



SPOT ON

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Green Industrial Policy – Joe Biden’s Made in (All of) America Energy Policy

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During his election campaign, U.S. President Joe Biden had announced an ambitious plan to transition away from fossil fuels toward clean energy resources. Two years later, he has kept many of his promises. This is not solely motivated by the goal to combat climate change. Energy policy is an important component of Biden’s Build Back Better program: He wants to promote the domestic production of renewable energy technologies in order to create sustainable jobs, especially for the middle class, and to strengthen U.S. competitiveness. To this end, Biden has used political and economic windows of opportunity to pass major spending packages. While Biden’s green transition might lose steam during the second half of his presidency, his energy policy opens a window of opportunity for deeper transatlantic cooperation. But there are also serious conflicts, which have to be addressed.

“We’re talking about American innovation, American products, American labor. And we’re talking about the health of our families and cleaner water, cleaner air, and cleaner communities. We’re talking about national security and America leading the world in a clean energy future”, Joe Biden emphasized a few days after he took over the office of the President late January 2021.

Biden’s energy policy differs significantly from that of his Republican predecessor Donald Trump. Renewable energies played little role in Trump’s energy policy, as he fundamentally questioned climate change and withdrew the United States from the Paris Climate Agreement. He also ended a 2016 moratorium on leasing public lands for coal mining. Another component of Trump’s energy policy was the expansion of petroleum transportation networks in the United States. This primarily involved the controversial Keystone XL and Dakota Access pipeline projects. In addition, Trump relaxed efficiency standards for cars and light trucks, which his predecessor, Barack Obama, had tightened significantly. He also thwarted previous efforts to reduce carbon emissions in the power sector. By replacing the Obama Administration’s Clean Power Plan with the Affordable Clean Energy rule, the EPA significantly eased emission reduction requirements especially for coal-fired power plants. Just hours after being sworn in as president, Joe Biden moved to reinstate the United States to the Paris Climate Agreement.

Within his first weeks in office, he blocked the Keystone XL pipeline and suspended oil and gas leasing on federal lands. Biden’s energy policy is climate, industrial, labor market and social policy all at once. It is part of his Build Back Better program, which aims at strengthening and modernizing the U.S. economy with a strong focus on the industrial base and the middle class. An important lever for this is the enormous public sector spending for green products and services, which, according to the Environmental Protection Agency (EPA), amounts to more than \$630 billion annually. By increasing public spending, the Biden administration also hopes to boost private investment. Through the Department of Energy’s Energy Earth Shots Initiative, the Biden Administration is, furthermore, allocating federal funds towards innovative clean technologies. The Hydrogen Shot sets the target of significantly reducing the cost of green renewables-based hydrogen by the end of the decade by funding initiatives for demonstration projects.

In the Federal Sustainability Plan, the Biden administration has formulated sustainability guidelines for public procurement. They are intended to enable federal agencies to achieve Biden’s energy policy goals (see table 1). For example, specifications for the conversion of the federal government’s vehicle fleet to zero-emission vehicles are intended to boost U.S. production of “green” vehicles.

Furthermore, Biden wants to improve social justice. Not only does he want to create jobs through the green transition. 40 percent of the spending of the federal government in this policy area is intended to benefit disadvantaged groups (Justice40 Initiative). These include, for example, communities affected by structural change, poorer populations, or those living in areas with extreme pollution. For this purpose, Biden also set up an Interagency Working Group on Coal and Power Plant Communities and Economic Revitalization. It has focused its working on directing investments into so-called energy communities that have been hit hard by structural change. Clean energy project developers benefit, for instance, from expanded tax credits in these communities. The Department of Energy has, furthermore, announced \$450 million in funds for clean energy demonstration projects on former mining lands.

Biden's energy policy is climate, industrial, labor market and social policy

Biden is also using his executive regulatory power to drive the energy transition. The focus of his regulatory proposals is on the power sector, vehicles, and the oil and gas industry. With regard to the decarbonization of the power sector – a contentious issue for many years – the Supreme Court significantly limited Biden's regulatory power through a July 2022 decision. At the center of *West Virginia v. EPA* stood the Clean Air Act (passed in 1970 and amended several times since) and President Obama's Clean Power Plan of 2015. The Clean Air Act gives the EPA the legal power to preserve and improve the nation's air quality. According to Section 111(b), the EPA can set performance standards for new power plants – New Source Performance Standards – based on a determination of the “best system of emissions reduction” for the category of sources. Under Section 111(d) of the Clean Air Act, the EPA can also regulate existing power plants – but its authority is much more limited. In the Clean Power Plan, the Obama administration had used this authority to reduce carbon emissions from existing power plants by shifting production from dirtier to cleaner power sources. While the Supreme Court affirmed the agency's ability to regulate carbon dioxide emissions at new and existing power plants, it found that the EPA's regulatory authority did not extend as far to existing power plants as envisioned in the Clean Power Plan. The EPA cannot, accordingly, prescribe power plants to shift their emission-intensive coal-based generation to natural gas or renewable energy in order to lower emissions. For

such far reaching regulation, the executive branch needed congressional approval. Nonetheless, the Biden Administration has issued plans to further regulate the power sector. In May 2023, the EPA proposed a new rule to regulate emissions from coal and new natural gas plants. It takes into account more recent technological and market developments which would allow fossil fuel power plants to install Carbon Capture and Storage (CCS) or clean hydrogen technologies to reduce their emissions.

In 2021, the EPA finalized efficiency standards for light-duty and medium-duty vehicles for the 2023 through 2026 model years to reduce harmful air pollutant emissions, revising the Trump administration's more lax regulation. In mid-April 2023, the EPA announced further proposed standards for the 2027 through 2032 model years as well as for heavy-duty vehicles – the strictest standards ever imposed – which are intended to move the auto industry toward the targeted path for net-zero vehicles. According to different estimates, this would require as many as two-thirds of new vehicles sold in the United States to be electric by 2032. In March 2023, the White House also released an EV Acceleration Challenge. Private stakeholders and the public sector are called upon to invest financial resources into the expansion of low-cost e-mobility and set ambitious goals. A large number of players such as Uber and Zipcar have already responded with corresponding financial commitments and targets.

In December 2022, the EPA issued an updated proposal for standards for crude oil and natural gas production. The standards aim at mitigating greenhouse gas emissions from the oil and gas industry, for instance by improving and speeding up leak detection. The agency is currently reviewing the comments submitted on the proposal.

Biden pursues climate policy through spending bills

That such regulatory projects can be altered or reversed by a successor administration is a lesson Joe Biden learned from the transition from Obama to Trump. It was thus all the more important for him to create a permanent legislative basis for his energy transition.

A Tale of Three Legislations

During Biden's first two years in office, Congress passed three of the largest spending bills with a strong focus on energy in recent memory: the Infrastructure Investment and Jobs Act,

Table 1: Energy Policy Goals of the Biden Administration.

Time window	Destination	Measures
From 2021	40% of budgetary spending on clean energy to benefit disadvantaged groups (= marginalized, limited access to resources, particularly affected by pollution)	Executive Order (EO) 14008: Tackling the Climate Crisis at Home and Abroad, 2021
2030	Reduce U.S. emissions by 50-52% below 2005 levels.	U.S. Nationally Determined Contribution (NDC) to the UNFCCC, 2021
	50% new car sales of zero-emission vehicles (battery electric, hybrid, and fuel cell vehicles).	Executive Order (EO) 14037: Strengthening American Leadership in Clean Cars and Trucks, 2021
	Build 30 GW of offshore wind capacity	Joint Statement by the Departments of Interior (DOI), Energy (DOE), and Commerce (DOC)
	Conversion of the federal government’s power supply to 100% CO ₂ -neutral energies	Executive Order (EO) 14057: Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability, 2021
2032	Halving emissions from federal government buildings	Executive Order (EO) 14057: Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability, 2021
2035	Decarbonization of the U.S.-wide electricity mix	U.S. Nationally Determined Contribution (NDC) to the UNFCCC, 2021
	100% New purchases of zero-emission vehicles for the federal government.	Executive Order (EO) 14057: Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability, 2021

2045	Net zero emissions from federal government buildings	Executive Order (EO) 14057: Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability, 2021
2050	Net zero emissions	U.S. Nationally Determined Contribution (NDC) to the UNFCCC, 2021

the CHIPS and Science Act, and the Inflation Reduction Act (IRA).

As part of the roughly \$1 trillion Infrastructure Act, the Department of Energy was allocated more than \$62 billion to advance research and development as well as the implementation of green energy technologies and infrastructure. In addition, the authority of the Department of Energy’s Loan Program Office was expanded, giving the agency greater discretion in disbursing funds.

The CHIPS and Science Act, signed by Biden in August 2022, provides nearly \$300 billion in funding for semiconductor research and manufacturing. The Act thus represents a significant investment in securing supply of a component critical to producing clean energy technologies. According to a report by the Rocky Mountain Institute, as much as one-fifth of these funds – about \$54 billion – could go toward promoting carbon-free industries and intensifying climate protection measures. A problem, however, may be that while the respective government agencies have official authority to implement the programs mentioned in the act, they must secure funding through the annual congressional budget process. Without adequate funding, the programs may not be able to be implemented.

Major energy policy fault lines between Republicans and Democrats remain

The Infrastructure Act and the CHIPS Act received bipartisan support in both chambers of Congress. The situation was different for the third and perhaps most important pillar of President Biden’s energy policy, the IRA. Neither in the House nor in the Senate did the bill receive a single Republican vote.

The IRA provides nearly \$394 billion for the energy sector, primarily in the form of tax incentives. An analysis by the World Resources Institute called the law “the largest single step Congress has ever taken to address climate

change”. Models by the Rhodium Group – a leading independent research organization – conclude that the law puts the United States on track to reduce its emissions by 31 percent to 44 percent by 2030. So-called carbon management technologies are one focus area of the IRA funding: Tax credits are available for emission reductions through technologies including CCS, Carbon Capture and Utilization (CCU), and Direct Air Capture (DAC) through expansions in paragraph “45q” of the U.S. tax code. Industrial facilities receive a significant credit for each ton of CO₂ which is either permanently stored or re-used. Another important focus is on electric vehicles. The IRA has expanded tax credits for the purchase of electric vehicles.

Although fossil fuels will continue to play an important role in the U.S. energy mix in the future, the Biden administration’s numerous support measures will significantly increase the importance of renewable energies and reduce the emission-impact of remaining fossil fuel consumption.

Energy Policy and Partisan Divides

The passage of the IRA revealed some of the major energy policy fault lines between the two parties. Republicans accused the Democratic caucus of “fiscal irresponsibility” and opposed policies that threaten the interests of oil and gas companies. But there were critical voices among Democrats as well, including Senator Kyrsten Sinema (D-AZ) and Senator Joe Manchin (D-WV). The latter is from West Virginia, one of the largest mining regions in the United States, which votes Republican rather than Democratic.

The political fault lines are also found in the general population. According to a March 2022 poll by the Pew Research Center, 69 percent of the U.S. population supports prioritizing the development of alternative energy sources. The same percentage favors the

United States taking steps to become carbon-neutral by 2050. However, only 31 percent favored the United States to stop using fossil fuels altogether, while 67 percent said the United States should continue to use a mix of fossil fuels and renewable energy sources. More Republicans and Republican-leaning respondents favored expanding oil, coal, and natural gas production, while fewer prioritized developing alternative energy sources. According to the Pew survey, a majority of Republicans and Republican-leaning independents also believed that fossil fuels should continue to be part of the U.S. energy supply. A large majority of Democrats and Democratic-leaning respondents, on the other hand, supported the development of alternative energy sources and favored the United States taking steps to become carbon dioxide (CO₂)-neutral by 2050, according to the survey.

How did the Biden administration manage to get these three major legislative initiatives through Congress despite the aforementioned fault lines – a Congress that has been characterized by a high degree of political polarization for years?

There are several reasons for this. First, President Biden had learned from his Democratic predecessor Barack Obama. The latter had repeatedly failed to get major regulatory climate and energy policy legislative initiatives passed by Congress. Biden therefore focused on issues – investments in infrastructure and the semiconductor industry – that enjoy bipartisan support. In addition, the Democratic Party used a measure from the budget process, Budget Reconciliation, to pass the IRA. This helped overcome the filibuster hurdle in the Senate, a tactic which uses long speeches to delay passage of legislation. While a majority of 60 votes is needed to overcome a filibuster, a simple majority is sufficient to pass legislation under a Budget Reconciliation.

Second, Biden was able to govern with a so-called unified government in his first two years in office. This means that in addition to the presidency, both chambers of Congress were controlled by the Democratic Party. In the Senate, 48 Democrats, plus two independents, Bernie Sanders and Angus King Jr. who mostly vote with the Democrats, faced a caucus of 50 Republicans. In a stalemate, Democratic Vice President Kamala Harris could cast the deciding vote, as was the case with the IRA.

Third, the COVID-19 pandemic had opened a window of opportunity for large spending programs. There had been a marked increase in both political and popular support for gov-

ernment action. Fourth, there was bipartisan support for both the CHIPS Act and the infrastructure bill as the Democratic and Republican parties share a common goal: They want to strengthen the U.S. international competitiveness in key technologies, especially against rival China. A strong economy also requires investment in modern infrastructure.

Biden's energy policy opens space for transatlantic cooperation

With the results of the midterm congressional elections in November 2022 and the upcoming presidential elections in November 2024, the window for major energy spending programs in Congress, however, is likely to have closed again.

The Transatlantic Dimension

What does this mean for the transatlantic relationship? Energy policy relations between the EU and the United States have not been easy over the past decade. A strong point of contention during Trump's presidency was the construction of the Nord Stream 2 pipeline through the Baltic Sea to Germany. The U.S. government had repeatedly warned against an overdependence on Russia. Russia's invasion of Ukraine in February 2022 represented a turning point. For the EU, the rapid cut of Russian gas imports was only possible through greatly increased LNG exports from the United States and the quick expansion of LNG import capacities.

Biden's climate and energy policy opens a window of opportunity for a strengthened transatlantic partnership in these two policy fields. Sustainable trade as well as technical standards and norms for renewable energy technology play important roles in the newly founded U.S.-EU Trade and Technology Council (TTC). At the third TTC meeting in 2022, the transatlantic partners introduced the Transatlantic Initiative on Sustainable Trade. The Initiative strives to "support the transition to low-carbon economies by identifying actions in key areas of trade and environmental sustainability that support our shared twin goals of a green and sustainable future and to increase transatlantic trade and investment." Furthermore, the transatlantic partners want to ensure that the green transition is fair and inclusive and promote efforts to advance the transition to a low-emission and green future at a global level. In early March 2022, the EU and the United States also launched the Clean Energy Incentives Dialogue which aims to ensure that the respective incentive programs are mutually reinforcing and do not lead to

trade distortions in transatlantic trade. As such, the transatlantic partners want to discuss the design of these programs and increase transparency on respective policy measures. In addition, they want to share information on non-market practices of third countries.

The fourth meeting of the TTC took place in Sweden at the end of May 2023. The green energy transition and sustainable trade were again important agenda points. Foremost, there was progress regarding standard-setting for electric vehicle charging infrastructure. However, more needs to be done to prevent new legislation, regulations, and standards from turning into non-tariff barriers, hindering transatlantic trade and investment. This holds especially true for two particularly contentious pieces of legislation in the United States and the EU: the IRA and the EU Carbon Border Adjustment Mechanism (CBAM).

- *CBAM*: The EU is planning to implement CBAM in fall 2023. With this mechanism, which is in the final stage of the legislative process, the EU is planning to tax imports from countries that have weaker climate policies than the EU. The current CBAM proposal covers aluminum, cement, electricity, fertilizers, and iron and steel, as well as hydrogen and some sub-products of the iron and steel sector. The European Commission has proposed a transition period from October 2023 to December 2025 in order to facilitate a smooth rollout. CBAM is based on a CO₂ price coupled to the EU emissions trading system. From 2026 onwards, importers of certain products will have to determine the direct and indirect emissions that occurred in the production process. In addition, they will be obliged to purchase CBAM certificates if the carbon price paid in the country of production is lower than the price of carbon certificates in the EU emissions trading system. This is intended to compensate for an unfair competitive disadvantage. Domestic and foreign producers are thereby treated equally (national treatment), which is why the EU judges its approach as compliant with World Trade Organization (WTO) rules.

By October 2023, the EU and US need to agree on a Global Arrangement on Sustainable Steel and Aluminium

The United States, however, does not have a country-wide CO₂ emission pricing system. It is therefore vital for the United States and the EU to find an understanding on how to calculate CO₂ content of products, how to determine a CO₂ price, and how to evaluate equivalence of policy measures. Otherwise, this could become a very serious and disruptive

transatlantic trade conflict. It is thus a step into the right direction that the United States Trade Representative Katherine Tai requested the United States International Trade Commission (USITC) to investigate and assess the greenhouse gas (GHG) emissions intensity of steel and aluminum produced in the United States to inform discussions with the EU regarding the Global Arrangement on Sustainable Steel and Aluminum (see below).

- *Industrial Policy and the IRA*: The IRA was met with considerable criticism in the EU because it contains some discriminatory elements. For example, it includes several tax credits in the automotive sector for the period 2022 to 2032. However, certain requirements must be met for this. For battery raw materials (such as lithium), starting in 2023, 40 percent of the critical raw materials used must come from North America or a country with which the United States has a free trade agreement. This quota will increase by 10 percent each year until it reaches 80 percent in 2027. Similarly, from 2023, 50 percent of battery components (based on cost) must be manufactured in North America or a partner country with a free trade agreement with the United States. This proportion will rise to 100 percent by 2029. From 2024, battery components will also no longer be allowed to come from certain countries such as China and Russia. The EU does not have a trade agreement with the United States.

To address the concerns of the EU, the transatlantic partners launched the U.S.-EU Task Force on the Inflation Reduction Act in fall of 2022. The idea behind this new taskforce was to keep this contentious issue out of the TTC negotiations. Experience with the Transatlantic Economic Council (TEC, created in 2007) showed how easily negotiations can get bogged down in all issue areas if one conflict gets out of hand. Back then, it was the (in)famous chlorinated chicken that proved a stumbling block in the TEC negotiations.

In March 2023, President Biden and European Commission President Ursula von der Leyen agreed to launch talks on a critical minerals agreement. The goal is to enable relevant critical minerals extracted or processed in the EU to count toward requirements for clean vehicles in the Section 30D clean vehicle tax credit of the IRA. The EU and the United States also want to cooperate more broadly on securing supplies of critical minerals. While some had hoped for a breakthrough of the talks at the TTC meeting in Sweden, the U.S.-EU Joint Statement only reiterates the ongoing negotiations. There are also worries on the EU side about the limited scope of the agreement – trade in EV battery critical minerals –

which may raise issues with WTO commitments from both parties and may be challenged by other WTO parties. Legislators on both sides of the Atlantic are also worried about the nature of the agreement. In April EU Commissioner Dombrovskis stated that the EU was “aiming for an executive agreement” that would not need to win the support of each EU member state. As an executive agreement, the deal would not need approval by U.S. Congress nor the European Parliament.

The EU and United States need future-proof institutional set-ups and conventions

A critical minerals agreement would solve a part of the problem of the IRA for EU companies, although many questions are still open, including how recycled materials would feature in such an agreement. In addition, it would not solve the broader challenge of industrial subsidies. As such, the dialogue on incentive and support measures needs to be intensified, both within the TTC as well as in the Task Force on the IRA and the Clean Energy Incentives Dialogue as a subsidies race would have devastating effects on the transatlantic economy.

- *Global Arrangement on Sustainable Steel and Aluminium:* During his term in office, President Donald Trump imposed tariffs on the import of steel and aluminum, also from the EU (national security tariffs under Section 232 of the Trade Act of 1962). These tariffs were initially continued by his successor Joe Biden. It was only on the sidelines of the G20 summit at the end of October 2021 that both sides agreed on a compromise: The United States granted the EU a tariff quota which allows for a certain amount of duty-free exports to the United States. In return, the EU put its retaliatory measures against U.S. tariffs on ice. There are two other important aspects to the agreement: First, the United States and the EU agreed to work more closely together to address unfair trade practices and overcapacities in third countries. Secondly, they decided to negotiate a “Global Arrangement on Sustainable Steel and Aluminium” within two years with the aim of creating a level playing field and reducing greenhouse gas emissions. Although the agreement does not directly reference China, it is clearly motivated by the country’s unfair trade practices. The deadline for negotiations is October 2023. While at first glance this agreement appears to accommodate the EU’s CBAM, there are transatlantic divergences, according to media reports. For example, the United States proposes to impose punitive tariffs on imported

steel or aluminium products from countries that have not joined the agreement and regulate their industries less. Depending on the carbon intensity of the manufacturing process, the tariffs are to rise progressively. The EU is skeptical of this approach, critically pointing to conflicts with WTO law. In addition, many questions regarding methodology are still open, for example how to determine equivalence of regulatory measures.

The last meeting of the TTC did not yield the hoped-for substantial progress regarding the Global Arrangement on Sustainable Steel and Aluminium. As time runs out, the transatlantic partners need to step up their efforts to finding a final solution to this long-standing trade conflict.

- *Standard Setting for Renewable Energy Technologies:* While tariffs are comparatively low in transatlantic trade, diverging technical standards and norms still pose considerable non-tariff barriers, creating unnecessary costs for businesses on both sides of the Atlantic. The TTC therefore focuses on technical standards in several of its working groups, with a strong focus on the development of standards for new and emerging technologies. This builds on an important learning from the failed negotiations for the Transatlantic Trade and Investment Partnership (TTIP): The harmonization as well as mutual recognition of existing standards is difficult. Given the rapid transformation of the transatlantic economies, working together on emerging standards is ever more important to prevent new barriers to trade.

In this effort, the EU and United States agreed in May 2022 to jointly work on a common standard on electric vehicle charging systems. At the fourth meeting of the TTC, Transatlantic Technical Recommendations for Government-funded Implementation of Electric Vehicle Charging Infrastructure were published which are to help set harmonized standards for smart charging infrastructure for EVs.

However, there is much more to be done. A prime example is the need for technical standards for hydrogen production and transportation. Both transatlantic partners are heavily investing in this emerging industry, which is an important component in the green transition on both sides of the Atlantic. Discussions about harmonized technical standards as well as the importance of defining what constitutes green hydrogen are, however, still nascent in the transatlantic partnership. Other areas for closer cooperation are international methane standards in gas production as well as Carbon Capture and Storage (CCS) technologies.

Overall, the cooperation between transatlantic standard-setting organizations needs to be strengthened to ensure that new standards facilitate transatlantic trade instead of hampering it.

The transatlantic partners share a great responsibility for advancing the green energy transition world-wide. Joint efforts can serve as best practices with a lighthouse effect on other countries. In addition, these can serve as important stepping stones in plurilateral and multilateral initiatives in the realm of international institutions such as the G7, the WTO, and international standard-setting institutions.

EU and United States share a great responsibility for advancing the green energy transition world-wide

Given the increasing political uncertainties regarding the upcoming presidential elections in the United States, it is high time to use the window of opportunity to also tackle the more conflictual issues in the transatlantic relationship while agreeing on future-proof institutional set-ups and conventions.



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