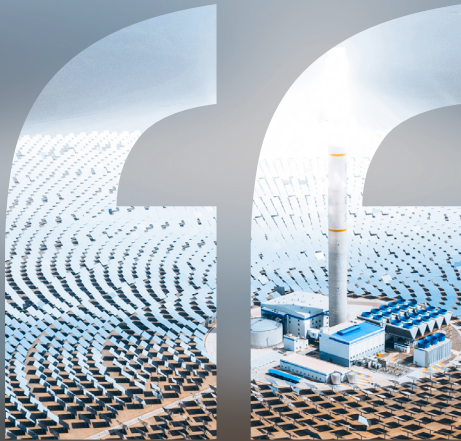
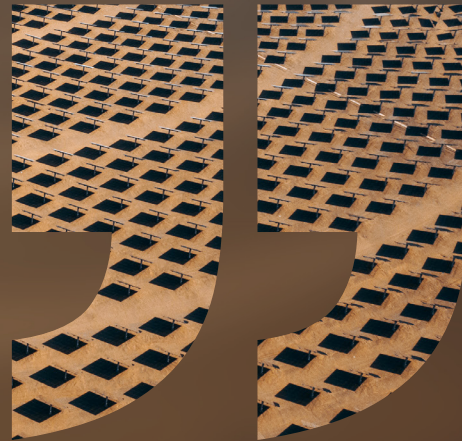


C L I F F O R D

C H A N C E



**THE GREEN
INDUSTRIAL POLICY
REVOLUTION –
DEVELOPMENTS IN
TRADE, ENERGY
TRANSITION, AND
GEOPOLITICS**



– THOUGHT LEADERSHIP

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THE GREEN INDUSTRIAL POLICY REVOLUTION – DEVELOPMENTS IN TRADE, ENERGY TRANSITION, AND GEOPOLITICS

Driven by the energy transition, national security concerns, and commitments to support domestic production, countries are increasingly taking measures to develop green economies and energy systems at home. New legislation in the US, especially the Inflation Reduction Act and responses by the EU, including the proposed Green Deal Industrial Plan for the Net-Zero Age, are creating fresh challenges and opportunities for businesses. In this extract from a recent Clifford Chance webinar, our global team examine the latest developments and the potential for a trade battle between the US and the EU.

"This shift towards adopting green industrial policies also fits within the broader context of efforts to enhance competition and to onshore and nearshore supply chains," says Michelle Williams, a Clifford Chance Partner based in Washington D.C. "We see this happening in key sectors such as, solar, electric vehicles, and batteries. But it goes beyond green technology and energy transition, impacting all sectors and market players. The term 'revolution' is a fitting one, as we are seeing developments in the United States, Europe and across the globe that none of us have seen before."

What is the US doing ?

The new US industrial policy focuses on sectors of the economy with national security implications – clean energy, semiconductors, artificial intelligence and supply chains – and has five major government objectives:

- Promoting manufacturing in critical industries, such as semiconductors, electric vehicles and advanced batteries within the US (sometimes described as "onshoring").
- Providing financial incentives for the development of clean energy facilities and technologies, such as "green" hydrogen. This has already attracted foreign investment in these technologies in the US and has lowered the cost of products produced. However, this raises questions around the use of state subsidies.

- Supporting and securing domestic supply chains – including domestic content requirements in funded projects, so as to reduce reliance on offshore providers for semiconductors, solar panels and critical minerals.
- Restricting the export of sensitive US technology and equipment, especially to China and other countries of concern.
- Monitoring and limiting foreign investment in critical US industries.

A carrot and stick approach

"It's worth noting that this Industrial Policy is bipartisan," says David Evans, Clifford Chance Senior Counsel based in Washington, D.C. "It started with Obama, was redirected under Trump and has accelerated with major legislation during the first term of the Biden Administration. So, as we say in Washington, "this thing has legs".

Evans says that the government is using a combination of "carrots and sticks" to implement the policy through major new legislation and the repurposing of existing authority. "New legislation essentially involves the "carrot" of low-cost Federal funding conditioned on certain actions and behavior by the recipient," he says. This legislation includes:

- The 2021 Bipartisan Infrastructure Act which provides US\$1.2 trillion of Federal funding, including US\$65 billion for clean energy projects through increased funding of the Department of

Energy Loan Program. This program, which began under President Obama, has been dramatically expanded under President Biden to fund hydrogen, critical minerals, EV batteries and transmission projects.

- The much-discussed Inflation Reduction Act (IRA) of 2022. The IRA provides US\$259 billion in tax credits across a broad range of clean energy projects and funds R&D into innovative energy technologies including cheaper production of hydrogen and new nuclear.
- The CHIPS Act of 2022, which provides over US\$113 billion in loan and direct funding for projects to manufacture semiconductors in the US. This legislation grew out of two concerns: the interruption of the semiconductor supply chain caused by the pandemic, and the realization that the US was vulnerable from a national security perspective as it did not have domestic chip manufacturing capabilities. "Commentators have noted the underlying concern here is with the development and control of AI, including for military purposes," says Evans.

The "stick" part of implementation involves new uses of existing authority, including the Defense Production Act which was used during the pandemic to fund the manufacturing of pharmaceuticals and medical devices and to protect supply chains. In addition, there is more rigorous enforcement by the Committee on Foreign Investment in the United States (CFIUS) following its reviews of acquisitions to be made by foreign firms, Department of Commerce export controls, and enforcement of laws directed at China, such as the Uyghur Forced Labor Prevention Act (UFLPA).

Other tools include tariffs imposed on Chinese goods and anti-dumping penalties imposed (but suspended) on solar panel companies in certain South-east Asian countries. "Suffice to say, I don't think we've seen the last of restrictions on foreign investments into sensitive US industries and restrictions on export of technology and products to countries of concern. The walls are going up and it's going to be difficult to drop them down," says Evans.

He adds: "The US new US industrial policy doesn't mean that "free trade" is dead. But it's not quite free as it used to be. It reflects a bipartisan view that for certain sectors the US Government should be involved – using both carrots and sticks – in what is built, where it is built and where the product is sold."

A potential trade battle between the US and the EU?

"US trade policy has changed direction – the traditional approach to many trade issues is over," says Senior Counsel, Janet Whittaker, who is based in Washington D.C.

In a recent speech, US National Security Advisor, Jake Sullivan said that the post-World War II international economic order has run its course and is no longer fit for purpose. He said that the old order could not adequately deal with a shifting global economy that left many working Americans behind, a pandemic that exposed the fragility of supply chains, a changing climate that threatens lives and livelihoods, and Russia's invasion of Ukraine which underscores the risks of overdependence on other nations. He added that the US needs to build capacity, resilience and inclusiveness at home and with trusted partners abroad.

The impact on international trade

"What does this mean for international trade?" says Whittaker. Among other consequences, it may mean "a potential subsidies race between the United States and the European Union in which they each provide massive support for industries leading the transition to a low-carbon economy, and a new US economic architecture built on mini sectoral and regional agreements and initiatives rather than the multilateral agreements that were the pillars of the trading system in the past."

As described above, the key pieces of legislation underpinning the new US industrial and innovation strategy provide substantial subsidies or tax incentives to US companies aimed at building US industries. Many of these incentives – especially those available through the

Inflation Reduction Act – are contingent on local content and production and assembly requirements.

The EV tax credits, for example, have become a particular point of dispute between the US and the EU. European leaders argue that the local content requirements and other final assembly rules discriminate against EU manufacturers and breach WTO rules requiring foreign produced goods to be afforded the same treatment as domestic items. "Booming US investment is raising concerns that European industries will lose ground to US industry given the vast incentives available in the US," says Whittaker.

In the meantime, US-EU discussions are ongoing around a potential critical minerals agreement similar to that agreed between the US and Japan in March. This would count as a free trade agreement for purposes of the IRA and open access to certain incentives to EU companies.

"It is essential for businesses to understand these ongoing trade dynamics, including the potential repercussions of market access limitations that may result from the subsidies available, in order to decide how best to locate and organize their supply chains in relevant industries," she says.

A new focus on regional and sectoral trade agreements

The days of traditional US trade agreements focused on market liberalization and tariff elimination are a thing of the past. "The Biden Administration's view is that these traditional trade agreements benefited multinational corporations and their executives at the expense of workers. What is emerging instead is a complex web of regional, bilateral, and mini-sectoral agreements and initiatives directed at achieving the goals of US foreign economic and industrial policy," Whittaker says.

For example, the Indo-Pacific Economic Framework (IPEF) is in significant part

about reinforcing the US presence in the Indo-Pacific region, while the US-Taiwan Initiative on 21st Century Trade is about showing support for Taiwan.

She adds: "One of the questions for the US administration is how it will balance its focus on resource nationalism with how it conducts global diplomacy and interacts with its allies not just in the developed world but also with developing countries."

On the industrial policy front, the US is pursuing sectoral deals such as the Global Arrangement on Sustainable Steel and Aluminum, which intends simultaneously to address the climate crisis and create a framework for confronting market distortions in the steel and aluminum industry. The US has also championed a Minerals Security Partnership – a multi-country initiative to bolster critical mineral supply chains essential for the clean energy transition. Under the auspices of the G7, there have been discussions around a Climate Club and a Critical Raw Materials Club, and the G7 has just launched a new "coordination platform on economic coercion".

The US and the EU are also cooperating through the US-EU Trade and Technology Council, the objective of which is to promote US and EU competitiveness and prosperity by strengthening technological and industrial leadership, boosting innovation, and protecting and promoting critical and emerging technologies and infrastructure.

"This fragmented approach means that the challenge for lawyers and their clients will be to understand how the various pieces intersect and interact, and what their impacts will be and where," Whittaker says.

What do US policies mean for the World Trade Organization?

The global trade landscape has changed significantly since the World Trade Organization (WTO) was established in 1995, and many of today's trade issues are not adequately addressed by existing WTO rules. For example, there have been criticisms that the WTO rulebook does

not address challenges around state-owned enterprises and industrial subsidies and is not aligned with environmental sustainability and climate action.

There are ongoing efforts to reform the WTO, including the dispute settlement system, and to ensure that climate and environmental priorities are supported by international trade.

At recent G7 meeting the leaders of the G7 affirmed their support for the WTO and stated that their cooperation to strengthen economic resilience and economic security will be rooted in a multilateral trading system, with the WTO at its core.

However, as Whittaker explains, there remains the possibility of a clash between the WTO rules and US and other industrial policies. "For example: there may be disputes around whether the local content requirements in the IRA violate the WTO's non-discrimination obligation EU subsidies contravene WTO subsidy rules; and countries may challenge another element of the EU's policy approach – the carbon border adjustment mechanism – China has already hinted that it may do so."

WTO rules need to be clarified and potentially updated to set boundaries around trade, industrial policy and climate change. It is unclear, however, whether there will be consensus among WTO members for such change. "In the meantime, it is important for businesses to understand potential risks around challenges to industrial policy and other climate measures at the WTO, including potential competing claims about industrial subsidies," says Whittaker.

The EU's response to US trade policies

"The introduction of the US Inflation Reduction Act acted as a catalyst for the EU to adopt a more aggressive industrial policy in a bid to integrate its climate goals and energy security, and to retain its global economic competitiveness," says Epistimi Oikonomopoulou, a Clifford Chance Avocat based in Paris.

The EU has recently proposed or introduced a raft of legislation partly in response to the US's changing trade focus. These include:

- **The Net Zero Industry Act**

Part of the EU's Green Deal Industrial Plan, the Net Zero Industry Act, aims to promote investment in eight strategic net zero technologies that are essential to EU decarbonisation and competitiveness: solar technologies, onshore and offshore renewables, battery / storage technologies, heat pumps and geothermal technologies, electrolysers and fuel cells, sustainable biogas and biomethane, carbon capture and storage, and grid technologies. The objective is that at least 40% of devices using these strategic net zero technologies will be manufactured in the EU by 2030.

- **The Critical Raw Materials Act**

The EU has also introduced the Critical Raw Materials Act, which is designed to strengthen the Union's economy and to ensure the supply of raw materials used in batteries, solar panels, wind turbines and digital technology. "The EU is vulnerable to supply risks because these raw materials are sourced from a limited number of countries. China currently provides 100% of the EU supply of heavy rare earth elements and Turkey provides 99% of the EU supply of boron, which is used in electric vehicles and by the renewable energy sector. EU demand for rare earth metals is expected to increase sixfold by 2030, and sevenfold by 2050 for lithium," says Oikonomopoulou. The Act sets ambitious targets that must be achieved by 2030: the EU should extract 10% of its annual consumption of strategic raw materials compared with 3% today; and 40% of processed strategic materials and 15% of recycled strategic materials must also be domestically produced. In addition, the EU aims to reduce its dependence on third countries, so no more than 65% of its annual consumption of each strategic raw material – at any stage of processing – should come from a single third country.

- **Boosting hydrogen production**

In the hydrogen sector, the EU has a regulatory framework in place and, in March 2023, the European Commission outlined the scope and structure of a new European Hydrogen Bank to boost investment in hydrogen so the EU can reach its ambitious target of domestic production of 10 million tonnes of renewable hydrogen by 2030.

"Currently, the Commission is in the process of designing an auction system that will support producers through a fixed price payment per kilo of hydrogen produced for a maximum of ten years of operation. The first pilot auctions are expected to be launched in October/November 2023, supported by EUR800 million that will be taken from the Innovation Fund budget," explains Oikonomopoulou.

- **The Carbon Adjustment Mechanism**

The Carbon Adjustment Mechanism (CBAM) covers carbon-intensive sectors including aluminium, cement, steel, fertilisers, hydrogen and electricity. EU importers will buy carbon certificates corresponding to the carbon price that would have been paid had the goods been produced for less than the EU's carbon price, to ensure that the EU's climate objectives are not undermined by production relocating to countries with less ambitious policies – so-called carbon leakage.

- **The EU Chips Act**

The EU Chips Act is a legislative framework and funding programme which aims to double the EU's global share of the chip market by 2030 to 20%, and to produce the most sophisticated and energy efficient semiconductors in Europe. The Act has generated over EUR100 billion of announced planned investment and is expected to result in additional public and private investment of more than EUR15 billion.

- **Important Projects of Common European Interest**

EU member states can support national projects of strategic significance and justify the aid that is given to them under Important Projects of Common European Interest (IPCEIs) guidelines. "In order to qualify for support, a project must provide an important contribution to the EU's objectives, to

overcome important market failures, to involve at least four member states, to deliver concrete, positive spillover affects benefiting the EU economy and society beyond the member state involved, and involve important co-financing by the companies that will receive the state aid," says Oikonomopoulou.

The role of state aid

In 2022, the EU introduced revised state aid rules for climate, environmental protection and energy. The new rules involve an alignment with the important EU objectives and targets set out in the European Green Deal and with other recent regulatory changes in the energy and environmental areas and cater for the increased importance of climate protection. The revised rules generally allow for aid amounts up to 100% of the funding gap, especially where aid is granted following a competitive bidding process, and introduce new aid instruments, such as Carbon Contracts for Difference to help Member States respond to the greening needs of industry.

EU funding programmes managed directly by the European Commission are not subject to state aid rules. "Currently, the debate in the EU revolves around whether to relax the state aid rules, or make more, fresh EU funding available to member states, or do both. State aid can be granted only as the name suggests, by member states that have the financial capacity to do so. To December 2022, almost EUR672 billion of state aid was notified, almost 85% of which came from just three member states; Germany (53%) France (24%) and Italy (7%). This raises the question as to whether an EU sovereign fund should be introduced; this will be discussed this summer," says Oikonomopoulou.

The challenges that lie ahead for industrial policy and the energy sector

The range of policies being introduced in the US and EU has two objectives: firstly, to supercharge the energy transition by boosting domestic investment, onshoring manufacturing, and encouraging domestic production of, for example,

battery metals and wind turbines; and, second, to reduce over-reliance on countries that are deemed to constitute a strategic risk – for example, reliance on the Democratic Republic of the Congo for cobalt production – or a political risk in relation to competitors such as China, or unreliable states such as Russia.

"Implementing coherent, large-scale policies in sectors that involve new technologies and which require careful regulation and coordination at the local, national and international level is not easy at the best of times and doesn't occur in a vacuum," says James Pay, a London-based Partner and co-head of the Firm's Mining and Metals Group.

"The setting and allocation of subsidies in periods of volatile inflation and technological change is not straightforward. And regardless of whether we have good regulations and efficient subsidy regimes to encourage investment in new technologies, such as floating offshore wind and green hydrogen, unless there is parallel investment in supporting infrastructure – in particular, electric grid capacity and ports – results may be disappointing. There is no point in mandating the construction of electric vehicles, for example, unless we have a charging infrastructure that supports demand for and use of these vehicles," he says.

Resilience of supply chains is a critical objective behind some of the policies being introduced. Any supply chain is only as strong as its weakest link – EV batteries require not only the raw materials and battery gigafactories, but also significant midstream refining capacity to create chemicals such as lithium carbonate and lithium hydroxide. These midstream processes are complex, the refining plants are expensive, and their environmental footprint is challenging – but without them we will not achieve our aims.

There is also a shortage of skilled and experienced workers. "It is all very well to plan on critical mineral production in Europe, but we don't have a mature mining workforce outside of coal, or regulators with much experience of hard rock mining," says Pay.

Where's the money coming from?

The vast size of the Inflation Reduction Act should not disguise the need for huge amounts of debt and equity to implement the current industrial revolution, whether we focus on energy transition or AI and supercomputing. Export Credit Agencies and Development Finance Institutions have a key role to play in funding new technology and helping to manage political risk, but commercial banks and the capital markets will be crucial, and the role of private equity financing, already very significant, will continue to grow.

"However, encouraging investment and financing won't come cheap, and the energy impacts of the Ukraine crisis have highlighted that there is a political and economic limit to the capacity of consumers to pay ever-increasing prices for energy. We should not forget that access to affordable energy is a more urgent need for many than how it is generated and where it comes from," says Pay.

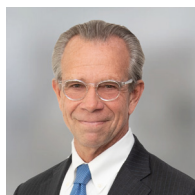
And he adds: "When dealing with encouraging, regulating and coordinating highly complex trade and industrial investment flows we should not be surprised if circumstances and politics aren't always helpful and, in periods of rapid change, we will make mistakes and produce unanticipated results. The key issue is whether we can identify these early enough and adapt, mitigate and compensate for them without distracting ourselves from the strategic imperatives that lie behind the trade and industrial policies that our governments are implementing today."



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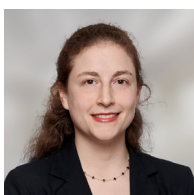
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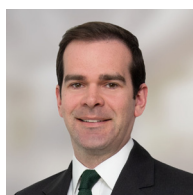
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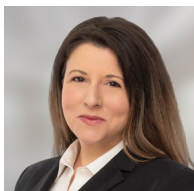
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