for Power Sector.” Climate Home News, 11 Jan. 2021, [www.climatechangenews.com/2021/01/07/china-launches-worlds-largest-carbon-market-power-sector/](https://www.climatechangenews.com/2021/01/07/china-launches-worlds-largest-carbon-market-power-sector/).

[xxvi] Slater, Huw, et al. “China's National Carbon Market Is about to Launch.” China Dialogue, 12 Feb. 2021, [chinadialogue.net/en/climate/chinas-national-carbon-market-is-about-to-launch/](https://chinadialogue.net/en/climate/chinas-national-carbon-market-is-about-to-launch/).

## Sources: US Proposals

[1] “The Top 10 GHG Emitters Contribute Over Two-Thirds of Global Emissions”, *World Resources Institute*, December 10 2020, <https://www.wri.org/blog/2020/12/interactive-chart-top-emitters>

[2] Matt McGrath, “Joe Biden: How the President -elect plans to tackle climate change”, *BBC*, November 10 2020, <https://www.bbc.co.uk/news/science-environment-54858638>

[3] Ellen Cranley, “These are the 130 current members of Congress who have doubted or denied climate change”, *Business Insider*, April 29 2019, <https://www.businessinsider.com/climate-change-and-republicans-congress-global-warming-2019-2?r=US&IR=T>

[4] Justin Sink, “Obama unrepentant after losing Senate”, *The Hill*, May 11 2014, <https://thehill.com/homenews/administration/223086-obama-american-people-sent-a-message>

[5] Madison Park, “6 Obama climate policies that Trump orders change”, *CNN*, March 29 2017, <https://edition.cnn.com/2017/03/28/politics/climate-change-obama-rules-trump/index.html>

[6] Jennifer Morgan and Kevin Kennedy, “First Take: Looking at President Obama’s Climate Action Plan”, *World Resources Institute*, June 25 2013, <https://www.wri.org/news/2013/06/statement-president-obama-announce-action-climate-change>

[7] “Fact Sheet: President Obama’s Climate Action Plan”, *The White House*, June 25 2013, <https://obamawhitehouse.archives.gov/the-press-office/2013/06/25/fact-sheet-president-obama-s-climate-action-plan>

[8] Jacopo Prisco, “What Trump’s executive order on climate change means for the world”. *CNN*, March 28 2017 <https://edition.cnn.com/2017/03/28/world/trump-climate-order-world-impact/index.html>

[9] Nadja Popovich, Livia Albeck-Ripka and Kendra Pierre-Louis, “The Trump Administration Rolled Back More Than 100 Environmental Rules. Here’s the Full List”, *The New York Times*, January 20 2021, <https://www.nytimes.com/interactive/2020/climate/trump-environment-rollbacks-list.html>

[10] Hannah Pitt, Kate Larsen and Maggie Young, “The Undoing of US Climate Policy: The Emissions Impact of Trump-Era Rollbacks”, *Rhodium Group*, Accessed February 21 2021, <https://rhg.com/research/the-rollback-of-us-climate-policy/>



- [11] “Report: U.S. States with Climate Commitments Off Track to Reach Science-based Emissions Goals”, *Environmental Defense Fund*, December 8 2020, <https://www.edf.org/media/report-us-states-climate-commitments-track-reach-science-based-emissions-goals>
- [12] “The Biden Plan For A Clean Energy Revolution”, *Biden Harris Campaign*, Accessed February 21 2021, <https://joebiden.com/climate-plan/>
- [13] Oliver Milman, “John Kerry named as Joe Biden’s special climate envoy”, *The Guardian*, November 23 2020, <https://www.theguardian.com/us-news/2020/nov/23/john-kerry-biden-climate-envoy-appointment>
- [14] Cary Funk and Brian Kennedy, “How Americans see climate change and the environment in 7 charts”, *Pew Research Center*, April 21 2020
- [15] Edward Wong, “Trump Has Called Climate Change a Chinese Hoax. Beijing Says It Is Anything But”, *The New York Times*, November 18 2016, <https://www.nytimes.com/2016/11/19/world/asia/china-trump-climate-change.html>
- [16] Brandon Mulder, “Fact-check: Will the Paris accord 'cost the U.S. economy 6.5 million jobs and \$3 trillion?'”, *Austin-American Statesman*, Accessed February 18 2021, <https://eu.statesman.com/story/news/politics/politifact/2021/01/22/joe-biden-jobs-paris-climate-agreement-fact-check/6671345002/>
- [17] ”Big Oil's Real Agenda on Climate Change”, *Influence Map*, Accessed February 18 2021, <https://influencemap.org/report/How-Big-Oil-Continues-to-Oppose-the-Paris-Agreement-38212275958aa21196dae3b76220bddc>
- [18] Juliet Eilperin and Brady Dennis, “As Biden vows monumental action on climate change, a fight with the fossil fuel industry has only begun”, *The Washington Post*, January 28 2021 <https://www.washingtonpost.com/climate-environment/2021/01/27/biden-climate-change/>
- [19] Marianne Lavelle “2016: Obama’s Climate Legacy Marked by Triumphs and Lost Opportunities”. *Inside Climate News*, December 26 2016, <https://insideclimatenews.org/news/26122016/obama-climate-change-legacy-trump-policies/>
- [20] Molly E. Reynolds, “What is the Senate filibuster and what would it take to eliminate it?”, *Brookings*, September 9 2020, <https://www.brookings.edu/policy2020/votervital/what-is-the-senate-filibuster-and-what-would-it-take-to-eliminate-it/>
- [21] Bill Ritter Jr., “Biden has plans to fight climate change in a way no U.S. president has done before”, *The Conversation*, January 12 2021, <https://theconversation.com/biden-plans-to-fight-climate-change-in-a-way-no-u-s-president-has-done-before-152419>
- [22] Emma Newburger, “Biden suspends oil and gas leasing in slew of executive actions on climate change”, *CNBC*, January 27 2021, <https://www.cnn.com/2021/01/27/biden-suspends-oil-and-gas-drilling-in-series-of.html>
- [23] Kevin Liptak, Kristen Holmes and Kate Sullivan, “Biden to halt new oil and gas leases on federal lands”, *CNN*, January 26 2021, <https://edition.cnn.com/2021/01/26/politics/biden-halt-new-oil-gas-leases/index.html>
- [24] Sam Brasch and Miguel Otárola, “What Biden’s Pause On Oil And Gas Leases on Federal Lands Means For Colorado”, *CPR News*, January 27 2021, <https://www.cpr.org/2021/01/27/what-bidens-pause-on-oil-and-gas-leases-on-federal-lands-means-for-colorado/>
- [25] Kevin Liptak, Kristen Holmes and Kate Sullivan, “Biden to halt new oil and gas leases on federal lands”, *CNN*, January 26 2021, <https://edition.cnn.com/2021/01/26/politics/biden-halt-new-oil-gas-leases/index.html>
- [26] Brad Plumer and Henry Fountain, “Trump Administration Finalizes Plan to Open Arctic Refuge to Drilling”, *The New York Times*, August 17 2020, <https://www.nytimes.com/2020/08/17/climate/alaska-oil-drilling-anwr.html>
- [27] Louise Boyle, “Bank of America joins all other big US banks and rules out financing Arctic drilling”, *Independent*, December 1 2020, <https://www.independent.co.uk/climate-change/news/bank-of-america-joins-all-other-big-us-banks-and-rules-out-financing-arctic-drilling-b1764514.html>
- [28] Alastair Marsh and Jennifer A. Dlouhy, “Conservationists lean on corporate insurers to stymie Trump’s Arctic oil leases”, *World Oil*, November 19 2020,



<https://www.worldoil.com/news/2020/11/19/conservationists-lean-on-corporate-insurers-to-stymie-trump-s-arctic-oil-leases>

[29] “U.S. government makes proposal that could limit bank pullback of Arctic oil, gas funds”, CBC, November 24 2020, <https://www.cbc.ca/news/canada/north/u-s-government-makes-proposal-that-could-limit-bank-pullback-of-arctic-oil-gas-funds-1.5814039>

[30] Jennifer Dlouhy, “These Days, the Smart Money Is Staying Away From Arctic Drilling”, Bloomberg, November 27 2020, <https://www.bloomberg.com/news/articles/2020-11-24/these-days-the-smart-money-is-staying-away-from-arctic-drilling>

[31] Mary Mazzoni, “As Consumers Shift Towards Conscious Companies, Communication is King”, Triple Pundit, October 2 2019, <https://www.triplepundit.com/story/2019/consumers-shift-toward-conscious-companies-communication-king/85131>

[32] Steven Mufson, “More U.S. businesses making changes in response to climate concerns”, *Washington Post*, June 11 2019, [https://www.washingtonpost.com/climate-environment/more-us-businesses-making-changes-in-response-climate-concerns/2019/06/10/a30c86ac-8944-11e9-98c1-e945ae5db8fb\\_story.html](https://www.washingtonpost.com/climate-environment/more-us-businesses-making-changes-in-response-climate-concerns/2019/06/10/a30c86ac-8944-11e9-98c1-e945ae5db8fb_story.html)

[33] “The Biden Plan To Build A Modern Sustainable Infrastructure And An Equitable Clean Energy Future”, *Joe Biden*, Accessed February 6 2021, <https://joebiden.com/clean-energy/>