
EU-US relations after the Inflation Reduction Act, and the challenges ahead



STUDY

EPRS | European Parliamentary Research Service



Guest author: Bruce Stokes
Members' Research Service
PE 759.588 – February 2024

EN

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EPRS invites leading experts and commentators to share their thinking and insights on important topics of relevance to debate in the European institutions. In this paper, Bruce Stokes, visiting senior fellow at the German Marshall Fund of the United States, and associate fellow at Chatham House, offers an overview of US-EU relations since the passage of the US Inflation Reduction Act in 2022. This paper is based on the author's interviews with leading European and US experts and published analysis by major think tanks and journalists on both sides of the Atlantic. The paper discusses current efforts to manage longstanding pre-IRA disputes, the Trade and Technology Council, the US Chips and Science Act and the EU's response, looming issues such as CBAM and critical minerals, and how politics in both the US and Europe may affect the handling of these issues.

AUTHOR

This study has been written by Bruce Stokes, Visiting Senior Fellow at the German Marshall Fund Washington D.C., at the request of the Members' Research Service, within the Directorate-General for Parliamentary Research Services (EPRS) of the Secretariat of the European Parliament.

ADMINISTRATOR RESPONSIBLE

Gisela Grieger and Marcin Szczepański, External Policies Unit, Members' Research Service, EPRS.

To contact the publisher, please e-mail eprs@ep.europa.eu

LINGUISTIC VERSIONS

Original: EN

Translations: DE, FR

Manuscript completed in December 2023.

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PE 759.588

ISBN: 978-92-848-1631-6

DOI:10.2861/385275

CAT: QA-05-24-111-EN-N

eprs@ep.europa.eu

<http://www.eprs.ep.parl.union.eu> (intranet)

<http://www.europarl.europa.eu/thinktank> (internet)

<http://epthinktank.eu> (blog)

Executive summary

The third decade of the 21st century has been marked by the re-emergence of industrial policy in the United States. Less than six months after the inauguration of U.S. President Joe Biden, Congress passed the [American Innovation and Competition Act](#), which included US\$52 billion to boost domestic manufacturing of semiconductors and US\$200 billion for scientific and innovation research and development. But this was only the beginning. In 2022, Congress enacted the [Chips and Science Act](#). Later that year it passed the [Inflation Reduction Act](#) (IRA). In April 2023, U.S. national security adviser Jake Sullivan elaborated on Biden Administration thinking, arguing that the IRA and its sister legislation reflects 'a [new Washington Consensus](#)', 'protecting our foundational technologies with a small yard and high fence'.

Initially, the IRA in particular sparked frictions with the European Union. But European opposition to U.S. economic support for American industry rapidly softened as both Washington and Brussels have adapted to new challenges posed by climate change, the green and digital transitions, and China. This has led to a reassessment of long-held assumptions – both in the U.S. and in the EU – about the role of government in the domestic economy and new European support for domestic production of semiconductors, batteries, and other critical industries.

Yet much remains to be done and there are challenges ahead. The EU and the U.S. have no agreement on permissible subsidies. The U.S.-EU Trade and Technology Council has produced few tangible results and has a lengthening agenda. Major transatlantic economic frictions loom: the EU's carbon border adjustment mechanism, competition for minerals critical to the needed energy transition, privacy in an increasingly digital economy, and how better to coordinate export controls and regulation of artificial intelligence. In 2024, the United States faces Presidential and Congressional elections, while the European Union will have elections for the European Parliament and EU member states hold nine national elections. Substantively and politically, the transatlantic debate over industrial policy has only just begun.

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1. Introduction

When American President Joe Biden came into office, mindful of the economically destabilizing supply chain problems caused by Covid, he ordered [a study](#)¹ of the U.S. economy's supply chains across a range of products. This report called for ambitious measures to strengthen semiconductor, electric battery, rare earth, and pharmaceutical supply chains. And less than six months after his inauguration, Congress passed the [American Innovation and Competition Act](#)², which included \$52 billion to boost domestic manufacturing of semiconductors and \$200 billion for scientific and innovation research and development.

But this was only the beginning of America's newfound interest in industrial policy that the U.S. had long claimed to disdain. In 2022, Congress enacted the [Chips and Science Act](#).³ Later that year it passed the [Inflation Reduction Act](#)⁴ (IRA).

In October 2022, White House National Economic Council director [Brian Deese](#)⁵ articulated the Biden Administration's rationale for the IRA in a speech to the City Club of Cleveland: 'strategic public investments are essential to achieving the full potential of our nation's economy. It's also an idea as old as America itself. Alexander Hamilton, the first U.S. Treasury Secretary, insisted that "the public purse must supply the deficiency of private resource" to "prompt and improve the efforts of industry".' Invoking Hamilton in the wake of the highly successful Broadway musical about Hamilton's life gave the administration's embrace of industrial policy an immeasurably significant connection to a popular culture phenomenon that politicians intuitively recognize for its populist appeal, and economists will never understand.

In April 2023, U.S. national security adviser Jake Sullivan further elaborated on Biden Administration thinking, arguing that the IRA and its sister legislation reflects '[a new Washington Consensus](#)'⁶ that replaces the 'Washington Consensus' that evolved in the Reagan Administration. 'Our goal is a strong, resilient, and leading-edge techno-industrial base [of] the United States and its like-minded partners,' Mr. Sullivan said, 'protecting our foundational technologies with a small yard and high fence.'

Initially, the IRA in particular sparked frictions with the European Union, amid charges that the law's subsidies and domestic preference requirements violated multilateral trading rules, that the legislation abandoned longstanding U.S. opposition to the government picking business winners and losers, and that the IRA both discriminated against European auto exports and, more ominously, would lead European firms to invest in America not in Europe.

[Bernd Lange](#)⁷, the head of the European Parliament's Trade Committee, called for filing a WTO dispute, while Thierry Breton, the European Commissioner for the Internal Market, indicated that

¹ <https://www.whitehouse.gov/wp-content/uploads/2021/06/100-day-supply-chain-review-report.pdf>.

² <https://www.congress.gov/bill/117th-congress/senate-bill/1260>.

³ <https://www.congress.gov/bill/117th-congress/house-bill/4346>.

⁴ <https://www.congress.gov/bill/117th-congress/house-bill/5376/text>.

⁵ <https://www.whitehouse.gov/briefing-room/speeches-remarks/2022/10/13/remarks-on-executing-a-modern-american-industrial-strategy-by-nec-director-brian-deese/>.

⁶ <https://www.whitehouse.gov/briefing-room/speeches-remarks/2023/04/27/remarks-by-national-security-advisor-jake-sullivan-on-renewing-american-economic-leadership-at-the-brookings-institution/>.

⁷ <https://www.reuters.com/business/lawmaker-says-eu-should-complain-wto-over-us-inflation-reduction-act-2022-12-04/>.

the IRA could lead to retaliation. There were threats of a subsidy war. In a state visit to Washington in early December, French President [Emmanuel Macron](#)⁸ called the IRA subsidies 'super aggressive', warned that the IRA and the CHIPS law might 'fragment the West', and urged the transatlantic allies to 'resynchronize' their economic policies.

But European opposition to the IRA and related U.S. economic support rapidly softened.

The post-IRA transatlantic relationship is evolving as both Washington and Brussels adapt to new challenges posed by climate change, the green and digital transitions, and China. This has led to a reassessment of long-held assumptions—both in the U.S. and in the EU—about the role of government in the domestic economy and the costs and benefits of an ever-more interdependent world economy.

As [Martin Wolf](#)⁹, no critic of free markets, has written: 'global markets must be incentivized in new ways to prioritize not just the planet, but its people.'

'Governments have now embraced a responsibility for shaping the structure of the economy and the direction of growth,' [Martin Sandbu](#)¹⁰ has written. 'This new activism applies to huge policy areas ranging from geopolitical resilience (building domestic microchip supply chains), decarbonizing the energy system, and managing the digital transition of our lives and livelihoods.'

So, the U.S. initiative, initially resisted but then rapidly followed by the EU, may well be evolving into a new international consensus.

'The old international political economic order anchored by the United States was "rule bound";' argue [Laura Tyson and John Zysman](#)¹¹. 'Although the rules themselves were built from debates about who would capture advantage, the new fragmentation and disorder are centred on national competitive advantage and self-sufficiency through onshoring, nearshoring and friend shoring. And the new economic nationalism is reflected in growing impediments to trade and global capital flows.'

If, in fact, both Europe and America are rethinking their post-World War II consensus about the evils of industrial policy and the merits of globalization, entering an era of more techno and economic nationalism, the dilemma they both face is that it is hard to understand how they individually overcome the challenges they share: climate change, the green transition, the digital revolution, and China, to name just a few.

As UK Prime Minister [Margaret Thatcher](#)¹² so presciently told the 1989 UN General Assembly in warning of the impending peril of carbon emissions: 'we shall only succeed in dealing with the problems through a vast, international co-operative effort.'

A generation later, in the wake of the IRA and the EU's response, the rise of economic nationalism and the profusion of shared challenges and their growing severity, Thatcher's appeal for international cooperation is even more salient today.

⁸ <https://www.washingtonpost.com/politics/2023/01/17/europe-not-happy-with-bidens-inflation-reduction-act/>.

⁹ <https://www.ft.com/content/c8cf024d-87b7-4e18-8fa2-1b8a3f3fba1>.

¹⁰ <https://www.ft.com/content/cf38927e-6685-425d-b696-37645b638433>.

¹¹ https://www.bruegel.org/sites/default/files/2023-08/Bruegel%20Blueprint%2033_chapter%205.pdf.

¹² <https://www.margaretthatcher.org/document/107817>.

And both the EU and the U.S. recognize this. The joint statement issued after the October [2023 EU-U.S. summit](#)¹³ concluded: 'we recognize that economic resilience requires de-risking and diversifying. In this context, we will invest in our own economic vibrancy and reduce critical dependencies and vulnerabilities, including in our supply chains. We also recognize the necessity of protecting certain advanced technologies that could be used to threaten global peace and security, without unduly limiting trade and investment. We will foster resilience to economic coercion. We will address challenges posed by non-market policies and practices.'

2. A bit of history

EU-U.S. differences over bilateral trade and investment stretch back to creation of the European Economic Community in 1957.

In 1963, Washington imposed a 25% tariff on imports of light trucks in retaliation for Europeans blocking imports of American frozen chickens. As a result, European light trucks practically vanished from the American market, as did all other imports of such vehicles. The duty still remains six decades later.

In the 1990s, the U.S. and the EU had a long running battle over EU banana imports that favoured product from former European colonies over bananas shipped by American-owned producers. The dispute led then President Bill Clinton to complain to an aide in the run-up to an U.S.-EU summit, 'do I really have to talk about bananas again?'

To transcend these past bilateral disputes and in response to the failure of multilateral efforts to further promote trade through the failed Doha Round, the United States and the European Union launched negotiations for a Transatlantic Trade and Investment Partnership (TTIP) in 2013. The aim was to boost transatlantic commerce through harmonization or mutual recognition of regulations, reduction or elimination of already low tariffs and greater investment.

The initiative built on the 1990 Transatlantic Declaration, the 1995 agreement on a New Transatlantic Agenda, the subsequent creation of Transatlantic Business, Consumer, Labor and Environmental dialogues and proposals for some kind of transatlantic free trade agreement, including, among others, from the [U.S. Council on Foreign Relations](#)¹⁴ in 1996 and in 2006 by German Chancellor [Angela Merkel](#)¹⁵.

The TTIP negotiations sparked unexpectedly strong opposition, especially in Europe, and to a lesser extent in the United States, from consumer, environmental and labour groups worried that any deal would weaken regulations they favoured. The talks paused in 2018 and were terminated in 2019.

This was the transatlantic trade and investment legacy inherited by U.S. President Joe Biden and European Commission President Ursula von der Leyen. And they were determined to break with the past.

'The evolution over the last 10 years was driven by a lot of different factors, and we're not going back,' former USTR Europe negotiator [Dan Mullaney](#)¹⁶ said. 'It's not a question of the last

¹³ <https://www.whitehouse.gov/briefing-room/statements-releases/2023/10/20/u-s-eu-summit-joint-statement/>.

¹⁴ <https://www.amazon.com/Open-Business-Creating-Transatlantic-Marketplace/dp/0876091877>.

¹⁵ <https://www.spiegel.de/international/trans-atlantic-free-trade-merkel-for-eu-agreement-with-us-a-440335.html>.

¹⁶ <https://www.politico.com/news/2023/06/03/us-europe-china-trade-00099954>.

administration is out and now everyone can go back to the way things were before and heave a sigh of relief. Things were already changing, including in Europe, even before the last administration.'

3. Clearing the brush

3.1. Airbus-Boeing

In June 2021, five months after Biden came into office, the U.S. and the EU agreed to suspend for five years reciprocal tariffs over alleged unfair subsidies for America's Boeing and the EU's Airbus, pausing a 17-year transatlantic trade dispute. Washington and Brussels pledged to use this ceasefire to try to find a way to support their aircraft industry on market terms in a manner that does not harm the other side.

Washington's interest in resolving this longstanding dispute is, in part, a reflection of changing market dynamics. Airbus delivered more commercial jets than Boeing from [2019-2022](#)¹⁷, thanks, in part to safety problems with Boeings 737 Max and a 787-work stoppage. This followed nine years, from 2003 to 2011, when the European aircraft maker out-delivered its American competitor.

But the major impetus for this breakthrough may have been growing concern in both Brussels and Washington over China's ambitions in the civil aircraft market. State-owned air plane manufacturer Commercial Aircraft Corporation of China (Comac) has [reportedly](#) received 1,200 orders for its first commercial jet, largely from Chinese carriers who currently fly Boeing and Airbus planes. Almost every plane supplied by Comac is a lost order for Airbus or Boeing. And that pain is being felt, especially in the U.S., where sales of aircraft, including related parts and equipment, were the largest single component of exports to China in each of the last three decades.

'Our goal was clear – to forge a new, cooperative relationship in this sector [...] that [...] includes a commitment for concrete, joint collaboration to confront the threat from China's non-market practices,' said European Commission Executive Vice-President [Valdis Dombrovskis](#)¹⁸ at the time of the agreement.

3.2. Steel and aluminium

Both Europe and the United States have suffered declining steel industries for decades, with bankruptcies, consolidations, and falling employment. And they have grappled with China's rising steelmaking capacity. Chinese steel makers now account for [47%](#)¹⁹ of global capacity, up from just 14% at the beginning of the 21st century. And Beijing's steelmaking capacity far exceeds its domestic needs, ensuring that China will export its excess, often at prices that many observers think is below the cost of production, a clear violation of international trade rules.

Washington and Brussels have long tried, with no success, to find common understanding between themselves and with others through the [OECD Steel Committee](#)²⁰ about the need to constrain

¹⁷ <https://www.statista.com/statistics/622779/number-of-jets-delivered-global-aircraft-fleet-by-manufacturer/>.

¹⁸ <https://ustr.gov/about-us/policy-offices/press-office/press-releases/2021/june/ustr-announces-joint-us-eu-cooperative-framework-large-civil-aircraft>.

¹⁹ https://stats.oecd.org/Index.aspx?DataSetCode=STI_STEEL_MAKINGCAPACITY.

²⁰ <https://www.oecd.org/industry/ind/steel-committee.htm>.

global capacity, especially in China, to ensure a price level that enables various national producers to survive.

In frustration with the inability to find a multilateral solution to steel overcapacity, the [Trump Administration](#)²¹ imposed a 25% tariff on imported steel and a 10% duty on imported aluminium, citing national security as a justification. While these tariffs were largely aimed at China, the duties also applied to European steel and aluminium, to keep displaced Chinese product from pushing European product into the U.S. market. The European Union saw itself as collateral damage in a trade dispute between Washington and Beijing. So, Brussels imposed retaliatory tariffs on American bourbon whiskey, Harley-Davidson motorcycles, and motorboats.

On [31 October 2021](#)²², the Biden Administration agreed to temporarily suspend the Trump tariffs on steel and aluminium and to work with Brussels to create a 'Global Arrangement on Sustainable Steel and Aluminium.'

The idea was that the agreement would be open to other countries who want to collaborate in less carbon-intensive steel and aluminium production, serving as a blueprint for making trade more environmentally friendly.

At their meeting in March 2023, in return for Washington dropping its 2021 tariffs on European steel and aluminium, [von der Leyen and Biden](#)²³ agreed to complete negotiations on a Global Arrangement on Sustainable Steel and Aluminium by October 2023. They missed the deadline, in part because the parties' visions for this arrangement differed.

The Biden Administration wanted to form a 'Green Steel Club' whose members would erect a common external tariff on imports of steel and aluminium from third countries that had steel and aluminium production that emitted more carbon than production in the U.S. and the EU. The more carbon emitted in production, the higher the tariff. The U.S. plan was also to penalize countries that excessively subsidized their producers and created a global oversupply problem. This latter objective was another American attempt to curb the longstanding excess capacity in the steel industry, largely due to China.

'What the Biden administration is trying to do is essentially convert [it's tariffs based on national security] [...] into a climate-friendly system,' said [Timothy Meyer](#)²⁴, a professor in international law at Duke University.

But there is no accepted methodology for calculating carbon intensity. Once there is such a methodology, this arrangement would incentivize third-country governments to green their steel sectors. Critics note, however, that the U.S. largely relies on mini-mill electric-arc furnaces to make their steel, a technology that already produces less carbon than the coal-fired blast furnaces used in China, so the American approach would give U.S. steelmakers, already one of the lowest emission steel producers, a competitive advantage.

²¹ <https://www.nytimes.com/2018/03/01/business/trump-tariffs.html>.

²² <https://www.euractiv.com/section/economy-jobs/news/eu-and-us-slash-tariffs-start-cooperating-on-green-steel/>.

²³ <https://www.whitehouse.gov/briefing-room/statements-releases/2023/03/10/joint-statement-by-president-biden-and-president-von-der-leyen-2/>.

²⁴ <https://www.euractiv.com/section/economy-jobs/news/eu-us-green-steel-showdown-how-to-decarbonise-trade/>.

Europeans argue they are making great strides toward decarbonizing their steel production. In her State of the Union 2023 address, European Commission President von der Leyen [noted](#)²⁵: 'In the last five years, the number of clean steel factories in the EU has grown from zero to 38.'

4. The current state of play

4.1. The Trade and Technology Council

As former British Prime Minister [Harold MacMillan](#)²⁶ once observed: 'Jaw, jaw is better than war, war.'

The size and volume of trade across the Atlantic is so vast, said U.S. Rep. Jim Costa and European Parliament member Danuta Huebner that 'we need a permanent dialogue involving all stakeholders before well-meaning policies trigger a trade war.'

To that end, the U.S.-EU Trade and Technology Council (TTC) was created at the 2021 EU-U.S. Summit. It involves -regular meetings of cabinet-level officials on the American side and European Commissioners to help grow the bilateral trade and investment relationship. The goal is to avoid new unnecessary technical barriers to trade; to coordinate and seek common ground on these issues; and to strengthen global cooperation on technology, digital issues, and supply chains. The TTC also aims to support collaborative research and exchanges; to cooperate on compatible and international standards development; and to facilitate regulatory policy and enforcement cooperation. Moreover, it hopes to advance the resilience of transatlantic supply chains in key sectors for the green and digital transitions, to cooperate on standards for emerging clean technologies, and to address common economic and national security challenges, which over time have included joint work on export controls and artificial intelligence.

The fourth TTC meeting took place in June 2023 in Luleå, a small industrial city above the Arctic Circle that is a hub for 'green' steelmaking in Europe and home to U.S. tech giant Meta's data servers.

'This [Sweden] TTC had good political sponsorship and high-level political visibility and presence,' observed Jeffries Briginshaw, a senior director at the Transatlantic Policy Network, 'with specific, on the spot, high level and trade association participation and the deliverables coming out of TTC were on the upside vis a vis expectations.'

Yet, overall, the TTC has received mixed reviews.

The most significant substantial achievement has been the work of the TTC in producing an agreement between the United States and the European Union on sanctions and export controls on Russia in the wake of its invasion of Ukraine.

But critics contend that TTC communiqués are mostly full of words about cooperation, coordination, partnership, information sharing, resilience, inclusivity, technical assistance, and capacity building rather than action.

'One of the (few) specific outcomes of the May Trade and Technology Council meeting in Sweden,' complained [William Reinsch](#)²⁷ of the Center for Strategic and International Studies in Washington,

²⁵ https://ec.europa.eu/commission/presscorner/detail/ov/speech_23_4426.

²⁶ <https://quotefancy.com/quote/1306642/Harold-MacMillan-Jaw-jaw-is-better-than-war-war>.

²⁷ <https://www.csis.org/analysis/europe>.

'was a mutual recognition agreement on veterinary medicines. This is welcome news but very small cheese—we have a long way to go if we are to reconcile our many different practices.'

'You have to cook with the ingredients that you have, which right now is TTC,' observed former European Commissioner for Trade [Cecilia Malmström](#)²⁸. 'And they're trying to make the best out of it. [But] it's not a lot,'

And American trade experts contend that there are too few of the major players arrayed around the table. 'Failing to include Congress in the TTC proved to have been a mistake,' argues [Chad Bown](#)²⁹, 'as industrial policy often takes the form of legislation (given Treasury's rule-writing function under the IRA and the fact that industrial policy is being implemented through the US tax code, it would also be helpful if the Treasury Department, not only the US Trade Representative, the Commerce Department, and the State Department, were part of the TTC).'

Moreover, observed Costa and Huebner, 'strong institutional grounding, Congressional engagement, and a revival of the Transatlantic Business Dialogue, are needed to boost and enhance the TTC's effectiveness and its longevity.'

Nevertheless, progress has been made. The TTC's creation suggests a felt need on both sides of the Atlantic to have a forum in which pressing technical matters can be discussed. 'The TTC can [...] make valuable contributions towards a transatlantic market for emerging technologies and digital transformation based on common values,' argues [Julian Ringhof](#)³⁰ of the European Council on Foreign Relations.

The fact that the TTC has become a venue for new deliberations, such as AI, suggests that both Washington and Brussels see value in having a pre-existing forum for consultation, one that is not a formal negotiation but that provides an opportunity to exchange views and approaches to mutual problem solving. But such ad hoc discussions have existed in the past and rarely survived more than one or two American or European administrations. The ultimate success of the TTC will, in part, not only be judged by what it produces, but if it survives.

Institutionalizing the TTC should be a primary objective for both Brussels and Washington in 2024. This might be accomplished through a multipronged approach. Broadening the agenda would give more business interests a stake in the outcome of TTC deliberations. Artificial intelligence is already on the agenda and more could be done to align policy with regard to generative AI and the employment challenges both Europe and America will face as a result. The shortcomings of export controls in the war in Ukraine suggest the TTC needs to double down on transatlantic coordination, especially on issues such as secondary sanctions. Synthetic biology is an emerging field with great implications both for dealing with disease and food production. But history suggests such scientific advances fuel transatlantic [disputes](#)³¹. The TTC should begin the dialogue on mutual recognition of standards before the science outstrips the regulation.

The TTC might also become a forum for discussion with third countries about trade, technology and regulatory issues. In [2023](#)³², the EU and India created a Trade and Technology Council. This forum is charged with working on artificial Intelligence, 5G/6G, high performance and quantum computing,

²⁸ <https://www.politico.com/news/2023/06/03/us-europe-china-trade-00099954>.

²⁹ https://www.bruegel.org/sites/default/files/2023-08/Bruegel%20Blueprint%2033_chapter%2011.pdf.

³⁰ <https://ecfr.eu/article/setting-the-tone-the-value-of-the-eu-us-trade-and-technology-council/>.

³¹ [https://www.europarl.europa.eu/RegData/bibliotheque/briefing/2013/130518/LDM_BRI\(2013\)130518_REV1_EN.pdf](https://www.europarl.europa.eu/RegData/bibliotheque/briefing/2013/130518/LDM_BRI(2013)130518_REV1_EN.pdf).

³² https://ec.europa.eu/commission/presscorner/detail/en/ip_23_596.

semiconductors, cloud systems, cybersecurity, green technologies, the resilience of supply chains and access to critical components, energy, and raw materials. At the same time, Washington and New Delhi have launched an [India-U.S. Strategic Trade Dialogue](#)³³ to address export controls, explore ways of enhancing high technology commerce, and facilitate technology transfer between the two countries. While these two discrete fora have their own strategic rationales, many of the same officials will be participating in the U.S-EU TTC, the EU-India TTC and the U.S.-India dialogue. As they identify shared trilateral concerns, interests and objectives, it would make sense to periodically meet together in an effort to come up with common initiatives or regulatory approaches.

Deeper engagement by both members of the European Parliament and the U.S. Congress—through establishing a formal TTC legislative participation—would create a legislators' constituency for TTC, making it harder for future administrations to abandon the TTC.

This would be particularly helpful because of the fundamental philosophical and practical differences about regulation in the EU and the U.S. Americans tend to believe that a market economy functions best with only light regulation. Europeans believe that a market economy functions best within a regulatory framework. So, TTC discussions must first overcome that philosophical difference. Moreover, the European Parliament frequently enacts regulation in anticipation of problems, while the American Congress often passes regulation after problems have manifested themselves.

These philosophical and practical differences are likely never to change. But more structured engagement between members of the European Parliament, members of Congress and TTC negotiators should help manage these differences. Not only should legislators attend all TTC meetings, but both sides could designate key committee or other committed legislators to be rapporteurs back to their legislatures, institutionalizing parliamentary engagement. These designees might then be asked to testify to both their own legislatures but also to their counterpart on the other side of the Atlantic, so that a broader number of legislators might understand the difference between the EU and U.S. positions, in the hope of maximizing the potential to iron out negotiating differences and reach conclusions that will have political support at home.

And, most importantly, the production of concrete results would demonstrate the value of the TTC, raising the likelihood that future administrations in both Washington and Brussels would find it useful to continue TTC engagement.

In the end, the success of the TTC—and more broadly the deepening of transatlantic trade and technology—will not be measured simply by a growth in trade and investment in the technology sector. It will best be assessed by the degree of technological collaboration and subsequent success in the transatlantic private sector, encouraged and sustained by the alignment of European and American regulatory and industrial policies. That will be the ultimate verdict on the TTC.

4.2. The Inflation Reduction Act

In August 2022, the U.S. Congress enacted the confusingly named Inflation Reduction Act (IRA). This legislation was the third piece of industrial policy pushed through by the Biden Administration, following the Bipartisan Infrastructure Law and the CHIPS & Science Act. The IRA's goal was to build

³³ <https://www.commerce.gov/news/press-releases/2023/03/joint-statement-india-us-commercial-dialogue#:~:text=In%20that%20context%2C%20the%20U.S.,transfer%20between%20the%20two%20countries.>

domestic renewable energy production capacity, boost consumer uptake of electric vehicles and other renewable energy technologies and secure raw material supply chains for these technologies.

The goal is to reduce American greenhouse gas emissions to [32% to 42% below 2005](#)³⁴ levels by 2030, which is up to 11 percentage points lower than estimated emissions without the IRA. This will enhance the likelihood the U.S. will meet its emission commitments under the Paris Climate Agreement.

To that end, the IRA commits the U.S. government to spending [\\$369 billion](#)³⁵ over a decade, an unprecedented American governmental commitment to spur the energy transition. This headline figure sounds large, but on an annual basis it represents a little more than 0.1% of U.S. GDP.

However, independent analysts predict the spending may go much higher. The IRA sets conditions under which consumers and businesses can receive tax credits for adopting green technology. And the estimated cost is based on an assumption of how many people will actually take advantage of these tax credits. But a [report](#) from Credit Suisse suggests that the credits might 'propel much higher activity levels' than Biden Administration projections. And there may also be a multiplier effect as private firms make investments complementary to those directly subsidized, just as the law intended. In that case, Credit Suisse suggests that public and private spending may be close to \$1.7 trillion over a decade.

Moreover, the IRA builds on already significant U.S. public support for clean technology, including the U.S. Department of Energy's Loan Program, or ARPA-E, for research and development and the 2020 Energy Policy Act.

The [IRA's energy transition incentives](#)³⁶ include a [tax credit](#)³⁷ of up to \$7,500 for the purchase of a plug-in or fuel-cell electric vehicle with a requirement that it is made by a qualified manufacturer, has been assembled in North America or by a free trade agreement partner of the U.S., and meets critical mineral and battery component requirements. The battery requirements are progressive: 60% of the value of battery components must be produced or assembled in North America in 2024 to qualify. That percentage will increase to 100% starting in 2029. And 50% of the value of critical materials must be sourced from the U.S. or a free trade agreement country in 2024 and 80% from 2027 to 2032.

For producers, the IRA also includes a credit of \$35 per kilowatt-hour of battery manufacturing capacity, while the production of battery modules qualifies for \$10 per kilowatt-hour. Companies can also be reimbursed 10% of the costs incurred due to the production of electrode active materials, like the cathode and anode.

Moreover, the Biden Administration has combined these federal investments with an [aggressive new regulatory proposal](#)³⁸ mandating pollution control standards to try to ensure that two-thirds of all new cars sold in the United States are all-electric by 2032, [up from about 7% in 2023](#)³⁹.

³⁴ https://www.nber.org/system/files/working_papers/w31267/w31267.pdf.

³⁵ https://www.democrats.senate.gov/imo/media/doc/inflation_reduction_act_one_page_summary.pdf.

³⁶ <https://home.treasury.gov/news/press-releases/jy1379>.

³⁷ <https://www.irs.gov/credits-deductions/credits-for-new-clean-vehicles-purchased-in-2023-or-after>.

³⁸ <https://www.nytimes.com/2023/04/12/climate/biden-electric-cars-epa.html>.

³⁹ <https://www.coxautoinc.com/market-insights/q2-2023-ev-sales/>.

While the IRA's impact on EV and battery production has received much of the public attention, the law provides other [energy transition subsidies](#)⁴⁰. The IRA gives solar cell manufacturers a tax credit of 17 cents per watt of solar module production, leading to at least a 38% decrease in the delivered cost of solar PV modules, which contributed to 49 gigawatts of new module production capacity in the IRA's first year. The IRA also grants U.S.-based wind turbine manufacturers a tax break of up to 70% of their upfront investment, as well as additional tax cuts for each kilowatt-hour of power generated by wind farms. And the IRA affords Americans a tax credit of up to \$2,000 per year covering 30% of the cost of energy conserving heat pumps.

Overall, the [Boston Consulting Group](#)⁴¹ estimates that the IRA could lower the cost of clean energy technologies across the board by around 15%, spurring their uptake.

As a climate change-fighting tool, the IRA has received positive reviews. 'The 2022 United States Inflation Reduction Act (IRA) is a significant and welcome climate law,' concludes a [study](#)⁴² from the Brussels-based think tank Bruegel. And the European insurance giant [Allianz](#)⁴³ agrees: 'Without the U.S., any attempt to limit the temperature rise below 2°C – not to mention the Paris target – is doomed to fail. Building green industries at scale in the U.S. might also help similar efforts across the world via the price mechanism: such technologies are likely to become more affordable in a shorter time. In this context, the IRA deserves much praise.'

And the IRA has been complemented by actions at the state level to incentivize renewable energy manufacturing investment. [Pennsylvania](#)⁴⁴ offers grants, loans, and loan guarantees for facilities that manufacture or assemble solar panels, equipment, technology and similar incentives for the manufacture of wind turbines and components. In 2023, [Oklahoma](#)⁴⁵ passed a \$180 million tax incentive package that will bring new job opportunities to the state. After passage of the measure, Italy-based Enel Green Power unveiled plans for a billion-dollar solar cell and panel manufacturing factory in the state, citing 'tailwinds' from the IRA as a motivating force.

But renewable energy manufacturing needs a market to encourage consumers to take up clean technologies. In [California](#)⁴⁶, for example, cities, counties, and public institutions can apply for low-interest loans from the state for energy efficiency projects. Colorado offers a 10% tax credit on energy storage systems. Kentucky offers a sales tax exemption for solar energy systems that produce electricity for sale. Utah also exempts from sales tax wind turbines and power lines, among other renewable energy equipment. Nationwide, for wind power alone, there are 23 sales tax incentives and 57 property tax incentives. For solar there are 8 corporate tax incentives, 26 grant programs, and 70 property tax incentives.

Less than two years after the passage of the IRA, evidence of its impact is emerging.

As of 31 July 2023, over [\\$270 billion](#)⁴⁷ in capital investment had been announced for utility-scale clean energy projects and manufacturing facilities since federal clean energy incentives were signed

⁴⁰ <https://www.politico.eu/article/eu-united-states-inflation-reduction-act-subsidies-investment-threat-data/>.

⁴¹ <https://media-publications.bcg.com/BCG-Executive-Perspectives-US-IRA-Global-Implications.pdf>.

⁴² <https://www.bruegel.org/policy-brief/how-europe-should-answer-us-inflation-reduction-act>.

⁴³ https://www.allianz.com/en/economic_research/publications/specials_fmo/inflation-reduction-act.html.

⁴⁴ <https://www.areadevelopment.com/taxesIncentives/Nov09/renewable-business11.shtml>.

⁴⁵ <https://www.pewtrusts.org/en/research-and-analysis/articles/2023/08/11/states-rise-to-the-clean-energy-occasion>.

⁴⁶ <https://programs.dsireusa.org/system/program/detail/5131/energy-efficiency-financing-for-public-sector-projects>.

⁴⁷ <https://cleanpower.org/resources/clean-energy-investing-in-america-report/>.

into law. This is equivalent to eight years' worth of past American clean energy investment, surpassing total investment into U.S. clean power projects commissioned between 2015 and 2022.

And, in the 12 months ending in the first quarter of 2023, American consumers bought almost a million EVs. It had taken a decade for the U.S. to sell its first million EVs, two years to sell the second million and just over a year to sell the third. How much of these greater sales are due to IRA consumer subsidies and how much to a consumer 'bandwagon effect' is unknowable. But initial consumer enthusiasm ebbed a bit, thanks to prices, despite the incentives, slow deployment of recharging stations and Americans' love affair with high-powered gasoline-driven vehicles. [Ford](#)⁴⁸, General Motors, and Tesla all have delayed their factory ambitions due to this slowdown in demand.

The IRA battery production and use incentives have been more successful, with both American and non-American firms. Automakers and battery manufacturers have collectively invested and promised to invest close to \$100 billion in building domestic cell and module manufacturing. In 2019, just [two battery factories](#)⁴⁹ were operating in the United States, with two more under construction. By mid-2023, there were about 30 battery factories either planned, under construction or operational in the country.

To provide some perspective on the dramatic acceleration of renewable energy investment spurred by the IRA, investment in battery manufacturing technology in the second quarter of 2023 alone ([\\$9.99 billion](#)⁵⁰) more than doubled total U.S. investment in all manufacturing technology for batteries, solar, wind, critical materials and zero emission vehicles in the second quarter of 2022. And in 2022 alone there was \$213 billion in total new clean investment, a 37% increase from 2021. The most rapid investment growth has been in clean technology manufacturing—with annual investment growing 125% year-on-year to \$39 billion—particularly within electric vehicle and solar manufacturing. Investment in clean energy production and industrial decarbonization rose 15% year-on-year to \$61 billion. But the subsidies have also impacted household and retail business behaviour, with purchasing and installing clean technologies such as heat pumps and zero-emission vehicles rising 32% year-on-year to \$113 billion.

Little acknowledged in the American discussion about the IRA, but certainly unsettling to Europeans, is the prospective competitiveness impact of clean energy use on energy bills for U.S.-based manufacturing. The Obama Administration tried to make dirty energy more expensive through carbon pricing, but Congress refused. Then the White House tried regulations, such as the Clean Power Plan, to accomplish the same thing. The IRA achieves emissions reductions almost entirely by trying to lower the cost of clean energy and the cars and electric appliances that use it.

The [U.S. Department of Energy](#)⁵¹ projects that the IRA will save businesses 13-15% on their electricity costs between 2022 and 2030. With U.S. energy bills already significantly lower than those in many parts of Europe, the IRA may give American manufacturers a cost-competitive advantage, while further enticing European companies to transfer production to the United States.

In light of this challenge, the [Franco-German Council of Economic Experts](#)⁵² has concluded: 'Rather than the IRA itself, it is the existing and sizeable energy price differentials that are likely to

⁴⁸ <https://www.ft.com/content/7d80627e-c6a6-4216-b4c8-275f089fc447>.

⁴⁹ <https://techcrunch.com/2023/08/16/tracking-the-ev-battery-factory-construction-boom-across-north-america/>.

⁵⁰ <https://www.cleaninvestmentmonitor.org/>.

⁵¹ <https://thehill.com/policy/energy-environment/4154516-exclusive-federal-analysis-says-ira-infrastructure-law-could-save-customers-billions-on-energy-bills/>.

⁵² https://www.sachverstaendigenrat-wirtschaft.de/fileadmin/dateiablage/Publikationen/FGCEE/CAE-SVG_Joint_statement_IRA_2309.pdf.

substantially impact Europe's attractiveness and the competitiveness of its industries. Therefore, concerted endeavours to reduce energy prices within Europe are of paramount importance.'

But even this competitive advantage derived from the IRA needs to be seen in perspective. At about \$369 billion over 10 years, the IRA is only [slightly larger than a quarter of the accumulated cost savings](#)⁵³ for U.S. industry from the American shale gas boom from 2008 to 2017, which did more than the IRA is likely to do to give U.S. manufacturing a competitive edge.

The political dynamics surrounding the American auto industry were a major motivating factor in the Biden Administration's push for the IRA. Far more Americans are employed making auto parts and repairing cars than in assembling vehicles. The needed transition from an auto industry based on gas-fuelled vehicles to one dominated by electric vehicles, which need far fewer parts and far less repair, threatens hundreds of thousands of jobs. And many of these jobs are in states that have already suffered severe job losses thanks to greater competition from China across a range of manufacturing sectors. Moreover, auto-producing areas such as Ohio and Michigan are major political swing states that could determine the outcome of the 2024 presidential election. Subsidizing the EV transition made good political sense for a President facing re-election in 2024.

Whether the IRA will revive American manufacturing or simply slow its decline remains an open question, however. Stronger demand for electric vehicle batteries and energy battery storage systems is expected to result in rapid employment growth in battery production, [according to](#)⁵⁴ the U.S. Department of Labor. But it projects that the total manufacturing sector will still 'lose 113,400 jobs over the 2022–32 decade as manufacturers continue to automate processes to improve productivity and reduce defects.'

The need to address climate change and the domestic political interest in more government spending and manufacturing job creation have both existed for some time. What finally coalesced support for and gave impetus to the IRA was Washington's recognition of the China challenge. As U.S.-China tensions over Taiwan have worsened, and with the example of the disruptive effect of Europe's energy dependence on Russia as a reminder, the Biden Administration wanted to avoid the supply shocks the U.S. experienced in the 1970s, when tensions in the Middle East led to backups at gas pumps, rationing, inflation, recession, and Ronald Reagan's landslide election in 1980.

A perceived need to limit U.S. dependence on Chinese clean energy technologies, such as batteries and electric vehicles, and semiconductors gave the Biden Administration a strong rationale for the IRA (and the Chips and Science Act).

The U.S. relies on China for [35%](#)⁵⁵ of its large capacity batteries that are used in electric vehicles and stationary electrical storage. And, it has become deeply reliant on China for a range of materials used in battery production, including nickel oxides and hydroxides (China provides 87% of American imports), unwrought manganese (83% of imports), and different forms of natural graphite, for which U.S. reliance on Chinese imports ranges from 54% to 79%. Moreover, America is also becoming increasingly reliant on China for imports of neodymium magnets—a critical component for wind turbines—and nuclear power.

In fact, both sides of the Atlantic are playing catch-up with China in a variety of renewable energy technologies. By 2030, China's planned battery-making capacity will be at least 2-4 times forecast

⁵³ https://www.sachverstaendigenrat-wirtschaft.de/fileadmin/dateiablage/Publikationen/FGCEE/CAE-SVG_Joint_statement_IRA_2309.pdf.

⁵⁴ <https://www.bls.gov/news.release/pdf/ecopro.pdf>.

⁵⁵ <https://www.atlanticcouncil.org/blogs/new-atlanticist/is-friendshoring-really-working/>.

demand. Experience with steel and other products suggests Chinese batteries and EVs will rapidly flood the global market at prices lower than the cost of production in Europe or the United States. This will call into question both the American and European ability to compete in the future.

But Washington's rationale for the IRA cannot be divorced from a broader, growing share of U.S. manufacturing imports that either were made in China or contain a large share of Chinese-made parts. In 1995, 6% of U.S. manufactured imports came from China and 6% of manufacturing imports came with Chinese-made parts. By 2018, 65% of American manufacturing imports were Chinese-made and 94% of all such imports had Chinese parts. This growing Chinese penetration of the U.S. manufacturing sector was accompanied by a sharp decline in [manufacturing employment](#)⁵⁶ and a decline in average incomes.

This growing dependence shaped a decisive political context for Administration and Congressional backing for the legislation. And while trade experts and European officials might dismiss such sentiment as ill-informed nationalism or protectionism, Americans fear the destabilizing potential of such dependence on a geo-political competitor.

Nevertheless, warned [Richard Baldwin](#)⁵⁷ of the IMD Business School, 'disengaging with China will be much, much harder and much slower than many people think, and may be impossible.'

4.3. The Chips and Science Act

Prior to enactment of the IRA, the United States Congress passed the CHIPS and Science Act in August 2022. The principal goal was to spur investments in domestic semiconductor manufacturing capacity. It also hoped to jump-start research and development and commercialization of leading-edge technologies, such as quantum computing, AI, and nanotechnology. Over a decade, it authorizes the expenditure of [\\$278.2 billion](#)⁵⁸. The vast majority of this new spending is for scientific R&D and commercialization, with \$52.7 billion for semiconductor manufacturing, R&D, and workforce development, and another \$24 billion worth of tax credits for chip production.

The motivation for the CHIPS Act is clear. Covid-driven shortages of semiconductors reduced U.S. economic growth by nearly a [quarter of a trillion dollars](#)⁵⁹ in 2021. Demand for chips, especially high-end chips, will grow at about 10%⁶⁰ per year worldwide in the coming years. In the face of this demand, while the U.S. is still a dominant player in the design of computer chips, accounting for 46% of the market as of 2020, American firms make just 12% of the world's semiconductors, compared with 37% in 1990. For the most part, semiconductors are largely being made elsewhere, in Taiwan, Korea, and China, with Taiwan currently cornering the market for high performance chips.

The limitations of Washington's aid for its computer chip companies and American semiconductor ambitions need to be seen in perspective. When [4-nanometer](#)⁶¹ production begins at Taiwanese company TSMC's first plant in Arizona in 2026, TSMC will be mass-producing 2-nanometers at the Hsinchu Science Park outside Taipei. And U.S. chip investment pales in comparison to what other

⁵⁶ <https://cepr.org/publications/dp16688>.

⁵⁷ <https://www.brookings.edu/articles/hidden-exposure-measuring-us-supply-chain-reliance/>.

⁵⁸ <https://www.mckinsey.com/industries/public-sector/our-insights/the-chips-and-science-act-heres-whats-in-it>.

⁵⁹ <https://www.mckinsey.com/industries/public-sector/our-insights/the-chips-and-science-act-heres-whats-in-it>.

⁶⁰ <https://www.alliedmarketresearch.com/computer-microchips-market-A31524>.

⁶¹ <https://www.euractiv.com/section/industrial-strategy/opinion/tsmc-in-germany-the-successes-and-limits-of-the-eu-chips-act/>.

nations plan to spend on semiconductor manufacturing. Taiwan is now spending [\\$120 billion](#)⁶² and has 20 new plants under construction or completed. Korea has a \$452 billion investment toward its own 'K semiconductor belt strategy' to compete with Chinese and U.S. investments. Even India has invested \$30 billion to bolster its domestic semiconductor and technology supply chains.

'The Chips Act is at once both a geoeconomic and a geostrategic initiative,' write Tyson and Zysman. 'It is a response to substantive state actions abroad that have made the U.S. reliant on semiconductor fabrication by a few major suppliers headquartered in Asia.'

Notably, however, on the one-year anniversary of passage of the CHIPS Act, the President, the Vice-President, members of the Biden Administration cabinet and Democratic members of Congress all released statements lauding both the legislation's passage, the money disbursed, and the private investment committed since passage. Absent from these statements was any mention of the national security rationale for the legislation or any acknowledgement of the impact the legislation has had on foreign companies or relations with allies. Such statements only underscored the political motivation for the subsidies, notwithstanding any security of supply impetus.

5. The European response

The European reaction to the IRA has been heated. 'You're hurting my country,' French President Emmanuel [Macron](#)⁶³ told U.S. Senator Manchin in January 2023.

'The [Americans] want to have the semiconductors, they want the solar industry, they want the hydrogen industry, they want the electrolysers,' complained Robert [Habeck](#)⁶⁴, Germany's vice-chancellor and economics minister. 'If we don't keep up, they'll have them [the key industries] and we won't. That's the brutal reality.'

'Many of IRA policies that take a "America first" attitude will hurt competition and EU firms,' agreed [Fredrik Erixon](#)⁶⁵, director of the European Centre for International Political Economy, 'and especially so in sectors where the EU is competitive, not least green industries and cleantech.'

'Without doubt,' concludes a [study](#)⁶⁶ by Allianz, 'the U.S. has become a more attractive place to invest in green technologies. This presents a lot to fear for Europe, which tends to see itself as the vanguard of green industries. Adding insult to injury: Just at the moment when the IRA became law in the U.S., Europe suffered a severe blow as an industry location because of the energy crisis triggered by the war in Ukraine.' For example, wholesale gas prices in Germany are roughly triple where they were before the Ukraine crisis, while [U.S.](#)⁶⁷ prices are a fifth of those in Europe.

Europe's worst fears about the impact of the IRA, coupled with higher energy costs, has been borne out by corporate investment decisions.

⁶² https://cdn.cfr.org/sites/default/files/report_pdf/Rethinking%20International%20Rules%20on%20Subsidies_0.pdf.

⁶³ <https://www.politico.com/news/2023/01/19/joe-manchin-davos-inflation-reduction-act-europe-00078510>.

⁶⁴ <https://www.ft.com/content/4bc03d4b-6984-4b24-935d-6181253ee1e0>.

⁶⁵ <https://www.cnbc.com/2022/11/09/europe-shows-a-united-front-against-bidens-inflation-reduction-act.html>.

⁶⁶ https://www.allianz.com/en/economic_research/publications/specials_fmo/inflation-reduction-act.html.

⁶⁷ <https://www.statista.com/statistics/673333/monthly-prices-for-natural-gas-in-the-united-states-and-europe/>.

'I know French and German businesses that are deciding on investments in the U.S., when they tell us they would have done them in France or Germany,' said French Energy Minister [Agnes Pannier-Runacher](#).⁶⁸

In the wake of the IRA, Volkswagen announced [plans](#)⁶⁹ to build a \$2 billion factory in South Carolina. BMW is building out a battery assembly facility in Woodruff, South Carolina and has invested funds in a battery cell plant in Florence, South Carolina to produce BMW's new sixth-generation round lithium-ion battery cells for its [Spartanburg](#)⁷⁰ South Carolina-built EVs. Mercedes-Benz has opened a battery plant at its existing manufacturing facility in Alabama, which is its production site for the automaker's fully electric EQS SUV.

'The US Inflation Reduction Act has revived Europe's deep-seated fears of de-industrialisation and of missing out on the growth opportunities of cleantech manufacturing,' write Simone Tagliapietra and Reinhilde Veugelers in a Bruegel [study](#)⁷¹.

'Where will all the future technologies — hydrogen, batteries, semiconductors — be based? That's what's being decided right now,' said Jens [Südekum](#)⁷², professor of international economics at Düsseldorf's Heinrich Heine University. 'The U.S. is taking the initiative on that and Europe has no choice but to respond. It can't just do nothing.'

At the same time, Europe faces its own resource challenges meeting its needs for the energy transition. European demand for lithium-ion batteries, and fuel cells necessary for electric vehicles, for example, is predicted to grow by [up to 30-fold](#)⁷³ in the coming years. The EU relies heavily on China for both these cells and batteries. 'Without implementing strong measures,' advised a [paper](#)⁷⁴ prepared by the Spanish presidency of the EU, 'the European energy ecosystem could have a dependency on China by 2030 of a different nature, but with a similar severity, from the one it had on Russia before the invasion of Ukraine.'

Europe's reaction to the IRA is not simply a knee-jerk response to America's aggressive industrial policy. Europeans face economic challenges of their own. Economic growth is slowing—the [IMF](#)⁷⁵ expects the euro area to grow by only 0.9% in 2023 and the German economy, the lynchpin of the European economy, to shrink by 0.3%. Meanwhile EU unemployment is at 6.6%, and the [European Central Bank](#) assumes it will remain at that level for the foreseeable future.

'One sometimes hears about 'creeping deindustrialization — well, it's not just creeping anymore,' said [Hans-Jürgen Völz](#)⁷⁶, chief economist at BVMW, an association that lobbies for Germany's Mittelstand.

⁶⁸ <https://www.ft.com/content/91d1242d-514a-4530-a4ec-ec7de862db3d>.

⁶⁹ <https://www.reuters.com/business/autos-transportation/volkswagens-scout-says-build-2-blm-manufacturing-plant-south-carolina-2023-03-03/>.

⁷⁰ <https://techcrunch.com/2022/10/19/bmw-to-invest-1-7b-to-build-evs-in-south-carolina/>.

⁷¹ <https://www.bruegel.org/policy-brief/rebooting-european-unions-net-zero-industry-act>.

⁷² <https://www.ft.com/content/4bc03d4b-6984-4b24-935d-6181253ee1e0>.

⁷³ <https://www.euractiv.com/section/china/news/leak-eu-may-become-as-hooked-on-china-batteries-as-it-was-on-russian-energy/>.

⁷⁴ <https://www.euractiv.com/section/china/news/leak-eu-may-become-as-hooked-on-china-batteries-as-it-was-on-russian-energy/>.

⁷⁵ <https://www.imf.org/en/Publications/WEO/Issues/2023/07/10/world-economic-outlook-update-july-2023>.

⁷⁶ <https://www.politico.eu/article/rust-belt-on-the-rhine-the-deindustrialization-of-germany/>.

In the face of this challenge, there has been a revival of some Europeans' belief in the efficacy of state intervention in the economy, especially among the French with their longstanding faith in dirigiste economic policy going back to Jean-Baptiste Colbert under the rule of Louis XIV.

French President [Emmanuel Macron](#)⁷⁷ has called for more investment in the industrial transition: 'If I compare us Europeans to the other big actors, we are the ones who have regulated the most, [...], but we sometimes invest less than those who regulate less. We have to invest more to accompany our industries and households.'

And it is not just the French who see a need for more European investment. It has become quite clear, [noted](#)⁷⁸ János Allenbach-Amann, the economy editor at EURACTIV: 'You [cannot regulate](#)⁷⁹ your way towards an industrial transition without spending major money.'

While the EU should not copy the IRA's production subsidies, [Bruegel](#)⁸⁰ contends 'there is probably a case for more EU subsidies for green R&D, innovation and early-stage deployment of next-generation green technologies, in which EU companies could build and maintain globally competitive positions. Likewise, there is likely a case for building or maintaining within the EU minimum levels of capacity in certain critical areas for the green transition, to make the EU more resilient to natural or political shocks.'

Such calls are echoed by others.

'Without greater public investment,' [write](#)⁸¹ Sabine Nallinger, managing director of Stiftung Klima Wirtschaft, an alliance of German CEOs, and Thomas Pellerin-Carlin of the French Institute for Climate Economics (I4CE), 'the EU will fall behind in the global cleantech race and see [...] the competitiveness of its historic industries falter.'

So, after loudly complaining about the IRA, its subsidies and America's newfound embrace of industrial policy, Europe has joined the subsidy race, albeit slowly and without America's deep pockets.

In March 2023, the European Commission set a goal that 40% of European clean energy technology will be made in the EU by 2030. It also set a similar target for the critical minerals needed for EV battery production. Brussels is also waiving EU state aid restrictions meant to prevent subsidy races and will permit nations to adopt 'matching aid' to compete with countries outside the EU.

'From wind to steel, from batteries to electric vehicles, our ambition is crystal clear: The future of our clean tech industry has to be made in Europe,' [President Ursula von der Leyen](#)⁸² said in her State of the Union address in September 2023.

In February 2023, the European Commission put forward a '[Green Deal Industrial Plan](#)⁸³' with the aim of enhancing the competitiveness of European industry. The ambition is to simplify the regulation of production of batteries, windmills, solar panels and other technologies needed for a

⁷⁷ <https://www.euractiv.com/section/economy-jobs/news/putting-money-behind-the-eus-industrial-policy/>.

⁷⁸ <https://www.euractiv.com/section/economy-jobs/news/putting-money-behind-the-eus-industrial-policy/>.

⁷⁹ <https://www.euractiv.com/section/economy-jobs/news/of-regulatory-bonds-and-money-bombs/>.

⁸⁰ https://www.bruegel.org/sites/default/files/2023-02/PB%2004%202023_0_1.pdf.

⁸¹ <https://www.euractiv.com/section/energy-environment/opinion/call-for-a-european-green-industrial-policy/>.

⁸² https://ec.europa.eu/commission/presscorner/detail/en/speech_23_4426.

⁸³ https://ec.europa.eu/commission/presscorner/detail/en/ip_23_510.

successful energy transition. State aid rules were also temporarily relaxed, 'subject to conditions necessary to limit distortions to the Single Market.'

To that end, in March 2023 the Commission put forward the Net Zero Industry Act (NZIA) and the Critical Raw Materials Act (CRM). The NZIA creates a list of strategic industries and sets a production target for those domestic industries of 40% of EU needs. And, among other things, it suggests policies to support those projects, such as accelerated permitting.

That same month, the Commission adopted the Temporary Crisis and Transition Framework, which gives EU members more leeway in supporting their own industries in boosting and retaining clean tech investments in Europe.

In support of these efforts, the EU has earmarked, among other funding, around €510 billion, largely from the NextGenerationEU program and the REPowerEU fund. In addition, the Recovery and Resilience Fund (RRF) allocates roughly €720 billion in grants and loans to the member states, with 37% explicitly designated to facilitate the green transition.

Thanks to these various funding streams, at 0.5% of GDP, [EU financial backing for renewable energy is twice that provided by the IRA](#)⁸⁴. Moreover, EU support tends to be focused more on upstream activities than are the IRA's investment and production subsidies, with Brussels supporting early-stage development, not specific projects. And, unlike the IRA, the NZIA's production targets only apply when a third country without a free trade agreement with the EU becomes a near-monopoly supplier for the EU. Thus, the NZIA is less protectionist than the IRA, while still helping diversity EU suppliers of strategic industries.

And not to be outdone by the U.S. CHIPS and Science Act, Europe has its own Chips Act. The goal is to increase domestic chip production, doubling the EU's global share from the current 9% to 20% by 2030.

The [Chips for Europe Initiative](#)⁸⁵ will combine investments from Brussels, member states and the private sector. The Chips Act also authorizes exemptions to the prohibition of state aid for semiconductor projects if companies and governments demonstrate that a project is 'first-of-a-kind'.

'Europe is taking its destiny back into its own hands,' European Commissioner Thierry Breton [enthused](#).

To that end, Germany plans to invest some [€4 billion](#)⁸⁶ in 31 projects. 'The Federal Government, the federal states and the EU must therefore pull together on microelectronics. This is the only way we can position ourselves confidently and as independently as possible from imports and lead the way in this technology of the future,' [said](#)⁸⁷ Winfried Kretschmann, Minister-President of Baden-Württemberg.

And there is evidence that these investment incentives are working. In April 2023, Spain announced a €450 million subsidy for ArcelorMittal to produce steel using hydrogen. France has offered €2.1 billion in subsidies for a floating offshore wind farm, and Paris has announced [€2.9 billion of](#)

⁸⁴ <https://www.cae-eco.fr/staticfiles/pdf/cae-svg-joint-statement-ira-230921.pdf>.

⁸⁵ <https://www.european-chips-act.com/>.

⁸⁶ <https://www.euractiv.com/section/industrial-strategy/news/semiconductors-germany-to-receive-e4bn-from-eu-programme/>.

⁸⁷ <https://www.euractiv.com/section/industrial-strategy/news/semiconductors-germany-to-receive-e4bn-from-eu-programme/>.

[support](#)⁸⁸ for chipmakers GlobalFoundries Inc. and STMicroelectronics. In June 2023, Intel unveiled a €30 billion investment plan in Germany in an effort to 'create a first-of-its-kind, leading-edge end-to-end semiconductor manufacturing value chain', according to its [press release](#)⁸⁹. In August 2023, Taiwanese semiconductor giant TSMC [announced](#)⁹⁰ it will invest over €10 billion in Germany, to both build and operate a microchips plant, in return for €5 billion in subsidies. And Italy will provide a €292.5 million subsidy for the construction of an STMicroelectronics silicon carbide substrate manufacturing plant in Sicily.

These investments are unlikely to have taken place without the EU Chips Act. Unfortunately, new doubts have been raised about some German chip subsidies, at least, after a [judgement](#)⁹¹ by the German constitutional court that the subsidies exceed the German debt brake.

But Nallinger and Pellerin-Carlin believe what has been done is not enough. 'Attempts at an EU response, namely the [Green Deal Industrial Plan](#)⁹², have so far proved insufficient to face the scale of the competitiveness challenge Europe faces [...]. What is required is [...]. First, creating an industrial policy that can put the Green Deal to work [...]. Climate innovation should be supported to scale and reach the market quickly, supply chains should be made more resilient to secure European energy security, and existing industries should be supported to decarbonize to ensure an economy-wide transformation. Second, find a solution to close the climate investment gap, estimated at [€360bn a year](#)⁹³ [...]. European public investment options currently remain too complex, too small – or both. For a truly European response, national budgets are not sufficient. A common industrial policy must create the space for more European funds to be spent quickly, simply, and strategically. In the short term, the best option is to increase public funding dedicated to the EU Innovation Fund. Third, a more effective European governance structure is required if the EU is to match American and Chinese peer institutions' ability to act [...]. This will not be achieved overnight. Member States must empower the EU's institutions to take a more entrepreneurial, less risk-averse role in investing and transforming Europe's clean industrial sector.'

The NZIA is also too narrow, argue Simone Tagliapietra, Reinhilde Veugelers, and Jeromin Zettelmeyer in a [study](#)⁹⁴ for Bruegel, 'in that it does not tackle the central problem plaguing EU green industrial policymaking: lack of coordination. Europe has a multitude of green industrial policy initiatives at EU level, adding to the multitude of policy initiatives at national and regional levels. These initiatives are generally not coordinated and may even conflict. Uncoordinated industrial policies fail to capitalise on EU economies and synergies scale and could undermine the level playing field across Europe. While the NZIA proposes a Net Zero Europe Platform to coordinate the preferential treatment of projects selected, this does little to address the fragmented state of cleantech industrial policymaking in the EU and risks worsening this fragmentation further.'

⁸⁸ <https://www.bloomberg.com/news/features/2023-07-25/global-subsidy-wars-force-us-allies-to-pay-up-for-chips-evs>.

⁸⁹ <https://www.intel.com/content/www/us/en/newsroom/news/intel-german-government-agree-magdeburg.html#gs.1nkhkb>.

⁹⁰ <https://www.euractiv.com/section/economy-jobs/news/tsmc-to-invest-e10bn-in-microchip-plant-in-germany/>.

⁹¹ <https://www.ft.com/content/e36830bf-0fb4-4878-944c-0bf9088478d2>.

⁹² https://ec.europa.eu/commission/presscorner/detail/en/ip_23_510.

⁹³ https://www.eib.org/attachments/lucalli/20230024_economic_investment_report_2022_2023_key_findings_en.pdf.

⁹⁴ <https://www.bruegel.org/policy-brief/rebooting-european-unions-net-zero-industry-act>.

[Jonathan Barth](#)⁹⁵, policy director at the economic think tank ZOE Institute, generally agreed with this sentiment. 'Without proper funding, the potential of industrial policy is limited,' he said. 'In comparison to the U.S., what the EU lacks right now is a bigger vision. We need to move from national to European level thinking and to re-imagine European industry across the continent.'

Such sentiments have been echoed by some European politicians. 'I think we are getting to a situation where we really have to think about how serious our ambition for net-zero technologies is,' observed [Christian Ehler](#)⁹⁶, a member of the European Parliament. 'The Inflation Reduction Act is a systematic challenge for the Green Deal. It's an alternative to the Green Deal because we never delivered on the deal part of the Green Deal. We are regulating our industry. We are co-creating the regulation [...]. We are not investing to ensure in the business case for the transition. That's what the Inflation Reduction Act is doing. The Inflation Reduction Act creates a business case for a sustainable transition. It offers an industry a deal, and our only possible reaction to it is to become furious about the deal part of the Green Deal.'

Paolo Gentiloni, the European Commissioner for Economy, claims that the bloc had enough money on the table for the immediate future. In fact, in late 2023 the Commission offered battery makers in the EU €3 billion in subsidies. But Brussels will have to boost its financial commitment after the 2024 European Parliament elections, he argued, potentially via the previously mooted idea of a European Sovereignty Fund. How this fund will be financed remains a subject of debate. Options include money in the EU's Next Generation EU fund, or from the EU Emissions Trading System, the CBAM, or the new minimum tax on multinational companies' profits.

In the interim, given limited EU funding and the desire of some national capitals with a history of supporting their industry and the resources to do so, the European Commission has relaxed state aid rules and approved €742 billion in such aid between February 2022 and September 2023. The only requirement is that such measures are introduced in response to those other countries' subsidies.

Approvals cover a range of initiatives at the national level. [Germany wants](#)⁹⁷ to offer tax credits for solar, wind and grid investments. In September 2023, French electric battery maker Verkor [secured](#)⁹⁸ €2 billion in financing for a new plant, €650 million of which comes from government subsidies. In addition, Paris hopes to offer consumers incentives worth between €5,000 and €7,000 for new EVs that have been assembled in an environmentally friendly way. French finance minister [Bruno Le Maire](#)⁹⁹ observed: 'It's not our role to use public funds to finance the development of factories in Asia. These measures will lead us to reserve that bonus to cars made in Europe'

It's 'not a bad thing in itself' that governments are directing all this support to the green transition, commented former European Commissioner for Trade [Malmström](#)¹⁰⁰. The risk, she said, is that 'subsidies from one country hurt other countries.'

⁹⁵ <https://www.euractiv.com/section/economy-jobs/news/putting-money-behind-the-eus-industrial-policy/>.

⁹⁶ https://www.europarl.europa.eu/doceo/document/CRE-9-2022-12-14-INT-3-081-0000_EN.html.

⁹⁷ <https://www.bloomberg.com/news/articles/2023-02-21/germany-wants-tax-credits-for-green-investments-to-counter-ira>.

⁹⁸ <https://www.euractiv.com/section/economy-jobs/news/french-electric-car-battery-start-up-secures-historic-e2-bl-nc-financing/>.

⁹⁹ <https://www.ft.com/content/5cc8197f-cccd-4e61-ac2d-349c95bcc877>.

¹⁰⁰ <https://www.bloomberg.com/news/features/2023-07-25/global-subsidy-wars-force-us-allies-to-pay-up-for-chips-evs>.

'There's a profound divide between large countries and small countries in the EU,' warned former Italian Prime Minister [Enrico Letta](#)¹⁰¹. 'I don't think we can leave all of this just at the national level.'

And, writes [Mathieu Duchâtel](#)¹⁰², 'the Commission [has] authorized precisely what European competition law sought to prevent by prohibiting industrial subsidies: concentration in countries with sufficient budgetary leeway to support large-scale projects.'

'There is a fundamental problem at the heart of this,' said [Fabian Zuleeg](#)¹⁰³, chief executive of the European Policy Centre think-tank in Brussels, 'if we continue to do industrial policy at the national level we are going to risk the single market in the end.'

'The US is one year ahead – but the EU has the power to catch up,' Bernd Weber, a German EPP member of the European Parliament, and Markus Pieper, CEO of the think tank EPICO Klimainnovation, wrote in [Euractiv](#)¹⁰⁴. 'The EU must rev up its competitiveness with the Net Zero Industry Act (NZIA) [...] while maintaining the driving seat of global decarbonisation we achieved thanks to the European Green Deal.' But, in an implicit warning about the transatlantic effects of the IRA, they argue: 'We should avoid by all means a clean tech race from becoming a subsidy race. Unleashing broad subsidy spirals and protectionist measures in Europe in response to the IRA would have questionable effects on competitiveness in Europe as a business location. Subsidies carry high risks for trade policy. They can unexpectedly shift the paradigm to a race to the bottom, harming both the European and the global green transition.'

5.1. The debate over subsidies

The IRA, the CHIPS Act and Europe's multifaceted response have renewed an old debate on both sides of the Atlantic on the philosophical and practical aspects of industrial policy.

In 1999, before the election of Joe Biden as American president, the United States devoted [0.4%](#)¹⁰⁵ of its GDP to business in the form of direct subsidies, tax incentives, below market credit and state investment funds. German and France provided 0.5%, roughly comparable.

But China committed 1.5% of its GDP to government-funded industrial policy. This three-fold differential in subsidization has fuelled much of the support for transatlantic industrial policy, although this enthusiasm may be misplaced.

A [study](#)¹⁰⁶ by Lee Branstetter and Guangwei Lee concludes that, while Chinese firms receiving 'Made in China 2025' aid exhibit an increase in R&D intensity, 'there is little statistical evidence of productivity improvement or increases in patenting or profitability [...]. If Western countries view the 'Made in China 2025' initiative as a threat to the competitive positions of their firms, they may also begin to introduce more industrial policies as a response [...]. The proliferation of these policies

¹⁰¹ <https://www.euractiv.com/section/economy-jobs/news/european-industrial-policy-and-capital-markets-union-enrico-lettas-plan-for-the-single-market/>.

¹⁰² <https://www.euractiv.com/section/industrial-strategy/opinion/tsmc-in-germany-the-successes-and-limits-of-the-eu-chips-act/>.

¹⁰³ <https://www.ft.com/content/4bc03d4b-6984-4b24-935d-6181253ee1e0>.

¹⁰⁴ <https://www.euractiv.com/section/economy-jobs/opinion/one-year-on-europe-is-still-missing-a-business-case-for-industrial-decarbonisation/>.

¹⁰⁵ <https://www.bloomberg.com/news/features/2023-07-25/global-subsidy-wars-force-us-allies-to-pay-up-for-chips-evs>.

¹⁰⁶ <https://cepr.org/voxeu/columns/actual-effect-chinas-made-china-2025-initiative-may-have-been-overestimated>.

could take on the dynamics of an arms race and further undermine the rules-based international trading system and the political support for it.'

Conservative, free market-oriented American economists also predictably criticize Washington's newfound love affair with industrial policy. 'Why should we expect the government to do a good job of [picking winners and losers](#)¹⁰⁷, or to allocate scarce resources better than the market?,' asked [Michael Strain](#)¹⁰⁸ of the American Enterprise Institute. 'In the real world, government planners simply lack the control to make an industrial policy succeed over the long term. If the government intervenes in markets, how will it avoid mission creep, cronyism, and corruption?'

'Bidenomics is much less a coherent approach to economic policy and much more a grab bag of subsidies designed to advance key interests of the Democratic Party coalition,' he concluded.

Environmental subsidies can come at a high cost economically, if mixed with protectionist policies. 'Such trade restrictions cannot possibly enhance global welfare,' writes George Washington University law professor [Steve Charnovitz](#)¹⁰⁹.

Such criticism is borne out by American experience with past semiconductor industrial policy. The George W. Bush Administration created Sematech, to bolster the industry. The effort temporarily helped boost employment and exports, but those both faded once the program ended.

Nevertheless, some conservatives, such as Strain, do not totally discount the industrial policy rationale behind the IRA. 'Operation Warp Speed (which accelerated COVID-19 vaccine development and deployment) and the [Defense Advanced Research Projects Agency](#)¹¹⁰ are two good examples of the government successfully orienting a specific industry toward specific goals,' he wrote. "'Specific' is the keyword, here. Restoring the entire manufacturing sector [...] to an unspecified semblance of its former glory is too vague, too broad, and too ambitious an objective.'

Strain suggests that Washington should: 'identify a narrow set of specific goods that genuinely warrant export and investment controls. Second, it should invest public funds in basic research and infrastructure.'

And in what is music to European ears, he endorses a Carbon Border Adjustment Mechanism: 'Third, it should adopt a carbon tax to lower the relative price of green technology. That would accelerate technological development and allow the market to determine which technologies are the most promising.'

Much of the political backlash against the IRA and the Chips Act is based on the fear that such American industrial policy will trigger a race to the bottom between Europe, Japan, the United States, and others. 'In seeking to draw industrial jobs to the United States alone,' [write](#)¹¹¹ David Kamin and Rebecca Kysar, former Biden Administration officials, in Foreign Affairs, 'the government may do more harm than good. And by concentrating solely on domestic production capacity, rather than working in concert with allies and partners, the government may incur significantly higher costs. This in turn can reduce living standards for workers because they are consumers, too.'

¹⁰⁷ <https://www.wsj.com/articles/elon-musk-tesla-buffalo-new-york-solar-plant-1b634b9e>.

¹⁰⁸ <https://www.aei.org/articles/plan-vs-no-plan-my-chat-with-economist-michael-strain-on-when-industrial-policy-makes-sense-and-when-it-doesnt/>.

¹⁰⁹ https://scholarship.law.gwu.edu/cgi/viewcontent.cgi?article=2341&context=faculty_publications.

¹¹⁰ <https://www.darpa.mil/>.

¹¹¹ <https://www.foreignaffairs.com/united-states/industrial-policy-china-perils>.

And American economists are not the only critics of the IRA. It has also become a partisan issue in recent American politics.

Republican Speaker of the U.S. House of Representatives [Mike Johnson](#)¹¹² has been highly critical of the Inflation Reduction Act, complaining it created 'green energy slush funds.'

And Republican candidates in the 2024 presidential election have used the IRA as a foil for a range of criticism of the Biden Administration and the Democrats. Opposing electric cars, one of the IRA's primary beneficiaries—and the auto industry's consequent shift away from internal-combustion engines to battery power—enables Republican candidates to bundle their criticism of Democrats into one neat rhetorical flourish. Attacking EVs enables them to go after China, the dominant economic force in the battery industry. It also pleases Republican voters still hostile to the notion of climate change and to all things environmental and 'woke.' And such attacks allow them to attack government bureaucrats in Washington as being out of touch with 'real Americans.'

Moreover, by making the energy transition a 'woke' exercise, it allows Republican politicians to evoke a halcyon past of muscle cars built by their fathers and grandfathers. This is the same past that Trump conjured up in his victorious 2016 presidential campaign, a nostalgia that continues to exert appeal for many American voters. In the 2024 presidential race, [Trump](#)¹¹³ has complained that EVs run out of power in 15 minutes, are bad for the environment, and would destroy the domestic auto industry within a few years. Gov. [Ron DeSantis](#)¹¹⁴ of Florida, another Republican candidate, promised to roll back EV subsidies to 'support Americans' right to drive the cars they want.'

Yet European subsidy policies also come in for criticism. Experts argue that it is not just the U.S. that has forsaken a commitment to free trade and reduced government involvement in the economy. 'European leaders have abandoned, in part or in whole, the economic and ideological principles they once held sacred,' [claimed](#)¹¹⁵ Europeans Matthias Matthijs and Sophie Meunier in Foreign Affairs.

Europe should not be too quick to respond to IRA subsidies with subsidies of its own, warned the [Centre for European Reform](#)¹¹⁶. Supply chains are shortening as technologies mature, and companies are expanding production nearer consumers to reduce shipping costs, as has happened in the past with the auto industry. The EU should be cautious about directly subsidizing green production where demand is robust, and markets are rapidly maturing. 'A subsidies race may also distort the EU single market, weaken incentives to innovate, and create excess production capacity,' CER scholars John Springford and Sander Tordoir conclude. Moreover, 'a protectionist backlash from other trade partners could slow the green transition by driving up the prices of inputs that the EU needs in order to decarbonize.' Rather, CER proposes that the EU focus subsidies on sectors where short-term assistance is needed to help infant European industries, such as hydrogen, achieve scale, while it supports markets for goods, like wind turbines, in which a global oligopoly or duopoly is likely to arise, and in which a dependence on China would be risky.

Some European economists argue that Europeans who worry about the IRA 'doth protest too much,' in Shakespeare's words. 'The overall funding level of the various programs the EU has already initiated to meet climate targets and facilitate the green transition is comparable to the IRA,'

¹¹² <https://www.politico.com/news/2023/10/25/new-house-speaker-mike-johnson-on-the-issues-00123627>.

¹¹³ <https://www.nytimes.com/2023/10/05/us/politics/republican-trump-electric-vehicles.html>.

¹¹⁴ <https://www.nytimes.com/2023/09/20/us/politics/desantis-climate-energy-biden.html>.

¹¹⁵ <https://www.foreignaffairs.com/europe/european-union-geo-economic-revolution>.

¹¹⁶ <https://www.cer.eu/publications/archive/policy-brief/2023/europe-american-chinese-green-tech>.

concluded a joint report by the [Franco-German Council of Economic Experts](#)¹¹⁷. More specifically, as [Bruegel](#)¹¹⁸ has pointed out, the IRA subsidy is roughly \$7,500 per car. EU support is about €6,000 per vehicle.

Therefore, the French and German economists argue: 'the subsidies under the IRA are expected to exert minimal overall macroeconomic impact on both the U.S. and the EU [...]. While specific industries may have greater incentives to invest in the U.S. rather than the EU under this new framework, a closer examination at the sectoral level fails to yield evidence linking the IRA to significant risks for the EU. In this context, a subsidy race should be avoided with the U.S. as well as within the EU.' And they conclude that the EU's green industrial policy is 'clearly a superior approach.'

While European economists downplay a transatlantic subsidy race, they do worry about the IRA triggering an intra-EU subsidy war.

Overall, nearly half (48.4%)¹¹⁹ of all EU-approved direct green transition grants, tax breaks, preferential loans or guarantees have been provided by Germany, with France (22.6%) and Italy (7.8%) a distant second and third.

These numbers highlight the resource disparity within the EU. 'The problem,' [complained](#)¹²⁰ Zach Meyers, a CER research fellow, 'is that the relaxed state aid rules benefit countries like Germany that have low public debt and can afford to lavish subsidies. These subsidies risk wasting public funds [...] and distort competition by encouraging investment to move within the EU.'

Such sentiment is echoed by [Olivier Blanchard](#)¹²¹, the former chief economist at the International Monetary Fund: 'I worry more and more about the reliance [on] green subsidies where carbon taxes should instead be used. On paper, largely equivalent. In practice, much larger distortions, and the likely source of strong trade tensions.'

This concern is also shared in the United States. 'The question,' asked two former Trump Administration officials in [Foreign Affairs](#)¹²², 'is whether this new industrial policy will set off a counterproductive subsidy race against friends and allies or can instead be implemented cooperatively with them [...]. Without new forms of cooperation or coordination with allies and friends, these U.S. measures could create a damaging contest.'

Moreover, there is danger for others posed by competing American and European industrial policies, as justified as they may be. 'Large-scale industrial subsidies seem to be a luxury that rich countries can indulge,' [writes](#)¹²³ economist Douglas Irwin. 'Just because the U.S., China, and the EU can afford subsidies does not mean that others should follow.'

¹¹⁷ <https://www.sachverstaendigenrat-wirtschaft.de/en/start/news/the-inflation-reduction-act-how-should-the-eu-react.html>.

¹¹⁸ https://www.bruegel.org/sites/default/files/2023-02/PB%2004%202023_0_1.pdf.

¹¹⁹ <https://www.euractiv.com/section/economy-jobs/news/analysis-eu-subsidy-race-is-on-and-germany-is-winning-it/>.

¹²⁰ <https://www.euractiv.com/section/economy-jobs/news/analysis-eu-subsidy-race-is-on-and-germany-is-winning-it/>.

¹²¹ <https://twitter.com/ojblanchard1/status/1702582502148198845>.

¹²² <https://www.foreignaffairs.com/united-states/industrial-policy-china-perils>.

¹²³ https://www.imf.org/en/Publications/fandd/issues/2023/06/the-return-of-industrial-policy-douglas-irwin?utm_medium=email&utm_source=govdelivery.

But criticism of the European response to the IRA is practical, as well as philosophical. [Mathieu Duchâtel](#)¹²⁴ of the Institut Montaigne in Paris, has warned that the aim of doubling the current EU semiconductor global market share to 20% by 2030 'would require hundreds of billions of euros,' a far cry from the €43 billion Brussels hope to mobilize in both EU, state aid and private investment.

Duchâtel's view is largely shared by Meyers. The doubling of current EU production to 20% relies on the 'unrealistic assumption that global production everywhere else stood still [...]. Announced chip-making investments in Europe do not come close to delivering these ambitions,' [he said](#)¹²⁵.

Moreover, announced chip investments are not cutting-edge. TSMC's new European factory will manufacture 14-28-nanometer chips for the automotive sector. But these are a far cry from the 4-5-nanometer chips being made in Taiwan.

Despite objections to industrial policy on both sides of the Atlantic, there is a need to address the underlying reason for new subsidies. 'We in the EU have decided the green transition is the biggest issue we face, and rightfully so,' argues [Jacob Kirkegaard](#)¹²⁶ of the Peterson Institute. 'We are in a planetary emergency. If we are going to hit our 2030 [climate] targets, rather than railing against unfair subsidies, whether they are being doled out in the U.S., China or Europe, maybe this is a moment to accept them as a necessary part of an urgent drive to lower greenhouse gas emissions.'

And this can only be accomplished through the EU and U.S. working together, writes [David Kleimann](#)¹²⁷: 'International cooperation will be essential to defuse such tensions before they escalate and impede effective climate policy rollouts, and before they lead to economic countermeasures that create new barriers to trade in environmental goods. This requires agreement on permissible environmental subsidy practices that minimize distortions.'

The debate over industrial policy and the transatlantic dilemma it poses is best summed up by [Tyson and Zysman](#)¹²⁸: 'With 'industrial policy' resurgent, several questions arise. First, are the goals and policies of green and chips industrial policy in inherent conflict with each other? Green has the objective of a universal energy transformation. That requires a broad alliance, including China, even with competitive conflicts in green production and employment. Chips requires a more restricted alliance of allies and friends that confront China, in which the underlying purposes of the allies are not all the same. China's ambition to establish leadership, indeed dominance, in crucial digital technologies is both a security and an economic challenge. For the United States, the security challenge is primary. The choices are not straightforward for other countries, which are trying to ensure in the name of 'sovereignty' their capacities for sustained autonomous technology development, to keep pace with U.S. technology firms, while maintaining access to the Chinese market for their exports. An overarching question is whether the U.S.-driven policy of containing China in the semiconductor industry will undermine China's willingness to participate in global solutions and trading rules in green technologies and products. If China is identified as an enemy in the semiconductor industry, will it be an ally in green industries?'

¹²⁴ <https://www.euractiv.com/section/economy-jobs/news/behind-shiny-new-semiconductor-investments-the-eu-chips-act-needs-more-work/>.

¹²⁵ <https://www.euractiv.com/section/economy-jobs/news/analysis-eu-subsidy-race-is-on-and-germany-is-winning-it/>.

¹²⁶ <https://www.ft.com/content/4bc03d4b-6984-4b24-935d-6181253ee1e0>.

¹²⁷ <https://www.bruegel.org/policy-brief/climate-versus-trade-reconciling-international-subsidy-rules-industrial>.

¹²⁸ https://www.bruegel.org/sites/default/files/2023-08/Bruegel%20Blueprint%2033_chapter%205.pdf.

5.2. Trade policy

The revival of industrial policy is not the only challenge to economic orthodoxy posed by the IRA. Transatlantic trade disputes and the policy differences that underlie them have long been a major irritant in U.S.-EU relations. And recent trade actions by both the Trump and Biden Administrations have Washington and Brussels at loggerheads.

The Biden Administration's 'new Washington consensus' 'turns 40-plus years of foreign economic policy on its head,' [Jennifer Harris](#)¹²⁹, a former White House National Economic Council member who is one of the architects of this policy, argues approvingly. 'In particular, it ends decades of unquestioning deference to trade rules that, even still, have not contended with either the realities of climate change or the crush of nonmarket practices from China.'

The perspective within the Biden administration, as articulated by [Sullivan](#)¹³⁰, is that 'in the name of oversimplified market efficiency, entire supply chains of strategic goods—along with the industries and jobs that made them—moved overseas.'

This perception is backed by long-time trade critics. 'What we're seeing here to some degree is elite opinion and policymaking catching up to where the public's lived experience of these policies already was,' said [Lori Wallach](#)¹³¹, director of trade at the American Economic Liberties Project. 'There was an elite consensus [...] and it was obviously bipartisan [...] and there were all these grandiose promises of things that everyone would want, but the deliverables did not come forward.'

Wariness of trade has been growing for some time, dating back to at least the 1980s and America's trade wars with Japan. And for years Americans have consistently [believed](#)¹³² that trade destroys jobs, lowers wages and does not lower prices. Successive U.S. administrations have been tough on individual trade issues, culminating in the Trump Administration's tariffs on Chinese imports, duties on EU steel and aluminium, turning its back on the World Trade Organization and forced renegotiations of both the Korea Free Trade Agreement and the North American Free Trade Agreement.

'The [current] U.S. approach is not to enter into comprehensive trade agreements, such as an FTA, a new TPP, or even a broader and shallower RCEP, but to selectively address some positive elements to facilitate trade that it favours, and to discourage trade which it disfavours. It downplays the possibility of obtaining enforceable global rules,' [Alan Wolf](#)¹³³, the former American deputy director general of the World Trade Organization, has observed. 'It acts inconsistently with existing obligations requiring non-discrimination or national treatment where industrial policy objectives or strategic security interests exist.'

Specifically, recent U.S. trade policy has broken with the past in ways that indirectly impact Europe. The aforementioned steel and aluminium tariffs are a prime example. But the IRA EV subsidies also pose a trade challenge for European automakers.

¹²⁹ https://rooseveltinstitute.org/wp-content/uploads/2023/04/RI_Industrial-Policy-Synergies-Reflections-from-Biden-Administration-Alumni_Report_202304.pdf.

¹³⁰ <https://www.whitehouse.gov/briefing-room/speeches-remarks/2023/04/27/remarks-by-national-security-advisor-jake-sullivan-on-renewing-american-economic-leadership-at-the-brookings-institution/>.

¹³¹ <https://thehill.com/business/4222035-how-trump-and-biden-killed-the-free-trade-consensus/>.

¹³² <https://www.pewresearch.org/global/2018/09/26/americans-like-many-in-other-advanced-economies-not-convinced-of-trades-benefits/>.

¹³³ <https://www.reuters.com/article/us-usa-trade-wto/world-trade-system-needs-full-u-s-participation-wto-official-idUSKBN2A922I>.

The Trump Administration imposed a 27.5% tariff on Chinese-made cars (a 2.5% duty on all auto imports plus the 25% China import-specific one), effectively pricing those vehicles out of the U.S. market, even if they qualified for IRA subsidies, which they don't. And no US-manufactured EVs that include Chinese-made battery components are eligible for the full subsidies. Nor will EVs qualify for [IRA incentives](#)¹³⁴ if they are made by companies with significant ties to the Chinese government or produced with a licensing agreement with a China-based or Beijing-controlled operator.

At the same time, the EU tariff on Chinese-made cars is only 10% and Chinese EVs qualify for national subsidies. With this tariff and subsidy differential it is little wonder that Chinese automakers have lifted their share of the EU EV market from [0.5% in 2019 to 8.2%](#)¹³⁵ in the first half of 2023.

This may be good for the environment, but 1.7% of the EU workforce is employed in the automotive sector, nearly three times that of the U.S. (0.6%), and the auto sector accounts for [10%](#)¹³⁶ of manufacturing activity. Moreover, auto exports have generated an EU trade surplus of between €70 billion and €110 billion every year over the past decade, the Allianz report points out. The closed American market and the diversion of Chinese cars to the lucrative EU market puts all of this at risk.

The EU's FTAs with South Korea, Mexico and Canada mean imports of their EVs pay no duty. Moreover, the phase-in period for Japan's FTA with the EU will result in the 3.8% EU tariff on its EVs disappearing in 2026. While U.S.-based EV makers will benefit from both consumer subsidies and protection from imports, European EV makers will face growing competition from Chinese, Japanese and Korean automakers.

A recent [study](#)¹³⁷ by Allianz projected that, if current trends hold, European carmakers and suppliers could see their profits fall by tens of billions of euros by 2030, with German companies bearing the brunt. 'There's a danger that Europe will end up being the loser in this shift,' Klaus Rosenfeld, the chief executive of Schaeffler, a car-parts maker, [acknowledged](#)¹³⁸ recently, adding that his company was likely to build its next plants in the U.S.

This has not gone unnoticed in Brussels. European Commission President von der Leyen has launched a probe into Chinese auto subsidies, complaining that the global auto market is overrun with cheap Chinese vehicles with prices kept artificially low by huge state subsidies.

But the new departure in U.S. trade policy is not limited to tariffs. The Biden Administration has also doubled down on [Buy American preferences](#)¹³⁹ that have long applied in U.S. government procurement at both the federal and state level. It has increased the domestic content requirements to 55%, and the margin of price preference for domestic end products and construction material from 6% to 20% for large businesses, and from 12% to 30% for small businesses. In the IRA, Buy American is required in numerous tax incentives, including the clean energy production and investment tax credits, the advanced manufacturing production credit, and the clean vehicle credit. For example, for buyers to utilize the EV credit of up to \$7,500, the EVs must be assembled in North

¹³⁴ <https://www.ft.com/content/7d80627e-c6a6-4216-b4c8-275f089fc447>.

¹³⁵ <https://www.theguardian.com/business/2023/sep/04/china-europe-electric-car-market-uk-sales-mg-tesla>.

¹³⁶ <https://www.politico.eu/article/china-us-europe-electric-cars-miles-apart-the-us-and-europe-diverge-on-car-threat/>.

¹³⁷ https://www.allianz.com/en/economic_research/publications/specials_fmo/european-automotive-industry.html.

¹³⁸ <https://www.welt.de/wirtschaft/plus243971997/Autozulieferer-Schaeffler-Unsere-naechsten-Werke-bauen-wir-in-Amerika.html>.

¹³⁹ https://www.wto.org/english/tratop_e/tpr_e/s434_sum_e.pdf.

America. And in his [2023 State of the Union](#)¹⁴⁰ address Biden reiterated his commitment to Buy American, arguably a political gesture, but one with important economic implications.

This has drawn a sharp rebuke from [French President Macron](#)¹⁴¹: 'We need a Buy European Act like the Americans,' he told TV Channel France 2. [German Economy Minister Habeck](#)¹⁴² has also suggested that new state aid should be used for the 'procurement of local products.' But the EU's proposed Net Zero Industrial Act does not favour European manufacturers over foreign ones; rather, it tries to limit dependency on Chinese green technologies. 'This is a fortunate and reasonable development,' [David Kleimann](#)¹⁴³ of Bruegel told EURACTIV, because it prevents the EU from breaching WTO agreements.

In December 2022, Bernd Lange, chair of the European Parliament's trade committee, [called for](#)¹⁴⁴ an EU lawsuit against the US due to its discriminatory 'local content' rules under the IRA. But he later acknowledged that, given subsequent EU-U.S. negotiations, such action was not timely. Lange told [Euractiv](#)¹⁴⁵: 'The IRA legislation is still not WTO-compliant. However, we are currently in intensive talks with the U.S., including on a raw materials agreement and resolving the conflict over illegal tariffs on steel and aluminium. During these negotiations, WTO procedures should not be pursued.'

[Monika Schnitzer](#)¹⁴⁶, head of the German Council of Economic Experts, agreed: 'Maybe it's not in the spirit of pure doctrine, but it's more helpful for us concretely if we get the U.S. to treat us as if we were American companies.'

The White House has also issued an executive order limiting U.S. investment in China in areas that pose national security risks: such as semiconductors, quantum computing and artificial intelligence. The idea is to expand on existing export bans to China, as well as impose limits on Chinese acquisition of American technology, by restricting how U.S. investors put capital into the most strategic sectors of the Chinese economy. The goal is to prevent venture capitalists and private equity funds from transferring important intangible assets—patents, data, software, and other kinds of intellectual property—along with their investments. These affected U.S. investors are unlikely to stand idly by and watch European investors take advantage of the investment opportunities now denied Americans by Washington's action. Just as with export controls, there is likely to be Biden Administration pressure on Brussels to similarly impose outbound investment limitations. The [European Commission](#)¹⁴⁷ is actively considering just such export screening. And German Economy Minister [Habeck](#)¹⁴⁸ has urged EU countries to adopt such a screening scheme, which he said was

¹⁴⁰ <https://www.whitehouse.gov/briefing-room/speeches-remarks/2023/02/07/remarks-of-president-joe-biden-state-of-the-union-address-as-prepared-for-delivery/>.

¹⁴¹ <https://www.politico.eu/article/emmanuel-macron-buy-european-act-cars-united-states-china/>.

¹⁴² <https://www.handelsblatt.com/politik/international/interview-habeck-kuendigt-starke-antwort-europas-auf-us-subventionen-an/28827452.html>.

¹⁴³ <https://www.euractiv.com/section/economy-jobs/news/green-industry-buy-less-chinese-instead-of-buy-european/>.

¹⁴⁴ <https://www.reuters.com/business/lawmaker-says-eu-should-complain-wto-over-us-inflation-reduction-act-2022-12-04/>.

¹⁴⁵ <https://www.euractiv.com/section/politics/news/german-top-adviser-cautious-about-possible-wto-case-against-us/>.

¹⁴⁶ <https://www.euractiv.com/section/politics/news/german-top-adviser-cautious-about-possible-wto-case-against-us/>.

¹⁴⁷ <https://www.herbertysmithfreehills.com/insights/2023-08/eu-seeks-new-controls-on-outbound-investment-as-security-fears-mount>.

¹⁴⁸ <https://www.politico.eu/newsletter/china-watcher/brussels-trade-chief-warns-china-and-eu-could-drift-apart-over-putins-war/>.

'necessary' but should be done 'not so much by the European countries' and instead 'on a European level'.

More fundamentally, Washington's sabotage and disdain for the World Trade Organization, which it was instrumental in creating, is profoundly disturbing in Brussels and could prove a long-term challenge to transatlantic trade cooperation.

The clean energy subsidies that are at the core of the IRA violate WTO rules against state support for domestic industries, claim many critics.

Of systemic importance, the United States has long complained about the decisions of the Appellate Body of the WTO's Dispute Settlement system, especially those rulings against U.S. anti-dumping penalties. In 2016, the United States blocked one proposed reappointment to the Appellate Body and, starting in 2017, it has blocked every proposed appointment or reappointment, effectively neutering the appeals process. The result has been 29 cases left in limbo.

[Keith Rockwell](#)¹⁴⁹, a former WTO official, says the WTO is 'teetering on the abyss of irrelevance. People are not feeling in any way constrained by their obligations to the WTO when it comes to policy.' And there is growing concern among officials, such as WTO Director-General Ngozi Okonjo-Iweala, that the world trading regime is devolving into a power-based rather than a rule-based system.

For its part, the Biden Administration has refused to participate in an alternative dispute settlement process set up by European partners and others. Instead, WTO members have told reporters that Washington has suggested a two-tiered dispute settlement system in which disputes would only advance beyond a first, non-binding judgement to a legally binding Appellate Body stage if both parties agreed to move ahead. This would, in part, return to the system under the GATT, in which losing parties to a dispute could refuse to implement a finding. It was Washington's frustration with that arrangement that led the U.S. to insist on binding dispute settlement during the Uruguay Round.

Cynics can only marvel at the current irony. In the Uruguay Round, it was the Americans pushing for a juridical dispute settlement system in which decisions were enforceable. Brussels argued that the system needed to be more flexible because all trade commitments had political ramifications. Now the EU favours a binding dispute settlement system, and the Biden Administration wants a more flexible approach.

The Biden Administration insists that it has not abandoned the WTO. U.S. Trade Representative [Katherine Tai](#) contended in a speech in Washington in September 2023: 'I think that we should figure out how to make the WTO part of the solution.'

And former USTR deputy [Wendy Cutler](#)¹⁵⁰ disputes Europeans' concerns that Washington is absent without leave in Geneva. 'Yes, we are not playing the same leadership role as in the past but that does not mean we are missing in action,' she tweeted.

But European concerns about American intransigence in Geneva were only confirmed when U.S. Trade Representative [Tai](#)¹⁵¹ also told Politico in September 2023: 'I don't have enough time and money to waste resources in Geneva on a process that we don't actually believe in.'

¹⁴⁹ <https://www.euractiv.com/section/economy-jobs/news/piling-up-of-unresolved-disputes-highlights-wto-crisis/>.

¹⁵⁰ <https://twitter.com/wendyscutler>.

¹⁵¹ <https://www.politico.com/news/2023/09/22/tai-targets-china-climate-in-call-to-reform-wto-00117491>.

Moreover, in [October 2023](#)¹⁵² Washington withdrew proposals initially made in 2019 as part of the WTO's e-commerce negotiations that would allow free cross-border data flows and prohibit national requirements for data localization and reviews of software source code. The reversal was apparently in response to political antipathy toward big data companies and Congressional desire to regulate anti-competitive behaviour in the digital realm.

However, in October 2023 the [U.S.-EU Joint Statement](#)¹⁵³ pledged: 'We will work towards substantial WTO reform by [Ministerial Conference]13 in 2024 including by conducting discussions with the view to having a fully and well-functioning dispute settlement system accessible to all WTO Members by 2024.'

Nevertheless, current U.S. trade policy is roundly criticized by many leading U.S. trade experts. 'We are favouring domestic production over imports. That's flatly prohibited in the rules of the WTO,' said Robert Lawrence, a professor of trade and investment at the Harvard Kennedy School, in an interview with [The Hill](#)¹⁵⁴. 'It's illegal, what he's doing. We are violating rules which American foreign policy and trade policy tried to persuade other countries to adhere to for 75 years.'

Former pre-Trump Republican officials agree. 'Biden's trade representative, Katherine Tai, embraces Trumpian isolationism,' complained former World Bank President and U.S. Trade Representative [Robert Zoellick](#)¹⁵⁵ in the Washington Post. 'She denies the power of deals to open markets to develop international standards for the digital economy and other cutting-edge sectors; to add resilience to nations and supply chains; and to encourage developing countries to improve environmental and labour standards. The Biden theorists imagine a national economy that Washington designs without foreign involvement. Their industrial policy uses tariffs, rules of origin and 'Buy American' requirements to block foreign competition. They send a destructive message to our partners: Join the race to subsidize. If you are a poorer developing country, too bad.'

And Washington's newspaper of record laments the administration's failure to engage with foreign partners. 'The biggest flaw so far in Mr. Biden's industrial policy is it's not been accompanied by strong enough trade policies,' argued a [Washington Post editorial](#)¹⁵⁶. 'There is still no trade deal with Europe. In the Indo-Pacific region, the 'economic framework' that is meant to counter China is not opening new markets or reducing trade barriers. Instead of embarking on a broad strategy for global trade, Americans are executing modest manoeuvres [...]. The Biden team has to do more than just talk about partnerships.'

However, American experts argue that it is not just the U.S. that has forsaken a commitment to free trade and reduced government involvement in the economy. 'European leaders have abandoned, in part or in whole, the economic and ideological principles they once held sacred,' [claimed Matthijs and Meunier](#)¹⁵⁷ in Foreign Affairs.

¹⁵² <https://www.reuters.com/world/us/us-drops-digital-trade-demands-wto-allow-room-stronger-tech-regulation-2023-10-25/>.

¹⁵³ <https://www.whitehouse.gov/briefing-room/statements-releases/2023/10/20/u-s-eu-summit-joint-statement/>.

¹⁵⁴ <https://thehill.com/business/4222035-how-trump-and-biden-killed-the-free-trade-consensus/>.

¹⁵⁵ <https://www.washingtonpost.com/opinions/2023/08/15/biden-economic-policy-revolution/>.

¹⁵⁶ <https://www.washingtonpost.com/opinions/2023/06/19/biden-industrial-policy-trade/>.

¹⁵⁷ <https://www.foreignaffairs.com/europe/european-union-geo-economic-revolution>.

And, as early as 2017, [Jean-Claude Juncker](#)¹⁵⁸, former President of the European Commission, told the European Parliament that the EU was not a bunch of 'naive free traders' and that it 'must always defend its strategic interests.'

But for all the *Sturm und Drang* and finger pointing about recent U.S. trade policy, the jury is still out about the consequences for world trade.

The combination of buy national provisions with subsidies for local production, new tariffs, export controls and 'friend shoring', further aggravated no doubt by the interruption of trade by the war in Ukraine, may have already begun to impact international commerce. The World Trade Organization's [World Trade Report 2023](#)¹⁵⁹ noted that, even though global trade was at an all-time high in 2022, trade between blocs grew up to 6% slower than trade within blocs. And for the first time since 2003, in mid-2023 U.S. imports from Mexico as a share of overall U.S. imports exceeded the percentage from China. Those former Chinese exports to the U.S. did not just stay home, however. Many ended up in other markets, competing with European exports to those consumers.

However, as economist Noah Smith [points out](#)¹⁶⁰, 'the global trading system is starting to rearrange itself, and it's mostly not Biden's doing.' As of yet there is little conclusive evidence that reshoring or new tariffs are dramatically altering global trade patterns. It may be too early.

But it is undeniable that the IRA, the embrace of industrial policy, new export controls, the disengagement from the WTO and the effort to solve trade disputes bilaterally reflects a fundamental shift in America's approach to trade policy.

This approach, with all its nationalistic implications, its failure to launch meaningful new trade negotiations, and its lack of initiative in helping fix the broken WTO suggest that Sullivan's 'new Washington consensus' may not be more of the same, but a significant, lasting departure for the country that drove creation of the multilateral trading system in the post-World War II era.

However, the jury is still out. The bilateral trade talks the U.S. has pursued, especially with Europe, on steel and aluminium and on Boeing/Airbus subsidies, are unprecedented efforts to resolve longstanding trade irritants, albeit bilaterally. This may not be ideal from a multilateral perspective, and the initiatives have yet to pan out. But they are a proactive trade policy.

The final judgement of the trade policy implications of a 'new Washington consensus' awaits a second Biden Administration, if there is one. The first Obama Administration had no major trade liberalizing initiatives. The second term included negotiation of the Trans-Pacific Partnership (TPP)—which the Trump Administration promptly torpedoed—and the Transatlantic Trade and Investment Partnership (TTIP), which failed to materialize largely due to European public opposition. A final assessment of the degree of change in American trade policy wrought by the Biden Administration requires more time to see if Washington becomes proactive in 2025 and beyond in opening commerce and solving trade problems, especially in addressing the broken WTO negotiating and dispute settlement mechanisms.

But [Robinson Meyer](#)¹⁶¹ offers a useful reminder that 'because clean energy is a growing and highly strategic industry, and trade conflict always arises from these very industries [...]. Managing trade

¹⁵⁸ <https://www.economist.com/finance-and-economics/2018/03/22/europeans-fret-that-chinese-investment-is-a-security-risk>.

¹⁵⁹ https://www.wto.org/spanish/res_s/publications_s/wtr23_s.htm.

¹⁶⁰ https://www.noahpinion.blog/p/decoupling-isnt-phoney?utm_source=profile&utm_medium=reader2.

¹⁶¹ <https://www.nytimes.com/2023/04/07/opinion/electric-vehicles-europe-trade-wars.html>.

disputes isn't some sideshow to the real work of fighting climate change. It is fighting climate change. Once you accept that [...] the United States, Japan and those in the European Union need to calm down about the existence of climate-related trade spats. They're here. They're not going away.'

6. Looming issues

The IRA has certainly helped frame U.S.-EU relations since its passage. But there are other ongoing issues that Brussels and Washington are wrestling with, and looming challenges that will continue to preoccupy officials and complicate the bilateral economic and diplomatic relationship, however the IRA-related subsidy and preferential treatment issues play out.

6.1. Export controls

America and Europe cooperated closely through the Wassenaar Arrangement in the wake of the Cold War, imposing export controls on military armaments and dual use equipment that might be used by adversaries. But the Ukraine war and growing concern about China has led to even greater reliance on such controls by both the U.S. and the EU.

The Trade and Technology Council quickly became a forum for discussion of unprecedented coordination of EU and U.S. technology export controls against Russia and Belarus, although in the end it was member states that negotiated and decided upon the measures in the EU's Foreign Affairs Council. Russia's military-industrial complex and defence supply chains have been significantly degraded. Export controls have created major supply shortages for Russia's armed forces and forced Moscow to struggle to import semiconductors and other key components for its military. Unfortunately, trade diversion has enabled Russian allies to meet much of Moscow's needs and have limited export control effectiveness.

Similar challenges face coordination and cooperation on export controls on trade with China.

In September 2022, [Jake Sullivan](#)¹⁶², in a speech at the Global Emerging Technologies Summit, announced that the United States can no longer stay only a couple of generations ahead on technology and 'must maintain as large a lead as possible.' He noted that three families of technology will be of particular importance in the coming decade, including computing-related technologies such as microelectronics, quantum information systems and AI, biotechnologies and biomanufacturing, and clean energy technologies.

In pursuit of maintaining the American lead ahead of China, in October 2022 Washington announced new rules prohibiting U.S. companies from exporting to China the technology, software, and equipment used in producing advanced computing chips and supercomputers. The new measures also bar U.S. persons from supporting certain China-based chip companies without a license.

After pressure from Washington, ASML, the global leading Dutch supplier of key equipment needed to produce high-end computer chips, [agreed to](#)¹⁶³ seek licenses before shipping any such machines.

¹⁶² <https://www.whitehouse.gov/briefing-room/speeches-remarks/2022/09/16/remarks-by-national-security-advisor-jake-sullivan-at-the-special-competitive-studies-project-global-emerging-technologies-summit/>.

¹⁶³ <https://www.reuters.com/technology/amid-us-pressure-dutch-announce-new-chip-equipment-export-rules-2023-06-30/>.

This was a reminder of the extraterritoriality of many U.S. export controls, an issue that has bedevilled EU companies for decades.

In [October 2023](#)¹⁶⁴, the Biden Administration announced a ban on most shipments of advanced U.S. semiconductors to Chinese data centres. U.S. companies seeking to sell China these advanced chips, or the machinery used to make them, will be required to obtain a license, as will firms who want to ship to dozens of other countries that are subject to U.S. arms embargoes.

German scholars [Tobias Gehrke and Julian Ringhof](#)¹⁶⁵ of the European Council on Foreign Relations argue that the European Union must update its strategic approach to export controls in the wake of the new American policy.

For its part, in October 2023 the European Commission announced that it would start collective risk assessments together with member states on four technologies—advanced semiconductors, artificial intelligence, quantum technologies, and biotechnologies. This review could lead to restrictive measures such as export controls. But it also might simply lead to subsidies for these technologies.

'We've all seen what can be the risks of too much dependency, be it during the Covid pandemic or now with the Russian war in Ukraine. Europeans have paid the price for this,' European Commission Vice-President [Věra Jourová](#)¹⁶⁶ said.

While China is not an explicit target of this risk assessment, it is clearly what Brussels has in mind.

And, commented [Agathe Demarais](#)¹⁶⁷, a senior fellow at the European Council on Foreign Relations: 'Through the release of this list, the EU is also keen to show that it is carving its own, European de-risking strategy, instead of merely following the lead of the United States in this field.'

But, rather than suggesting to comprehensively reduce ties to China in the technology sector, the EU's decision to include only a few technologies in its list underscores the bloc's [willingness](#)¹⁶⁸ to reiterate that its goal is to de-risk, not decouple, from China. Moreover, the omission of clean tech in the EU's list also illustrates the fact that the U.S. [approach](#)¹⁶⁹ to de-risking is broader than that of the EU.

Nevertheless, at the [2023 U.S.-EU Summit](#)¹⁷⁰ both sides noted that: 'Export control regimes are central to maintain international security and stability, and necessitate cooperation between actors—including in multilateral fora—to ensure our dual-use technology protection ecosystem is continuously improved upon and cannot be exploited. We will cooperate and share lessons as we work to maximize the effectiveness of our economic security toolkit to achieve our shared interest.'

¹⁶⁴ <https://www.nytimes.com/2023/10/17/business/economy/ai-chips-china-restrictions.html>.

¹⁶⁵ <https://ecfr.eu/article/caught-in-the-crossfire-why-eu-states-should-discuss-strategic-export-controls/>.

¹⁶⁶ <https://www.euractiv.com/section/economy-jobs/news/stricter-eu-controls-on-critical-technologies-possible-from-spring-2024/>.

¹⁶⁷ <https://www.euractiv.com/section/economy-jobs/news/stricter-eu-controls-on-critical-technologies-possible-from-spring-2024/>.

¹⁶⁸ <https://www.nytimes.com/2023/05/20/world/decoupling-china-de-risking.html>.

¹⁶⁹ <https://www.whitehouse.gov/briefing-room/speeches-remarks/2023/04/27/remarks-by-national-security-advisor-jake-sullivan-on-renewing-american-economic-leadership-at-the-brookings-institution/>.

¹⁷⁰ <https://www.whitehouse.gov/briefing-room/statements-releases/2023/10/20/u-s-eu-summit-joint-statement/>.

6.2. Privacy

Data flows underpin [\\$7.1 trillion](#)¹⁷¹ in U.S.-EU economic activities, the biggest such exchange in the world. With the manipulation of massive amounts of data an increasing driver of the creation of economic value for American and European companies—be it BMW and Volkswagen analysing feedback from the computers in its cars in order to build better vehicles, or Master Card and American Express analysing consumer purchases—establishing a legal framework for transatlantic data flows is of paramount importance for competitiveness in the future data-driven global economy.

But this has proven exceedingly difficult because of differences in regulatory philosophy creating persistent legal uncertainty.

EU privacy law forbids the movement of its citizens' data outside of the EU, unless it is transferred to a location which is deemed to have 'adequate' privacy protections in line with those of the EU. In 2000, Washington and Brussels signed a 'Safe Harbor' agreement. It allowed companies such as Facebook, Google, and Amazon to self-certify that they would protect EU citizens' data when transferred and stored within U.S. data centres.

The Safe Harbor Agreement was struck down by the European Court of Justice in 2015. Brussels and Washington then negotiated a Privacy Shield. In 2020, the Privacy Shield was also struck down by the EU court, which cited the risk of massive surveillance and spying on EU citizens by U.S. intelligence agencies.

So, for the third time, the EU and the U.S. have agreed to what they call a Data Privacy Framework, designed to address some of the EU's data protection concerns and limit the ways in which U.S. intelligence agencies can obtain information about EU citizens. In addition, the framework agreement contains other conditions for the collection of personal data. EU citizens will also have recourse to a U.S. Civil Liberties Protection Officer and the independent Data Protection Review Court. And this court will allow European residents to bring claims against U.S. government agencies if they believe their data was not gathered in a 'necessary' and 'proportionate' way for national security.

Privacy advocates are still not satisfied. And this third transatlantic data transfer agreement is again under [attack](#)¹⁷² in Europe. The European Data Protection Board, a group of privacy activists, [claims](#)¹⁷³ the new agreement showed 'substantial improvements' compared with previous pacts, but still lacked some safeguards. The European Parliament has [opposed](#)¹⁷⁴ the new pact, arguing it still allowed some bulk-collection of personal data and included insufficient protections for Europeans' privacy. With multiple lawsuits anticipated, the Court of Justice is expected to have to rule again.

6.3. Critical minerals

Both Washington and Brussels had an early warning of the vulnerability and potential strategic use of critical minerals when, in 2010, China vowed to halt exports of rare earths to Japan over a fishing

¹⁷¹ <https://www.whitehouse.gov/briefing-room/statements-releases/2022/03/25/fact-sheet-united-states-and-european-commission-announce-trans-atlantic-data-privacy-framework/>.

¹⁷² <https://www.euractiv.com/section/data-protection/news/new-eu-us-data-transfer-deal-also-faces-criticism-in-germany/>.

¹⁷³ <https://pro.politico.eu/news/eu-privacy-watchdogs-worried-about-eu-us-data-flows-deal>.

¹⁷⁴ <https://pro.politico.eu/news/eu-lawmakers-oppose-new-data-flows-deal-with-the-us>.

dispute. While there is [some doubt](#)¹⁷⁵ as to whether Beijing ever acted on this threat, the signal was sent and resent again when, in early August 2023, China [imposed](#)¹⁷⁶ restrictions on two metals crucial for semiconductors—gallium and germanium. In October 2023, Beijing limited exports of [graphite](#)¹⁷⁷, which is used in EV batteries. The U.S. is the largest buyer of Chinese graphite. And Beijing has not been alone in exerting its leverage. In 2023, Indonesia banned exports of nickel, a key component of stainless steel.

The EU and U.S. transition to a greener economy based on renewable energy resources is dramatically increasing the need for a range of raw materials, such as lithium, cobalt, gallium, and nickel, used for everything from electric vehicles to wind turbines. The market for these materials has doubled in size between 2017 and 2022, according to [IEA](#)¹⁷⁸ estimates, and is set to at least double again by 2040 amid anticipated surging demand for EVs and battery storage, as well low-emission power generation and electricity networks. Batteries, to cite just one example, may raise global demand for lithium by [500% to 800%](#)¹⁷⁹ by 2030. And there are currently just [11 lithium mines](#)¹⁸⁰ in the world, only one of which is in the U.S.. Demand for EVs and other uses suggests the world will need 60 lithium mines within a decade.

But both the U.S. and the EU are deeply dependent on China for many critical minerals. Chinese production of rare earth elements roughly doubled in the last half decade. Moreover, rare earths must be separated from the oxides, refined, and forged into alloys in a complex, highly specialized, multi-stage process. China is a world leader at each step of this process, thanks to a concerted industrial policy fuelled by generous subsidies.

While China has cornered the market for much of the mining and processing of critical minerals, neither the EU nor the U.S. has a sufficient supply of many of the minerals necessary for the green transition.

U.S. energy-transition-related demand for the critical minerals lithium, nickel and cobalt, taken together, will be [23 times higher in 2035 than it was in 2021](#)¹⁸¹, thanks to the IRA.

However, the IRA is strangely quiet about how to ensure a sufficient supply of critical raw materials. This lack of attention to these building blocks of the green transition was another unfortunate consequence of the closed-door, political horse-trading legislative drafting of the IRA.

Moreover, the IRA imposes three improbable conditions on the sourcing of critical minerals contained in newly purchased vehicles qualifying for tax credits. These requirements set the percentages of these minerals by value that must be extracted or processed in the U.S. or in a country with which America has a free trade agreement. Moreover, it further stipulates that they cannot be sourced from a 'foreign entity of concern', an oblique reference to China. The FTA country percentages increase annually: 50% for a vehicle in service before 2024; 60% for a vehicle coming into service in 2024 or 2025; 70% in 2026; and 80% after 2026. A very rapid transition.

¹⁷⁵ [https://cepr.org/voxeu/columns/revisiting-china-japan-rare-earths-dispute-2010#:~:text=In%202010%2C%20China%20halted%20exports,\(New%20York%20Times%202023\).](https://cepr.org/voxeu/columns/revisiting-china-japan-rare-earths-dispute-2010#:~:text=In%202010%2C%20China%20halted%20exports,(New%20York%20Times%202023).)

¹⁷⁶ [https://www.politico.eu/article/china-europe-chip-industry-faces-new-reality-of-weaponized-supply-chains/.](https://www.politico.eu/article/china-europe-chip-industry-faces-new-reality-of-weaponized-supply-chains/)

¹⁷⁷ [https://www.ft.com/content/8af8c05c-8e54-40e9-9051-5a0b2b036c32.](https://www.ft.com/content/8af8c05c-8e54-40e9-9051-5a0b2b036c32)

¹⁷⁸ [https://www.iea.org/topics/critical-minerals.](https://www.iea.org/topics/critical-minerals)

¹⁷⁹ [https://dqap.org/en/research/publications/europes-green-industrial-policy-and-united-states-ira.](https://dqap.org/en/research/publications/europes-green-industrial-policy-and-united-states-ira)

¹⁸⁰ [https://source.benchmarkminerals.com/article/more-than-300-new-mines-required-to-meet-battery-demand-by-2035.](https://source.benchmarkminerals.com/article/more-than-300-new-mines-required-to-meet-battery-demand-by-2035)

¹⁸¹ [https://cdn.ihsmarket.com/www/prot/pdf/0823/Impact-IRA-Metals-Minerals-Report-FINAL-August2023.pdf.](https://cdn.ihsmarket.com/www/prot/pdf/0823/Impact-IRA-Metals-Minerals-Report-FINAL-August2023.pdf)

The significance of the FTA sourcing requirement is seen in U.S. dependence for critical minerals from nations with whom it has no FTA. Currently, [47%](#)¹⁸² of US nickel imports are from non-FTA countries. Non-FTA countries together will account for [92%](#)¹⁸³ of expected global nickel production in 2035, ensuring that the U.S. projected sourcing requirement will not be met by FTA countries. Almost all American lithium imports are from Argentina (44%) and Chile (53%). But Argentina is not an FTA country, and much of Chile's production is exported to China. In addition, the U.S. currently sources 78% of its refined cobalt from non-FTA countries. How Washington meets its own FTA sourcing requirement is unclear.

Moreover, how this politically attractive, but practically impossible requirement became law highlights American lawmakers' inattention to the international implications of their actions. [Sen. Joe Manchin](#)¹⁸⁴, a Democrat from West Virginia, who played a major role in the drafting of the IRA, dubiously claimed at the World Economic Forum in Davos in 2023 that 'I did not realize the EU is not a free trade agreement.' This certainly was no surprise to USTR, but they were not in the room when the legislation was drafted.

The Biden Administration has moved rapidly to try to clean up this oversight.

First, in December 2022, the U.S. Internal Revenue Service issued an interpretation exempting leased imported vehicles from the IRA requirements regarding location of assembly, battery origin and income level. Effectively, someone who leases an imported BMWi4 qualifies for the subsidy. Given the ease of leasing, this exception means that for many European automotive producers the local content requirement may have limited practical effect.

Second, the U.S. has free trade agreements with 20 nations, accords that have all been approved by Congress. But for the purposes of the IRA, the Biden Treasury has chosen to define an FTA country very broadly as it applies to the IRA to include deals in which the U.S. and other countries reduce, eliminate or refrain from imposing tariffs and export restrictions, and aim to raise standards in areas such as labour rights and environmental protection. This enables EVs from these nations to be eligible for subsidies thanks to the needed critical minerals in their batteries.

Jealous of its trade agreement prerogatives under the U.S. Constitution, Treasury's new definition of an FTA does not sit well with some members of Congress. 'I've said it before and I'll say it again so there is no confusion: Congress will not, under any circumstance, forfeit our constitutionally mandated oversight responsibility of all trade matters,' said [Rep. Adrian Smith](#)¹⁸⁵ (R-Neb.), chair of the House Ways and Means trade subcommittee. 'This is unacceptable and unconstitutional, and I intend to use every tool at my disposal to stop this blatant executive overreach.'

Moreover, in June 2023, arguing that under the Constitution all trade-related agreements must be submitted to Congress for its approval, the U.S. House of Representatives unanimously prohibited the Biden Administration from designating a U.S.-Taiwan Agreement as a 'free trade agreement' for purposes of the IRA tax credits. Eventually the U.S. Supreme Court may have to rule on whether the White House can circumvent Congress' Constitutional power.

¹⁸² <https://cdn.ihsmarket.com/www/prot/pdf/0823/Impact-IRA-Metals-Minerals-Report-FINAL-August2023.pdf>.

¹⁸³ <https://cdn.ihsmarket.com/www/prot/pdf/0823/Impact-IRA-Metals-Minerals-Report-FINAL-August2023.pdf>.

¹⁸⁴ <https://www.bloomberg.com/news/articles/2023-01-19/manchin-says-he-didn-t-know-us-eu-lacked-free-trade-agreement>.

¹⁸⁵ <https://www.politico.com/news/2023/03/31/washington-brussels-pushback-patch-trade-rift-00089941>.

Moreover, since any non-FTA deals were never approved by Congress and thus do not contain enforceable, binding provisions, a new U.S. administration could invalidate them on its first day in office.

Nevertheless, said [John Podesta](#)¹⁸⁶, senior adviser to President Joe Biden for clean energy: 'We have an all-of-government approach. We need to develop ready supply chains with friends and allies, like the free trade agreement with Japan and the negotiations with the European Union. It's strategically challenging to be totally dependent on China.'

To that end, in February 2023 the White House convened representatives of 19 nations and the EU as part of a [Mineral Security Partnership](#)¹⁸⁷ with the goal of developing global supply chains with allies and mineral-rich countries. In March 2023, President von der Leyen and President Biden directed their officials to begin talks on critical minerals. 'The goal,' said [von der Leyen](#)¹⁸⁸, 'is to have an agreement on critical raw materials that have been sourced or processed in the European Union, that these strategic supply chains are able to access the American market, as if they had been sourced in the United States.'

But European Parliamentarians, while supportive of transatlantic negotiations on critical raw materials, have had questions about the U.S negotiating position. 'The United States has 50 raw materials that it sees as particularly critical,' observed [Bernd Lange](#)¹⁸⁹, in September 2023. 'In the offer that the United States has now made to us, they are only offering us five in terms of access. And the question naturally arises: why is this the case and how does the Commission react to it? Especially since we are of course in particular trouble with two raw materials, gallium, and germanium, where China is now apparently setting up supply restrictions.'

The EU faces a similar challenge in sourcing critical minerals for the green transition.

Of the [30 materials](#)¹⁹⁰ of high economic importance with significant supply risk, the EU imports 100 percent of 14 of these. Particularly vulnerable is Germany, Europe's largest economy, which imports [100% of 20 of the 30](#)¹⁹¹, some exclusively from China.

In March 2023, the European Commission unveiled the EU's Critical [Raw Materials Act](#)¹⁹², with the aim of increasing Europe's capacity for the extraction, processing, and recycling of key minerals. And in September 2023, the European Parliament approved plans for the EU to secure its own supply of critical raw materials. The [goal](#)¹⁹³ is for the EU to extract 10% domestically, process 40%, and recycle 15% of its annual critical mineral demand by 2030. It implicitly counters China's dominance over mineral supply chains by aiming to reduce dependence on any country supplying over 65% of a particular mineral.

¹⁸⁶ <https://www.houstonchronicle.com/business/energy/article/critical-minerals-shortage-nickel-copper-18297217.php>.

¹⁸⁷ <https://www.state.gov/minerals-security-partnership-governments-engage-with-african-countries-and-issue-a-statement-on-principles-for-environmental-social-and-governance-standards/>.

¹⁸⁸ <https://www.ft.com/content/257f7d0d-cf9d-472b-9c49-e9aafa7977de>.

¹⁸⁹ https://www.europarl.europa.eu/doceo/document/CRE-9-2023-09-13-INT-3-267-0000_DE.html.

¹⁹⁰ https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/critical-raw-materials_en.

¹⁹¹ https://www.diw.de/de/diw_01.c.861639.de/publikationen/wochenberichte/2022_50_1/deutschland_kann_seine_versorgungssicherheit_bei_mineralischen_rohstoffimporten_erhoehen.html.

¹⁹² <https://www.euractiv.com/section/economy-jobs/news/eu-unveils-critical-raw-materials-act-aiming-to-lessen-dependence-on-china/>.

¹⁹³ https://www.europarl.europa.eu/doceo/document/TA-9-2023-0325_EN.pdf.

The Act also emphasizes '[strategic projects](#)'¹⁹⁴ with partner countries such as Australia and Chile, which have large reserves of minerals such as cobalt, lithium, manganese, and rare earths.

Europe is not devoid of some of the minerals needed for EV batteries and other green transition technologies. France, Germany, and Portugal are rich in lithium and France is preparing to open a large lithium mine. Substantial unexploited cobalt resources exist throughout Europe. But, as in the United States, launching a mining project typically takes 10-15 years in the EU, making it unlikely that new mines can make a significant contribution to raw materials' needs by 2030. The Critical Raw Materials Act aims to expedite critical minerals mining through streamlined permitting and facilitated finance, with permits to be issued within two years.

But both EU and U.S. self-sufficiency in critical raw materials is out of the question in the short run, if ever. Of the 32 minerals that the U.S. and the EU consider critical, 21 are deemed critical by both regions. This could lead to growing competition for scarce resources and new transatlantic tensions.

'Competition for these minerals might disrupt geopolitics and alliances', concluded the [Allianz](#)¹⁹⁵ study. 'In recent years, around 10% of the global value of (Critical Raw Materials) exports faced at least one export restriction measure by governments. China, India, Argentina, Russia, Vietnam, and Kazakhstan were the top six countries in terms of new export restrictions from 2009 to 2020, and some also account for the largest production share of many CRMs.'

Yet, amid such scepticism on both sides of the Atlantic about the feasibility of both the U.S. and the EU de-risking their sourcing of critical minerals, there is some optimism. A study by the Net Zero Industrial Policy Lab at Johns Hopkins University concludes that, given existing reserves, 'it is possible for the United States and its key partners to significantly friend shore production,' said [Bentley Allan](#)¹⁹⁶ of the Carnegie Endowment, as envisioned in the proposed plurilateral Minerals Security Partnership. 'However, given current production in democratic countries, it would require an unprecedented build-out of the mining industry to achieve 2030 clean energy targets.'

This will only be achieved, with some difficulty, the study concludes, through a joint industrial policy that identifies priorities in a targeted and strategic approach. This would necessarily include nations with strategic mineral reserves such as [Indonesia](#)¹⁹⁷ (which has large reserves of nickel and tin), Peru (silver), Brazil (graphite), and Türkiye (graphite and chromium). These countries already partner with the United States and the EU to deal with security and economic challenges. But cooperation on critical minerals will require the EU and the U.S. to double down on these partnerships.

As a first step, in July 2023 the Council of the EU authorized the European Commission to start negotiations on a 'Critical Minerals Agreement' with the U.S. The rationale for such a transatlantic deal is to enable EU-made electric vehicles to claim IRA subsidies by becoming the equivalent of a free trade agreement country with the U.S.

Moreover, there are other opportunities for transatlantic cooperation on critical minerals. The rapid rise in EV production and sales will eventually create a supply of used batteries, and they may prove one future source of needed minerals. To maximize this potential may require incentives for

¹⁹⁴ <https://www.euractiv.com/section/circular-economy/news/parliament-to-bolster-eus-strategic-projects-for-critical-minerals/>.

¹⁹⁵ https://www.allianz.com/en/economic_research/publications/specials_fmo/critical-raw-materials.html.

¹⁹⁶ <https://carnegieendowment.org/2023/05/02/friendshoring-critical-minerals-what-could-u.s.-and-its-partners-produce-pub-89659>.

¹⁹⁷ <https://carnegieendowment.org/2023/04/11/how-indonesia-used-chinese-industrial-investments-to-turn-nickel-into-new-gold-pub-89500>.

recycling (something the EU has stressed as a general goal in its 2020 [Circular Economy Action Plan](#))¹⁹⁸, standardization of battery design and components, and rules on what can and cannot be done with batteries after they have been extracted from used cars.

6.4. CBAM

As of October 2023, foreign firms that export iron and steel, cement, fertilizers, aluminium, electricity generation, and hydrogen, all of which produce carbon-intensive emissions, have to collect emissions data and report them to the European Commission in order to continue exporting to Europe. In 2026, they will then have to pay an 'adjustment' fee to cover the carbon price gap between non-EU and EU products.

'CBAM will encourage industry worldwide to embrace greener technologies,' contended European Commissioner for Economy [Paolo Gentiloni](#)¹⁹⁹. 'It will also prevent so-called carbon leakage, or the relocation of production outside our borders to countries with lower environmental standards.'

CBAM has been welcomed by some EU industries who see it as levelling the playing field. 'The EU steel industry has been shouldering a CO2 price for several years while steel imports from third countries, which on average have a significantly higher CO2 footprint, have been exempted thus far,' complained Axel Eggert, director general of Eurofer, the European steel association.

But [Sara Murray](#)²⁰⁰, international managing director at The Conference Board, warned: 'Our Europe-based members are clear that implementing CBAM will increase prices of carbon-intensive products, possibly with knock-on effects for consumers.'

Despite concern about CBAM, the United States has neither formally supported nor opposed it. And any American reaction to CBAM was notably absent from both the President's proposed fiscal 2023 budget and the Office of the US Trade Representative's 2022 Trade Policy Agenda and 2021 Annual Report to Congress. This is likely because the U.S. does not export a significant amount of CBAM-covered goods to the EU. Estimates of CBAM's economic impact on the United States are quite small. American exports impacted by the initial list of CBAM products amount to around \$1 billion, or [roughly 0.4%](#)²⁰¹ of the \$260 billion in U.S. exports to the European Union. And in June 2022, the United States joined other G7 countries in supporting work on a climate club that could mitigate concerns about carbon leakage among club participants.

But the de minimis impact on the U.S. economy does not ensure that CBAM will not become a major issue in post-IRA transatlantic relations. The U.S. exported no bananas to the EU in the 1990s and that still became a major contretemps.

The looming problem is that Europe places a price on carbon emissions and the U.S. does not. The U.S. Commerce Department has ruled 'to treat certain free allowances under the EU's Emission Trading System as a countervailable subsidy.' This applies to only a small group of European producers. But it poses a potential point of friction as the sectors covered by CBAM increase over time.

¹⁹⁸ https://environment.ec.europa.eu/strategy/circular-economy-action-plan_en.

¹⁹⁹ <https://www.euractiv.com/section/energy-environment/news/europes-carbon-border-tariff-starts-applying-causing-jitters-for-trade/>.

²⁰⁰ <https://www.euractiv.com/section/energy-environment/news/europes-carbon-border-tariff-starts-applying-causing-jitters-for-trade/>.

²⁰¹ <https://www.piie.com/sites/default/files/2022-10/pb22-14.pdf>.

6.5. Artificial intelligence

Artificial intelligence promises previously unimaginable advances in data analysis, automation of repetitive tasks, higher precision with fewer human errors and performance of tasks hazardous to humans. At the same time, it may displace jobs, violate privacy, and possibly operate beyond human control.

The maximization of the benefits of AI and the limitations of its downsides will be one of the major technology and transatlantic challenges in the next decade.

In 2023, the European Parliament and the Commission adopted the [Artificial Intelligence Act](#)²⁰², the first EU legislation to regulate AI, which could become fully effective in 2026. It constitutes a [two-tiered approach](#)²⁰³, with a transparency requirement for all general-purpose AI and stronger requirements for powerful models with systemic impacts.

Regulation of artificial intelligence through the AI Act comes through three baskets of activity. There is a complete ban on uses that pose unacceptable risks to fundamental human rights, health, and safety, such as social scoring of people's behaviour or characteristics. Rules will apply to AI use in power systems, hospitals, employment, credit ratings, activities that impact the environment and Generative AI used in ChatGPT and similar systems. But AI use in activities such as translation, image recognition, and weather forecasting will have minimal transparency requirements.

In the future, AI-related issues will likely emerge that could require action by the European Parliament. These include use of copyright-protected content in AI training, broader use of generative AI, and cybersecurity, all of which could touch on issues Washington is also wrestling with in terms of regulation.

The [United States](#)²⁰⁴ has made far less progress in dealing with AI, and what has been accomplished is not very meaningful. America is only at the beginning of what is likely to be a long and difficult path toward the creation of AI rules. Seven tech companies have announced a set of principles for making their AI technologies safer, including third-party security reviews and watermarking AI-generated content to combat its use to generate misinformation.

But these suggestions are not new. Many of the practices that were announced had already been in place at OpenAI, Google, and Microsoft, or were on track to take effect. They don't represent new regulations. Promises of self-regulation also fall short of what consumer groups had hoped.

In late 2022, the White House introduced a Blueprint for an A.I. Bill of Rights, a set of guidelines on consumer protections. The guidelines also aren't regulations and are not enforceable.

Congress has held hearings on AI and plans more. But, admitted Senate Majority Leader [Chuck Schumer](#)²⁰⁵, '[i]n many ways we're starting from scratch.'

Such voluntary guidelines reflect, in part, the slow American response to the challenges posed by AI and the influence in Washington of technology companies that are wary of regulation and its impact on their innovation.

²⁰² <https://www.mwe.com/insights/the-eu-artificial-intelligence-act-whats-the-impact/>.

²⁰³ <https://www.ft.com/content/d5bec462-d948-4437-aab1-e6505031a303>.

²⁰⁴ <https://www.nytimes.com/2023/07/21/technology/ai-united-states-regulation.html>.

²⁰⁵ <https://www.nytimes.com/2023/07/21/technology/ai-united-states-regulation.html>.

'Voluntary commitments are not enough when it comes to Big Tech,' complains [Caitriona Fitzgerald](#)²⁰⁶, deputy director at the Electronic Privacy Information Center, a privacy group. 'Congress and federal regulators must put meaningful, enforceable guardrails in place to ensure the use of A.I. is fair, transparent and protects individuals' privacy and civil rights.'

At the 2023 TTC meeting in Sweden, U.S. and EU representatives voiced their intention to bridge the transatlantic regulatory gap on AI. While the TTC will not produce full regulatory alignment in AI policy, it can develop common terminologies and metrics to assess the trustworthiness and risks of AI. 'An agreement on a common taxonomy and approach to risk management could pave the way for joint AI standards,' argues [Julian Ringhof](#)²⁰⁷ of the European Council on Foreign Relations. 'This, in turn, would strengthen the positioning of the EU and the U.S. in international standards bodies and help disseminate transatlantic standards across the globe.'

7. Potential for future technological cooperation

The future holds not only challenges but also opportunities to build on current technological cooperation.

Europe and the United States could cooperate in pre-competitive research and development and testing on a range of new technologies through the creation of a Transatlantic Advanced Research Project Agency (TARPA), with designated funding streams for specific technologies. TARPA can be modelled on the highly successful U.S. Defense Advanced Research Project Agency (DARPA), which has been instrumental over the years in developing the internet, GPS, the computer mouse, and Apple's voice-recognition system Siri. To maximize resources, Washington and Brussels might consider creating a public-private technology venture fund that would use government funds to mobilize private investment in TARPA projects.

If European and American firms are to keep pace with Taiwanese, South Korean and, most importantly, Chinese chip makers, Brussels and Washington need to bring together their scientific talent and jointly shoulder some of the financial burden of cutting-edge R&D, not simply compete with each other through mutually exclusive subsidies.

A Transatlantic Advanced Research Products Agency-Chip (TARPA-C) effort should be jointly created to conduct precompetitive R&D for next generation chips.

At the same time, small, powerful, rapidly rechargeable batteries are needed for the digital world, for modern manufacturing, and for consumer products such as cars. This market is currently dominated by Asian, especially Chinese, producers. The European Union has already taken steps to increase its battery supply through the European Battery Alliance, supported by the European Commission and the European Investment Bank. The United States has created a Federal Consortium for Advanced Batteries. Washington and Brussels should take their efforts to the next level and create a Transatlantic Advanced Research Products Agency-Batteries (TARPA-B) to pursue joint pre-competitive research and development.

Finally, if the Covid pandemic has taught anything, there is a pressing need to be better prepared for the inevitable pandemics of the future.

The McKinsey Global Institute estimates that as much as \$83 billion needs to be spent on infectious

²⁰⁶ <https://www.nytimes.com/2023/07/21/technology/ai-united-states-regulation.html>.

²⁰⁷ <https://ecfr.eu/article/setting-the-tone-the-value-of-the-eu-us-trade-and-technology-council/>.

disease R&D over the next decade. Much more public funding is needed to make the economics of producing new treatments work for drug makers.

In 2022, Washington created an Advanced Research Projects Agency for Health (ARPA-H). The European Union should join this effort, with an initial focus on developing new pandemic vaccines. By pooling resources and scientific talent, ARPA-H will maximize the potential for developing life-saving therapeutics.

8. Elections and post-election politics in the US and the EU

The future of transatlantic relations in the wake of the IRA and, by extension, the rationale for 'the new Washington consensus'—to fight climate change, compete with China and secure supply chains through an embrace of industrial policy and friend shoring—may ultimately depend, not on the long-term economic effectiveness of America's actions and Europe's reactions, but on the outcome of the 2024 American presidential contest, and to a lesser extent Congressional elections, and on the 2024 European Parliamentary elections and the creation of a new European Commission.

Another America First president could lead to renewed disagreement on climate action, economic sanctions, and how to engage in commercial competition. Candidate Trump has promised to scrap the [IRA tax credits](#)²⁰⁸ on day one of his second administration. He has claimed that [climate change](#)²⁰⁹ would raise sea levels only 1/8th of an inch over the next 350 years. His election would raise legitimate European fears about U.S. security commitments to Europe and continued membership in [NATO](#)²¹⁰. Such renewed American questioning of transatlantic relations would fuel the EU's appetite to pursue greater strategic autonomy. A Democratic presidential victory in 2024 would potentially smooth the way for greater cooperation on trade and technology.

The politics underlying the Biden administration's embrace of the IRA and the 'new consensus' is often attributed to the Democratic Party's political roots in the American union movement and the electoral importance of manufacturing states, such as Michigan, Ohio, and Pennsylvania. The 81-year-old Joe Biden formed his world-view decades ago when American manufacturing and unions were under assault from the twin threats of free-market economics and globalization.

But the American public is disinterested in trade. Many take globalization as a fact of life. Trade as a discrete issue that periodically dominated policy and political debates in the 1980s and 1990s around relations with Japan, and then with regard to China, is no longer a salient political concern. And [six in ten Americans](#)²¹¹ see trade as an opportunity, not a threat.

Moreover, the Democratic party is no longer the party of working-class Americans whose livelihoods have been adversely impacted by trade. Nor do Democratic voters oppose trade. The party is increasingly a party of better educated, higher income, service workers whose livelihoods are relatively unaffected by trade. And, since [at least 2011](#)²¹², Democrats have been more supportive of trade than Republicans. The Biden 2020 campaign pledge of a 'foreign policy for the middle class' was, in part, based on a [Carnegie Endowment study](#)²¹³ that showed that, while U.S. international

²⁰⁸ <https://www.taxnotes.com/featured-news/ill-scrap-ira-tax-credits-day-1-trump-says/2023/09/28/7hdjq>.

²⁰⁹ <https://www.cnn.com/2023/04/24/politics/fact-check-trump-sea-levels-ocean-climate-change/index.html>.

²¹⁰ <https://www.nytimes.com/2023/12/09/us/politics/trump-2025-nato.html>.

²¹¹ <https://news.gallup.com/poll/390614/views-foreign-trade-nearly-back-pre-trump-levels.aspx>.

²¹² <https://news.gallup.com/poll/390614/views-foreign-trade-nearly-back-pre-trump-levels.aspx>.

²¹³ <https://carnegieendowment.org/specialprojects/usforeignpolicyforthemiddleclass/>.

economic engagement did feel threatening to some in Ohio, in Nebraska it was seen as an agricultural export opportunity and in Colorado voters supported it because the state benefited from military spending.

The IRA also has evoked mixed public interest and backing. In July 2023, only [four in ten](#)²¹⁴ Americans supported the IRA, while an equal portion opposed it. But this divided opinion reflects both the partisan nature of almost every issue in American public life and a good dose of ignorance. Seven in ten claimed to have heard little or nothing about the landmark legislation, including many of the climate-related tax incentives that have troubled Europeans most. Only a third had heard of the buy-American tax incentives to purchase electric vehicles, and just a quarter knew about the tax incentives to manufacture solar panels and wind turbines. This ignorance poses a political problem for the Biden Administration. But it belies the underlying support Americans have for the IRA's climate-related industrial policy when they see personal benefits from the legislation. Two-thirds of respondents also supported tax incentives for the installation of solar panels and half or more backed tax benefits for building solar panels, windmills or buying an electric vehicle.

The Biden Administration's avowed goal of reviving American manufacturing may help stem the erosion of Democratic support among working-class voters. But recent political trends suggest the populist appeal of any 'new consensus' rests in the Republican Party's voting base, which is increasingly among white, less educated males. And a Republican victory in the 2024 presidential election may usher in even more 'new consensus' policies—such as those pursued by President Donald Trump—not their scaling back.

The American elections are not the only electoral challenge facing post-IRA transatlantic relations. The 2024 European Parliament election and the subsequent new European Commission will also be a test of Europe's response to the new circumstances reshaping recent economic orthodoxy.

Sabine [Nallinger and Pellerin-Carlin argue](#)²¹⁵ that the 2024 European Parliament election should lead to a shift in focus 'from currently pursuing domestic visions of industrial policy in splendid isolation towards a common European approach.'

But early public opinion polling suggests that transition may prove challenging. The European Parliament's recent grand coalition of the EPP, S&D and Renew, which spans the centre left to centre right, may keep its majority, even though these parties may lose seats, according to early [polling data](#)²¹⁶. But their influence will be curbed by the rise of the right-wing European Conservatives and Reformists (ECR), which could become the third-biggest group in the Parliament, and a potentially strong showing by the far-right Identity and Democracy (ID) group.

'A pause for thought on the Green Deal and the Fit for 55 package would [be] useful', opined ECR shadow rapporteur [Carlo Fidanza](#)²¹⁷. And the ECR has also questioned CBAM. 'CBAM is nothing more than an additional levy,' said ECR shadow rapporteur [Hermann Tertsch](#)²¹⁸, 'the cost for which will ultimately have to be borne by EU customers.' The ECR's potential Parliamentary partner agrees. The Commission's efforts toward the green transition are a 'total failure,' complained [Marco Zanni](#)²¹⁹, president of the far-right Identity and Democracy (ID) group in the European Parliament.

²¹⁴ <https://www.washingtonpost.com/climate-environment/2023/08/07/biden-white-house-climate-policy/>.

²¹⁵ <https://www.euractiv.com/section/energy-environment/opinion/call-for-a-european-green-industrial-policy/>.

²¹⁶ <https://www.politico.eu/article/european-election-2024-polls-right-wing-big-gains/>.

²¹⁷ https://ecrgroup.eu/article/fidanza_all_electric_philosophy_may_be_making_us_more_dependent_on_china.

²¹⁸ https://ecrgroup.eu/article/tertsch_ecr_an_energy_crisis_is_no_time_to_introduce_cbam.

²¹⁹ <https://www.euractiv.com/section/elections/video/identitydemocracy-eu-commissions-green-transition-a-total-failure/>.

With respect to post-IRA-related issues, the most pertinent trade question for the next European legislative cycle may well be what 'de-risking' means. Former Latvian Prime Minister Krišjānis Kariņš has called it the 'million-euro question', although measured by the volume of EU-China trade it is a €230 billion question. At the same time, parliamentarians will also be expected to address the energy transition's funding challenge and how to raise those funds jointly or to leave the energy transition funding largely to national governments.

Who the next European Commission President is and whether that is Ursula von der Leyen could matter greatly for transatlantic relations. Von der Leyen has built a solid relationship with Joe Biden, has been a strong transatlanticist and has done as much as she could to contain transatlantic disputes. She has supported the creation and ongoing work of the TTC. A different Commission President would require the establishment of new working relationships and could mean greater transatlantic tension, depending on who is America's president.

And, as has been the case repeatedly in U.S.-EU relations over the years, economic and geopolitical reality may interfere with the best-laid plans and ambitions of officials on both sides of the Atlantic. The IRA and related technology and economic issues have been handled fairly well. For all of the finger pointing about the IRA and differences on how to deal with privacy, critical minerals, AI, steel and aluminium, commercial aircraft and so forth, Washington and Brussels have worked closely to manage their differences and may, in fact, find solutions to at least some of them.

But the domestic political ramifications of potential differences over the war in Ukraine, renewed hostilities in the Middle East and ongoing tensions with China could easily make it more difficult to resolve bilateral economic and technological frictions. Politics has repeatedly trumped diplomacy in transatlantic relations in the past and could always do so again.

But the shared challenges remain. And, if anything, they are becoming more numerous and more important. The U.S and the EU have no choice but to find ways to overcome their differences, not be deterred by their domestic politics, and to work together to deal with problems that are too big for either party to resolve alone.

And there is reason to believe both Brussels and Washington realize they must work together. In March 2023, in an effort to head off a transatlantic subsidy bidding war, von der Leyen and Biden agreed to launch a [Clean Energy Incentives Dialogue](#)²²⁰, as part of the TTC. The goal is to 'coordinate investment incentives and make them mutually reinforcing'. Notably, the dialogue is intended to also coordinate action on third-country distortive policies, such as Chinese subsidies.

Such a transatlantic initiative in response to the IRA is much needed. For, as the American statesman Benjamin Franklin remarked in 1776 after signing the U.S. Declaration of Independence: 'We must, indeed, all hang together or, most assuredly, we shall all hang separately.'

While the consequences Franklin alluded to were obviously more immediately dire, the warning is still applicable today to both Washington and Brussels. The climate, economic, technological, and China-related problems both face are too big, too complex, and too important to be dealt with successfully on their own. The U.S. and the EU need each other. And how they deal with their shared post-IRA differences will go a long way to determining whether they succeed.

²²⁰ <https://www.whitehouse.gov/briefing-room/statements-releases/2023/03/10/joint-statement-by-president-biden-and-president-von-der-leyen-2/>.

MAIN REFERENCES

Allianz, A Faustian Bargain – Europe's Answers to the US IRA, February 2023.

Boston Consulting Group, US Inflation Reduction Act: Global Implications, December 2022.

Brookings Institution, Hidden Exposure – Measuring Supply Chain Exposure, Richard Baldwin et al, September 2023.

Bruegel, Sparking Europe's New Industrial Revolution, July 2023.

Bruegel, Rebooting the European Union's Net Zero Industry Act, June 2023.

Carnegie Endowment for International Peace, U.S. Foreign Policy for the Middle Class, 2018, 2019, 2020.

Centre for European Reform, Europe Can Withstand American and Chinese Subsidies for Green Tech, June 2023.

Congress.gov, S.1260 – United States Innovation and Competition Act of 2021.

Congress.gov, H.R.5376 – Inflation Reduction Act of 2022.

Cyber Risk GMBH, The European Chips Act.

European Commission, The Green Deal Industrial Plan, February 2023.

European Commission, 2023 State of the Union Address by President von der Leyen, September 2023.

Franco-German Council of Economic Experts, The Inflation Reduction Act, How Should the EU React?, September 2023.

McKinsey & Company, The Chips and Science Act: Here's What's in It, October 2022.

Whitehouse.gov, Remarks by National Security Advisor Jake Sullivan on renewing American economic leadership at The Brookings Institution, 27 April 2023.

Whitehouse.gov, Building resilient supply chains, revitalizing American manufacturing, and fostering broad-based growth, June 2021.

Whitehouse.gov Briefing Room Statements, Joint statement by President Biden and President von der Leyen, March 2023.

EPRS invites leading experts and commentators to share their thinking and insights on important topics of relevance to debate in the European institutions. In this paper, Bruce Stokes, visiting senior fellow at the German Marshall Fund of the United States, and associate fellow at Chatham House, offers an overview of US-EU relations since the passage of the US Inflation Reduction Act in 2022. This paper is based on the author's interviews with leading European and US experts and published analysis by major think tanks and journalists on both sides of the Atlantic. The paper discusses current efforts to manage longstanding pre-IRA disputes, the Trade and Technology Council, the US Chips and Science Act and the EU's response, looming issues such as CBAM and critical minerals, and how politics in both the US and Europe may affect the handling of these issues.

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PE 759.588
ISBN 978-92-848-1631-6
doi:10.2861/385275
QA-05-24-111-EN-N