

One year on from the Inflation Reduction Act: International responses to the IRA

BRIEFING PAPER

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The success of the US Inflation Reduction Act (IRA) has triggered significant changes in international trade and manufacturing, as other OECD governments have sought to imitate its approach. This briefing surveys international responses to the IRA to identify how the UK can take advantage of the opportunities in this new economic regime.

KEY POINTS

- The US Inflation Reduction Act (IRA) has successfully stimulated economic growth, attracting billions in private investments and creating thousands of clean energy jobs. Other OECD governments have adopted similar policies.
- This new economic environment is creating challenges and opportunities for the UK economy. However, certain fears proved premature, including predictions that the IRA would threaten the UK economy, provoke a wave of protectionism, or decrease the role of the market in net zero industries.
- On trade, domestic content requirements have proven more flexible than initially feared, expanding to include neighbouring and allied countries.
- On subsidies, governments have adopted a variety of approaches, from more direct forms such as grants to more indirect tax deductions, and from targeted subsidies for particular sectors to broader-based funding.
- Governments have simplified permitting and set benchmarks to reassure investors that their goods have a reliable market, which has combined with subsidies to develop a hospitable environment for the private market.

POLICY CONSIDERATIONS

- The UK should focus on securing a trade deal with the EU to accelerate trade on net zero goods in specific industries, as the EU's 40% domestic content requirements leaves the door open for British exports.
- The UK should identify sectors that would benefit from government support and provide at least £54 billion over 10 years in grants, loans and tax incentives to attract investment and avoid offshoring to other countries.
- The UK should set legally binding benchmarks for green goods beyond electric vehicles to assure private manufacturers of a market for their goods.
- The UK should streamline its planning system by prioritising net zero projects, creating permitting offices for combined authorities and devolved governments and providing permissions within 18 months of submission.

INTRODUCTION

Although the U.S. Inflation Reduction Act (IRA) triggered significant changes to international trade and manufacturing, this briefing indicates that the UK is well-placed to benefit from the new regime. Analysing the policies and approach pursued by other advanced economies, it identified how Britain can learn from their experience. To realise the economic, social, and environmental benefits of net zero industrialisation, policymakers at Westminster should prioritise green trade negotiations, regulations, and funding.

What is the Inflation Reduction Act?

The Inflation Reduction Act was signed in August 2022 to accomplish three goals. The first was economic: policymakers wished to create American manufacturing jobs by coaxing businesses into the country. The second related to security. The Biden administration wanted to wean American industries off Chinese supply chains. China holds a particularly strong grip on net zero industries, such as renewables, manufacturing and batteries—already considered necessary for day-to-day business and defence. Finally, environmental. The bill sought to develop green industries to help the US towards its net zero ambitions.

The act directs an estimated USD \$391 billion (GBP £308 billion) in federal spending over ten years towards clean energy, manufacturing, the environment, transportation, agriculture, and water. 64% is being spent on building and upgrading energy infrastructure. Funding largely comes in the form of tax credits for corporations as well as grants and loans, while some funding is also directed towards consumer subsidies for personal purchases like electric vehicles. A majority of subsidies are uncapped, leading the Brookings Institution to estimate the ultimate cost will be closer to \$900 billion.¹ Consumers are also subsidised for buying energy-efficient appliances, installing heat pumps, and other behavioural changes.

To qualify for tax incentives, corporations must invest in clean energy, transport, and manufacturing. Though the IRA uses more carrots than sticks to achieve its objectives, it includes some regulations on business, such as wage floors and apprenticeship requirements, which were added after consulting with local unions.

There is some evidence that the incentives are having the desired effect: Climate Power estimates that 94 new clean energy projects opened across the US in the five months following the passage of the IRA, totaling \$90 billion in private investments and creating over 100,000 clean energy jobs.² Of these investments where the amount is publicized, half (49%) came from firms headquartered outside the US. Further, according to American Clean Power, total investments in clean power projects received more private investment over the eight months following the IRA's passage than they received in the five preceding years combined.³

The bill made the country more attractive to businesses in the space. Globally, this caused considerable consternation that American subsidies would pull manufacturers into the US.⁴ Major manufacturers including Audi, Tesla, Northvolt, and BMW have already announced plans to offshore production into the region.⁵ However domestic

content requirements – which demand businesses be active in the country to qualify for funding – have proven more elastic than they initially appeared.

Don't panic

Policymakers in the UK reacted to the Inflation Reduction Act prematurely. The bill and the international responses it provokes will pose significant challenges to the British economy. However, to develop appropriate responses to these policies, it is important to understand what they will *not* do.

Firstly, the threat to British exports will be minimal. In 2021, just 13% of the UK's total exported goods went to the US, and only a small fraction of these will be impacted by the IRA. Failing to recognise this reality leads analysts to overestimate British exposure to the US market, causing an overreaction. A more legitimate concern is the threat of a proportionate response from the European Union, which makes up a much larger share of our exports. However, the EU has capped its domestic content requirements at 40%, leaving the door open for British manufacturing.

This points to the second calming fact: globally, the IRA is not prompting the wave of protectionism which some foretold. While some governments including the US and EU have introduced domestic content requirements, these apply to a minority of goods in a handful of sectors, they do not ban all imports, and have proven more elastic than they initially appeared. The American National Security Advisor Jake Sullivan explained the US' motives:

“It isn't feasible or desirable to build everything domestically. Our objective is not autarky – it's resilience and security in our supply chains. Building our domestic capacity is a starting point, but the effort extends beyond our borders...We are unambiguously committed to not leaving our friends behind. We want them to join us. In fact, we need them to join us.”⁶

Rather than creating isolated autarkic economies, the IRA has spurred national governments to invest in export industries expected to trade and distribute key goods across the globe. Some sectors, such as the critical minerals sector, will actually see an increase in trade. The WTO predicts a return to normal growth in merchandise trade volume by 2024, reaching 3.2% growth and outpacing that year's expected growth in GDP.⁷ In place of hard borders, countries and blocs are offering new incentives to coax production into their region. But some of those products are then to be sold on the world market – the goal is more global activity, not less.

Lastly, politicians and policymakers have warned that the IRA is a resort to nationalisation and government control. This underplays the central role of the private market in the IRA and in every country's response. Most governments are responding to the challenge with market-based solutions, investing in private businesses or altering trade and regulation agreements to incentivise production. As the EU's Green Deal response makes clear: “The majority of investments necessary to reach the Green Deal objectives will come from private capital attracted by the growth potential of the net-zero ecosystem.”⁸ In place of the state, the private sector has been entrusted with the next wave of industrialisation, with governments guiding market activity through incentives and regulations. Businesses are free to ignore or use government benefits,

and will decide independently how to respond to shifting market conditions. With the IRA, many environmentalists on the right are accepting that the private sector cannot solve the climate crisis on its own, while those on the left have acknowledged that they might not overthrow capitalism by 2030. The method is therefore a compromise, with government planning a long-term strategy in which the private sector is the central player.

With these three misconceptions corrected, policymakers and private businesses in the UK should breathe easier. Rather than a threat to be feared, Britain has an opportunity to expand green manufacturing, secure its supply chains, and develop cheaper safer energy sources. McKinsey estimates there will be a global market opportunity of £1 trillion for British businesses in the net zero space by 2030, supporting 500,000 jobs.⁹

The new international net zero economy should not be thought of as a race, but as a mutually beneficial system where countries can learn from one another. That is fortunate because the size and strength of the American economy means that other countries cannot realistically seek to outcompete it with copycat measures that mimic the IRA. Instead, this briefing outlines how major economies – Australia, Canada, the EU, Japan, Mexico, New Zealand, and South Korea – are responding with innovative approaches adapted to their unique circumstances.ⁱ These countries were chosen based on their comparability to the UK and whether they had enacted policies in direct or explicit response to the IRA. The amount of space they are given is proportional to the policies they have implemented. As such, the briefing is meant to describe the economic risks facing Britain as well as a grab bag of policies capable of responding to them. These include negotiating new trade deals, subsidising net zero industries, and rethinking regulations.

NEGOTIATING NEW TRADE DEALS

In its early stages, the IRA's domestic content requirements presented serious challenges to those reliant on exports to the US. Nowhere were challenges greater than its direct neighbours Canada and Mexico. Since then, however, "Buy America" provisions have proven more elastic than they first appeared, expanding first to include the US' direct neighbours, and then expanding towards other allies. Trade deals are not written in stone. The UK can benefit by learning from the experience of global partners negotiating what appeared to be exclusionary and protectionist policies into new agreements for collaborative growth.

ⁱ This list covers the largest fifteen global economies by GDP with four notable exceptions: China, India, Brazil and Russia. India, Brazil and Russia have yet to respond to the policy and were therefore excluded. As for China, this briefing is designed to collect responses to the IRA, which is in itself a response to Chinese policies which for years have given the country an edge in manufacturing for green and low carbon technologies. Many IRA ideas, like declaring batteries a nationally important sector or subsidizing infant renewable industries, are lifted directly from China's historical playbook. As such, though its policies warrant attention, China has been excluded.

The US-Mexico-Canada Agreement (USMCA)

The US-Mexico-Canada Agreement entered into force in July 2020 as the continent's updated free trade deal.¹⁰ In 2021 trade in goods between the three countries was worth \$1.28 trillion USD, of which 99% involved the United States.¹¹ This leaves the Canada and Mexico extremely reliant on American trade, with proportions of exports to the US even greater than UK exports to the EU. Unlike Britain, they had cause to panic.

The IRA threatened to discount American electric vehicles at the point of sale so long as they were built in the United States. This would obstruct both countries' manufacturers from accessing a growing market. In response, Canadian Prime Minister Justin Trudeau and Mexican President Andrés Manuel López Obrador flew to Washington and begged legislators to loosen consumer subsidy requirements.¹² The strategy was described as a "hissy fit" by the American Ambassador to Canada, but it successfully convinced American policymakers of the benefits of reinforcing their supply chains.¹³ Canadian and Mexican industries would not benefit from Washington's production subsidies, but consumer discounts would still apply.

Strict "Buy American" provisions were relaxed, with \$3,750 taken off the price of a new electric vehicle (EVs) so long as its battery was produced or manufactured in North America, and a further \$3,750 if critical minerals came from the US or countries with US free trade agreements. This left the US' neighbours eligible for the full \$7,500 discount for cars and batteries manufactured, assembled, or resourced in Canada or Mexico. By the time the bill reached the House of Representatives, the words "United States" had effectively been struck off and "North America" put in its place.

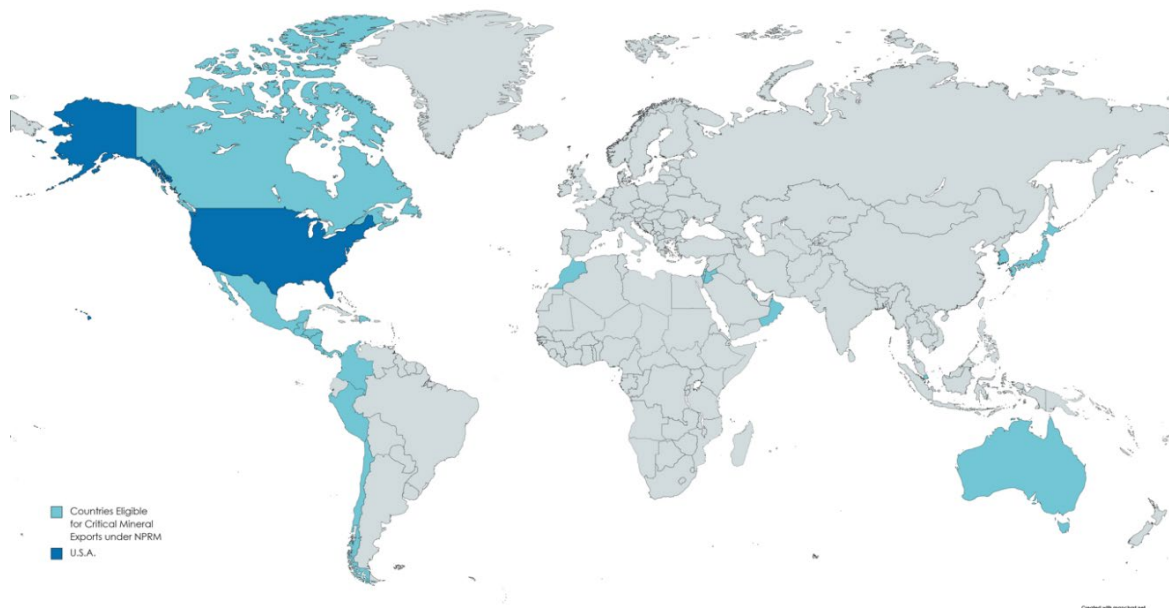
In a speech to Canada's parliament in March 2023, the American President explained the benefits of these compromises: "We're creating value at every step right here in North America," and going on to explain how companies "Can source and supply here in North America everything we need for reliable and resilient supply chains."¹⁴ Canadian and Mexican businesses are still competing with American subsidies, but they maintain a healthy access to the continental market. The move did not secure American jobs, but it promoted the IRA's other two priorities: reducing reliance on China and supporting environmental objectives.

Notice of Proposed Rulemaking (NPRM)

In March 2023, Japan and the US signed a bilateral trade agreement to collaborate on critical mineral supplies. Each party agreed to "ensure the free trade of such minerals" and "affirms its obligation not to impose prohibitions or restrictions on imports of critical minerals from the territory of the other Party."¹⁵ Japanese and American policymakers argued that this satisfied the domestic content requirements for critical mineral imports agreed under the IRA.

In response, the US Treasury produced a Notice of Proposed Rulemaking (NPRM) providing guidance on qualities required of critical minerals trade agreements to qualify for consumer subsidies.ⁱⁱ Countries with access based on the NPRM include Australia, Bahrain, Canada, Chile, Colombia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Israel, Japan, Jordan, Korea, Mexico, Morocco, Nicaragua, Oman, Panama, Peru, and Singapore.¹⁶ Although some countries were disappointed not to qualify, the door is still open, as the NPRM continues: “In addition, the Treasury Department and the IRS also propose to include additional countries that the Secretary identifies.”. Additionally, countries may take an alternative track by establishing a critical minerals agreement in line with the proposed rules. In a joint statement in March 2023 it was announced that the US and EU had begun negotiations for such an agreement, and it has been reported that Indonesia is proposing similar agreements.¹⁷ The UK established a critical minerals export agreement this Spring to allow critical minerals sourced or processed in the country to qualify for subsidies. The NPRM has set a precedent for other countries to follow in order to gain access to the American market for critical minerals mined, processed, or refined abroad.

Figure 1: Countries now eligible for critical mineral export to the US under NPRM



Source: US Treasury

Once again, the IRA has proven more flexible than expected. As Sullivan described, “It isn’t feasible or desirable to build everything domestically,” a fact particularly true of critical minerals which can only be mined where deposits exist. Once again, domestic content requirements in the IRA pose fewer hazards to British production than they initially appear to.

ⁱⁱ These include the reduction or elimination of trade barriers, refraining from introducing new trade barriers, establishing high standards in labour and environmental protections, or reducing export restrictions. These rules are open for comment until 16 of June 2023 after which they will likely be finalised.

Recommendations

Since 2016, a trade deal with the United States has been touted as a Brexit benefit. It is true that the passage of the IRA makes this deal more attractive, with the potential to provide Britain with a large market for net zero industrial exports. The UK recently secured such a deal allowing critical minerals from the country to be used in American supply chains through the NPRM, but its importance should not be overestimated for two reasons. The first is geographic: the United States does not represent as large an export destination as it does for those countries listed above. The second is sectoral: while there are growing calls to increase Britain's critical mineral output, the sector is currently underdeveloped relative to other countries.¹⁸ While the Critical Minerals Strategy provides a theoretical foundation, it will take time, and the deal does little for net zero manufacturers outside the battery industry.

Rather than being distracted by the white whale of an American trade agreement, Britain should seek a solution closer to home. Negotiations listed above were undertaken by economies more reliant on the US market, and lessons can be applied in the British context to our largest trading partner to whom we exported 47% of our goods in 2022. The EU has limited its domestic content requirements to just 40% of the bloc's green deployment, leaving the door open for British exports. The UK could benefit by accelerating trade with Europe on net zero goods. Given the technical and political difficulties of a large trade agreement, this should be tailored to specific industries such as renewable technology as well as critical materials extracted, processed, or refined in the region, in a similar form to NPRM guidance. The EU-UK Trade and Co-operation Agreement provided a foundation for a new trading partnership between the UK and EU, including stipulations that motor vehicles would not be tariffed. Additionally, bilateral agreements have accepted domestic content requirements on batteries which tariff products which are not sourced from the EU-UK area. This has built resilience into motor vehicle supply chains, and the same cooperation can now be applied to other net zero goods.

Some in the EU might look skeptically at British entreaties, fearing extra competition. However, the changes brought about through NPRM have shown how quickly economic orthodoxy can change, and there are good examples of mutually productive interactions. Countries used alternative arguments related to military security, supply chain resilience, and climate action to motivate sector-specific trade agreements. Trade in these sectors is likely to be accelerated by subsidies offered by countries which will expand business opportunities in strategic industries. From a security standpoint, supporting trade links with the UK would hasten Europe's transition away from reliance on China. From the industry's perspective, manufacturers would see their market expand while shoring up supply chains. Demand for net zero industrial production is currently greater than manufacturers in the bloc can supply, and British manufacturing can help fill existing gaps.

SUBSIDISING STRATEGIC INDUSTRIES

With the passage of the IRA, public money is being funnelled towards net zero businesses in the private market. This funding can take many forms. Some governments, like Canada and New Zealand, offer direct funding in the form of grants and loans. Other countries have favoured indirect funding, which includes the tax deductions used in the US, but also consumer subsidies, financial incentives, and low interest rates used elsewhere. The level of targeting of these subsidies also varies, with some like Australia spreading funding across a wide variety of industries while other countries like South Korea prefer to prioritise sectors where they enjoy an advantage.

European Union

The most significant impact of the EU's Green Deal Industrial Plan came in the form of regulatory changes. The Commission has loosened restrictions on subsidies governments can provide to net zero industries.¹⁹ Currently, member countries must notify the bloc of industrial subsidies beyond a set ceiling and leave themselves open to sanction if they do not receive approval from the Commission. Revisions will increase notification thresholds to levels matching those which net zero industries receive overseas, effectively allowing for greater subsidies. Countries have discretion over how subsidies may be provided, but they must be "necessary, appropriate, and proportionate" relative to other countries where a delocalisation risk has been identified.²⁰ The Commission's Temporary Crisis and Transition Framework expands by explaining that subsidy notification conditions can be avoided when distributing state aid so long as concrete risks of offshoring are identified.²¹ This has already allowed France's "France 2030" plan to invest €34 billion into future industries and may allow for further subsidies moving forward.²² As changes to the General Block Exemption Regulation allow for member companies to pursue national subsidy strategies, it will be worth keeping a close eye on how Europe's economies choose to boost domestic manufacturing.

Although no new money was introduced in the EU's plan, certain Union funds have been made available for net zero industries.ⁱⁱⁱ Additionally, services and technical support for legislators is being made available through the bloc's Technical Support Instrument and through the European Sovereignty Fund.²³ These are being targeted particularly to less prosperous EU countries to support their transition, and a similar strategy may be useful when applied to regional inequality in the UK.

ⁱⁱⁱ These include the Recovery and Resilience Facility worth EUR €20 billion, InvestEU worth EUR €11 billion, the Innovation Fund worth EUR €10 billion, and parts of the EUR €392 billion cohesion policy programmes.ⁱⁱⁱ

Canada

Canada's 2023 spring budget devoted a wide array of subsidies to the net zero transition. Canada has seen success in using public funds to catalyze private investment. The Strategic Innovation Fund, established in 2017, has spent CAD \$6.9 billion on large projects across sectors to leverage CAD \$67 billion in private investment.²⁴ Today, the government is using those institutions with a demonstrated history in asset management to direct new funds. The budget has allocated CAD \$4.2 billion for the installation of technologies to reduce emissions in the private sector.²⁵ A further \$500 million CAD will be provided to support clean tech in Canada, and directed CAD \$1.5 billion towards projects funding clean technology, minerals, and industrial transformation. CAD \$3 billion will be spent on regional priorities, and an unspecified amount on clean fuels. Finally, hundreds of millions are being invested in adaptation, such as projects to identify and communicate areas at high risk of flooding.

Other institutions include the Canada Growth Fund and the Canada Infrastructure Bank, established to act as green banks offering capital on more favorable terms than commercial banks. The Canada Growth Fund acts as "a \$15 billion CAD arm's length public investment vehicle that will help attract private capital...by using investment instruments that absorb certain risks."²⁶ This uses public funds to increase trust in necessary but risky ventures to help motivate private capital. The government has noted that it will consult unions on adding two seats to the board of directors to represent organized labour. Meanwhile, the Canada Infrastructure Bank has been allocated CAD \$10 billion to invest in clean power projects and another CAD \$10 billion to invest in green infrastructure.²⁷ Private businesses can present projects while the bank provides financial advice and capital in partnership with the private sector.

Beyond direct financing, Canada has announced new investment tax credits on a wide range of eligible technologies. The Clean Technology Investment Tax Credit provides a credit worth 30% of capital investments used to support projects related to net zero manufacturing and critical minerals, costing an estimated CAD \$10.1 billion over ten years.²⁸ The Clean Electricity Investment Tax Credit introduces a 15% refundable tax credit for investments in grid technology including net zero electricity generation, storage, and transmission costing £25.7 billion over ten years.²⁹ Certain natural gas generation projects are eligible but subject to an emissions intensity threshold. These can be applied to new projects or for refurbishment of existing facilities.

Tax credits compensate companies based on capital invested, rather than the tax credits used in the IRA that compensate spending for each unit produced, potentially lowering incentives for output but also decreasing the risk of ventures. The credit's amount, however, is generally on par with IRA incentives, and in some cases higher. Importantly, eligibility for the full tax credit is conditional on labour requirements and wages, with the rate being reduced by 10% should these not be met.

Japan

Following the passage of the IRA, the Japanese government introduced the Green Transformation Act, which would see the state issue \$150 billion USD in long term bonds to fund nuclear and renewable energy, grid upgrades, electric vehicles, energy efficiency, and a carbon surcharge and trade scheme. Details including distribution and control will be established at a panel to be held later in 2023.³⁰ The government projects the scheme would catalyse \$1 trillion in private sector investments over the next ten years.

Sustainable bonds are being complemented with money provided through taxes. Japan's Ministry of the Economy, Trade and Industry announced it would subsidise up to half the cost of mine development, geological surveys, and smelting projects related to critical minerals. This is part of a Japanese target to increase domestic battery production sevenfold by 2030.³¹ This is in addition to a pre-existing \$15 billion USD Green Innovation Fund which provides finance to green energy, transport, and infrastructure investments.³²

In parallel, the parliament is considering amending the scope of the Japan Bank for International Cooperation, a credit agency used to support domestic energy and infrastructure projects in a similar form to Canada's Infrastructure Bank. The bill would allow financing for non-Japanese borrowers so long as they benefit the Japanese supply chain.³³ This is being used to expand Japan's trade network while potentially opening up new production facilities in the US— a strategy also being enacted by South Korea.

South Korea

Due to its existing trade deals with the US, South Korea has the potential to increase its existing exports under the NPRM. Under the guidance, battery materials which are processed in Korea will be eligible for \$3,750 in consumer subsidies related to critical mineral sourcing.³⁴ Since then, South Korean policymakers have gone further, hoping to make their businesses eligible for the other \$3,750 available in consumer subsidies for batteries manufactured in North America.

The government has earmarked \$5.3 billion USD to support its battery makers and material producers that are trying to move manufacturing into North America. Measures include lowering lending rates and insurance premiums by up to 20% while increasing loans and tax credits from government for businesses offshoring production to the US.³⁵

It remains unclear how beneficial this will be to South Korea's economic, security, and environmental goals. While this policy will protect the export capacity of South Korea's businesses, it will not directly support job creation in the country. That said, pre-existing subsidies for net zero manufacturing in place since 2021 have allowed South Korea more breathing room when competing with American financing. Overall, both South Korea and Japan appear to be using public subsidies to increase trade rather than decrease it.

Australia

Australia's wealth of natural resources is a material advantage in the post-IRA world. Australia will benefit from admission into the American market of critical minerals under the NPRM, and predicts increasing demand as a result. In 2023, the Minerals Council of Australia claimed an additional USD \$13 billion would be needed annually just to sustain current production.³⁶

Australia's experience exemplifies how subsidies work in tandem with new trade arrangements which opened up new funding needs. However, despite increasing demand, Australia appears to be leaving critical minerals funding to the private market. Australia's budget announced in Autumn 2022 announced USD \$700 million in new funds for Australia's mining industry to help meet growing demand.³⁷

USD \$16 billion in funding will also be provided to energy and renewables projects delivered by the private sector. 80% of new funds will be directed to the energy grid, connecting renewable power generators in energy-rich areas of the country to its cities.³⁸ \$1.2 billion USD will be devoted to industry decarbonization, though it remains unclear how this will be allocated. Remaining funds will be devoted to local charging stations, power banks, and skills training. In addition, the Ministry of Industry announced USD \$2 billion worth of funds earmarked for Australian industrial expansion would go towards the manufacture of low or zero emissions technology, including wind turbines, hydrogen electrolyzers, and modernised steel and aluminum.³⁹

Australia's strategy appears to be the inverse of South Korea's, refusing to focus on any single industry and decreasing exposure to global supply chains. Rather than target a safe sector like critical minerals, Australian policymakers are hoping to expand into new technologies and renewables manufacturing. This would create secure supply chains within the country. According to the Investor Group on Climate Change, Australia's 2022 policy announcements have increased certainty among investors in net zero industries allowing for greater private capital deployment.⁴⁰

New Zealand

Like Japan, New Zealand has established a sovereign green bond program which projects to raise \$4 billion USD by 2025. In autumn 2022 the central government agreed to use the funds generated to invest in public transport, low and zero emissions vehicles, energy efficiency, land use, ecosystem management, and adaptation. However, the government has diluted many of these climate measures during the cost of living crisis, which has led to uncertainty among potential investors.⁴¹

In addition, the government announced in Spring of 2024 that a Climate Emergency Response Fund (CERF) would be established to fund investments in climate-related initiatives in the private sector with total cash set proportionate to the profits of its Emissions Trading Scheme—initially \$4.5 billion NZD.⁴² The Government Investment in Decarbonising Industry fund is one example, which has used \$70 million NZD to finance projects that businesses need to decarbonize their model.⁴³ So far, this has catalysed \$116 million NZD in private funding.⁴⁴ New Zealand therefore appears to be using public funds to decarbonise existing industries rather than create or expand new ones.

Recommendations

A new task force could establish key sectors which would benefit from government support. Chris Skidmore MP's Independent Review of Net Zero identified offshore wind, carbon capture, and green finance as sectors in which the UK enjoys comparative advantage. A decision will need to be made on whether to target these sectors similar to South Korea or spread funding across sectors as in Australia. Critical minerals are one of those sectors already identified for investment.⁴⁵ Given the heightened demand for these products over the medium to long term, processing and refining of critical minerals can be given long term funding plans to encourage private investments, as Japan is doing.

Canada, the United States, and Japan demonstrate that public investments can decrease risk and so catalyse many times as much in private capital. Funding may be provided in the form of direct grants and loans, in line with Canada and Australia, or in the form of tax incentives, in line with the United States. To prevent offshoring, both would need to be sufficient to compete with other countries. Estimating the precise amount government should provide is difficult, but using comparisons can help. Over the next ten years the United States, Canada, Japan, and New Zealand have announced funding worth between 1.7% and 3.5% of their annual GDP, while EU regulations permit countries to match foreign incentives likely basing these on American offers. To match this average, the UK would need to immediately budget at least £54 billion for spending on net zero industries and manufacturing over the next ten years. It is important to note that this estimate is conservative, not accounting for private sector spending and assuming no new funding will be announced by foreign powers. Funds could be diverted from existing revenue as in New Zealand, raised through new taxes and/or debt as in Canada, or made available through new long term sustainable bonds as in Japan.

RETHINKING REGULATION

When asked to identify the main challenges to decarbonizing their industry, 37% of businesses in the UK selected political uncertainty, second only to funding at 40%.⁴⁶ A University of Cambridge survey found that 70% of global businesses said regulation was important for them to meet climate commitments, rising to 80% in the UK.⁴⁷

Many responses to the IRA pair trade deals and funding with regulations designed to decrease risk and incentivize investment. Businesses have historically been unable to rely on the private market to buy net zero products. Today, regulations are being used as an efficient and cost-effective tool to help deliver on national climate targets by reassuring investors of the reliability of their market.

European Union

Benchmarks are a key lever in the EU plan to boost confidence among private investors. The Net Zero Industry Act proposes that 40% of the bloc's annual needs in strategic industries^{iv} will be manufactured domestically by 2030.⁴⁸ This affects both end products and intermediate components used in their manufacture. This headline benchmark is an average, meaning certain industries face higher demands. Battery manufacturers, for instance, will be asked to provide 90% of the bloc's annual demand from within the EU. In addition, to upgrade security, no single source may provide more than 65% of the bloc's demand for a specific technology. This will effectively wean Europe off of Chinese manufacturing which, for example, currently accounts for 89% of its solar panels.⁴⁹ Benchmarks in the EU are acting as a useful incentive and could give investors the long term confidence necessary to develop manufacturing projects in the net zero space without great costs to member states.

To further encourage investments, other benchmarks have been introduced. The proposal raises the bloc's legally binding 2030 renewable energy target from 32% to 42.5% and adopts efficiency measures to reduce energy consumption by 13%.⁵⁰ In addition, 40% of the bloc's raw material processing and 10% of raw material extraction should come from within the EU by 2040.⁵¹ This encourages future spending in net zero spaces while the domestic manufacturing benchmark ensures jobs are created at home. Regulations will be complimented by state aid meant to fill gaps left by the private market.

In addition, the deal proposes that permitting procedures be prioritised for strategic industries such that judicial officials and resolution procedures treat net zero projects as urgent and in the public interest.⁵² This means planning disputes must be adjudicated quickly, and projects be prioritised over nature and environmental protection. This essentially provides a fast track option for regulatory approval in the sector. Further, the deal advises national governments to develop a single national office or "one stop shop" responsible to streamline permits for strategic industries. The proposal states that no project should wait longer than 18 months for approval.⁵³

Mexico

Once known for its cumbersome bureaucracy, Mexico is streamlining its net zero industrial regulations to attract private businesses. This is partially because of the country's economic position, which means it is unable to compete with its richer neighbours. New regulatory frameworks are therefore acting as alternative policies to attract investment.

^{iv} "Strategic Industries" in the EU context include solar technologies, onshore and offshore wind technology, heat pumps and geothermal energy, electrolyzers, fuel cells, sustainable biogas and biomethane technology, carbon capture and storage, and grid technologies.

Funds from Mexico's Clean Technology Fund are being used to clarify regulatory frameworks regarding energy and green investments and help streamline access for private investment.⁵⁴ In 2021, Mexico brought together the central bank, financial authorities, and financial sector associations to mutually determine a taxonomy for sustainable projects/financing.⁵⁵ Defining these terms helped clarify Mexican regulations, which have delayed investment in the past.⁵⁶ Tesla recently announced a new factory in Mexico despite the country being unable to offer subsidies on par with the US or Canada. Low wages in combination with streamlined regulations and proximity to the United States appear to be proving successful in attracting new businesses.

Following this, Mexican authorities introduced sector-by-sector regulatory benchmarks similar to the EU including in transport and energy. For instance, 35% of power is expected to be generated by clean technologies by 2024, for which the country is currently on track.⁵⁷ Moving forward the national regulatory institution, CENACE, has been promoted by multiple parties to play a larger role in Mexico's future energy transition through changes in the regulatory regime.

Canada

Canada's 2023 budget announced new funding for regulators to help speed approval processes. It further announced new investments in cooperation with lower-tier governments including provinces to align regulations. This would allow for faster investments and incentivize new businesses, ideally reaching the goal of "one project, one assessment."⁵⁸ This mimics the EU's ambition for a single permitting office for projects, though Canada appears to be maintaining an office in each province rather than create a national bureau. Overall, the Canadian experience positions its investments of private capital within a simplified regulatory ecosystem.

Recommendations

Regulations have the remarkable ability to improve Britain's investment climate and productivity without major costs. EVs are a powerful example. Starting from 2024, an increasing proportion of vehicles sold in the UK must be zero emissions vehicles, starting at 22% in 2024, 28% in 2025, 33% in 2026, and steadily rising to 80% in 2030. With petrol and diesel vehicles being totally regulated out of the market by 2035, EV purchases have soared. Production of these vehicles has also increased, as car manufacturers alongside their associated industries can feel confident in future consumption.⁵⁹ Now businesses are describing the need for new benchmarks in other areas. The government's heat pump target is an example, which stated an ambition to install 600,000 heat pumps annually by 2028 but failed to assure businesses because it is not legally binding.⁶⁰

There are signs of progress in this domain, but more needs to be done. Although regulations featured heavily in the government's 2021 export plan, emphasis was placed on aligning environmental, social, and consumer protection with external countries rather than leveraging internal regulations to incentivise private manufacturers to increase production. Solar and wind energy would seem well-suited for additional legally binding benchmarks. These would provide enforceable targets to, for instance, assure solar energy providers of market demand over the long term, allow businesses to run a cost benefit analysis of greening their production lines, and give new urgency to housing insulation missions.

Beyond this, permitting and planning can be accelerated both to increase the amount of capital being spent on net zero industries and to speed the UK's progress responding to the climate crisis. Mexico's experience shows how streamlining regulatory approvals can accelerate private investment with little public expenditure. One option would be to establish a new national permitting office like the EU's to speed up approvals of projects in net zero industries. Yet this could provoke conflict with local politicians. As such, the Canadian approach may prove more workable, wherein funds would be offered to each of England's combined authorities as well as devolved parliaments to provide a "one stop shop" responding to requests and providing permissions to net zero industry projects. To compete with the EU, the UK should aim to provide these permissions within eighteen months of submission, potentially following Europe in altering planning curricula to prioritise net zero industries given the urgency of the climate crisis.

CONCLUSION

The countries listed in this report hope to unleash the private sector to support productive industrialisation alongside climate action. To do so, there are a range of options available. These include but are not limited to:

Table 1: Summary of policy considerations for the UK based on international responses

	Policy	Pursuant countries
Trade	Neotiating trade deals with major markets for net zero industrial goods	Canada, Mexico
	Negotiating trade deals with major markets for critical minerals	Canada, Mexico, Australia, Japan, South Korea
Funding financial incentives	Establishing a new fund to provide grants, loans, and/or financial consulting for manufacturing in strategic sectors	Canada, South Korea
	Establishing a new fund to provide grants, loans and/or financial consulting for critical minerals extraction, processing and refining	Canada, Australia
	Providing tax credits for new projects in net zero industries	Canada, Japan
	Co-financing projects with the private sector through options listed above	Canada, Japan, New Zealand
	Offering sovereign Green Bonds to fund net zero industry investments	Japan, New Zealand
Regulation	Introduce domestic content requirements set at a certain percentage in net zero industries	EU
	Setting legally binding benchmarks in key sectors	EU, Mexico
	Introducing fast track options for regulatory approval on projects of strategic significance with the option of a target timeline	EU
	Investing in regulatory agencies to speed approvals	Canada, Mexico, EU
	Cut down on unnecessary red tape and streamline regulations through one system with the goal of “one project, one assessment”	Canada, Mexico, EU

Other questions remain which will have large implications on the future of the British economy. If trade deals are agreed, who should they be agreed with and how much manufacturing should be maintained domestically? If benchmarks are introduced, how ambitious should they be in their timelines for net zero transition? Should public subsidies be targeted to sectors in which we enjoy an existing strategic advantage or spread across promising industries to help develop them?

The UK's failure to respond to the IRA has drawn criticism.⁶¹ However, excessive haste would have been unwise. What is critical is that the Government uses the pause to learn from others' strategies and develop a robust and holistic response.

ENDNOTES

- ¹ Neil R. Mehrotra and Sanjay Patnaik, “How Much Will the Climate Provisions in the IRA Cost, and What Will They Achieve?,” Brookings (blog), April 27, 2023, <https://www.brookings.edu/podcast-episode/how-much-will-the-climate-provisions-in-the-ira-cost-and-what-will-they-achieve/>.
- ² Carla Wanna, “Over 100,000 New Clean Energy Jobs, \$90 Billion in Private Sector Investments Announced Across 31 States” (Climate Power, 02 2023), <https://climatepower.us/resources/climate-power-launches-new-campaign-highlighting-the-u-s-clean-energy-economic-boom-since-passage-of-inflation-reduction-act/>.
- ³ American Clean Power, “Clean Energy Investing in America” (American Clean Power, 04 2023), https://cleanpower.org/wp-content/uploads/2023/05/CleanEnergy_ImpactReport_230505.pdf
- ⁴ “WTO Chief Urges Talks to Resolve Green Subsidy Dispute,” Bloomberg.Com, January 19, 2023, <https://www.bloomberg.com/news/newsletters/2023-01-19/supply-chain-latest-wto-urges-talks-to-resolve-subsidies-debate>.
- ⁵ Reuters, “Factbox: How Companies Are Reacting to the U.S. Inflation Reduction Act,” Reuters, February 24, 2023, sec. Markets, <https://www.reuters.com/markets/company-reaction-us-inflation-reduction-act-2023-02-23/>.
- 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 “Global Trade Outlook and Statistics.” World Trade Organisation (WTO). Geneva, Switzerland: 5 Apr 2023, n.d. https://www.wto.org/english/res_e/booksp_e/trade_outlook23_e.pdf.
- ⁸ “Proposal for a Regulation of the European Parliament and of the Council on Establishing a Framework for Measures for Strengthening Europe’s Net-Zero Technology Products Manufacturing Ecosystem (Net Zero Industry Act),” COM(2023) 161 2023/0081 (COD) § (2023), https://eur-lex.europa.eu/resource.html?uri=cellar:6448c360-c4dd-11ed-a05c-01aa75ed71a1.0001.02/DOC_1&format=PDF.
- ⁹ McKinsey Sustainability (2021), ‘Opportunities for UK businesses in the net zero transition’, <https://www.mckinsey.com/capabilities/sustainability/our-insights/opportunities-for-uk-businesses-in-the-netzero-transition> and Department for Business, Energy and Industrial Strategy (BEIS) (2021), ‘Net Zero Strategy’ <https://www.gov.uk/government/publications/net-zero-strategy> and BEIS (2022) ‘British Energy Security Strategy’ <https://www.gov.uk/government/publications/british-energy-security-strategy/british-energysecurity-strategy>
- ¹⁰ International Trade Administration, “USMCA,” Department of Commerce, accessed June 5, 2023, <https://www.trade.gov/usmca>.
- ¹¹ “USMCA Tracker,” Brookings (blog), February 28, 2022, <https://www.brookings.edu/interactives/usmca-trade-tracker/>.
- ¹² “Three Amigos Summit: Awkward Conversations for US with Its Neighbours,” BBC News, November 17, 2021, sec. US & Canada, <https://www.bbc.com/news/world-us-canada-59300461>.
- ¹³ James McCarten, “Canada ‘Threw a Hissy Fit’ over U.S. EV Credits before Gaining Exception: Envoy,” Global News, May 3, 2023, <https://globalnews.ca/news/9672308/us-canada-trade-buy-american-david-cohen/>.

¹⁴ President Joseph Biden, “Remarks by President Biden in Address to the Canadian Parliament” (Address to the Canadian Parliament, House of Commons of Canada, Ottawa, Canada, March 24, 2023), <https://www.whitehouse.gov/briefing-room/speeches-remarks/2023/03/24/remarks-by-president-biden-in-address-to-the-canadian-parliament/>.

¹⁵ Ambassador Katherine Tai for the Government of the United States and Ambassador Tomita Koji for the Government of Japan, “Agreement between the Government of the United States of America and the Government of Japan on Strengthening Critical Minerals Supply Chains,” 03 2023, <http://ustr.gov/about-us/policy-offices/press-office/press-releases/2023/march/united-states-and-japan-sign-critical-minerals-agreement>.

¹⁶ Treasury and Internal Revenue Service (IRS), “Notice of Proposed Rulemaking: Section 30D New Clean Vehicle Credit,” Pub. L. No. 2023-06822, 88 FR 23370 23370 (2023), <https://www.federalregister.gov/documents/2023/04/17/2023-06822/section-30d-new-clean-vehicle-credit>.

¹⁷ President Joseph Biden and President Ursula von der Leyen, “Joint Statement by President Biden and President von Der Leyen” (The White House, March 10, 2023), <https://www.whitehouse.gov/briefing-room/statements-releases/2023/03/10/joint-statement-by-president-biden-and-president-von-der-leyen-2/> and Stefano Sulaiman, “Indonesia to Propose Limited Free Trade Deal with US on Critical Minerals,” Reuters, April 10, 2023, sec. Asia Pacific, <https://www.reuters.com/world/asia-pacific/indonesia-propose-limited-free-trade-deal-with-us-critical-minerals-2023-04-10/> and “Rishi Sunak Presses Joe Biden for a Trade Deal — Just Not the One the UK Wants Most,” POLITICO (blog), April 11, 2023, <https://www.politico.eu/article/rishi-sunak-presses-joe-biden-for-trade-deal-uk-us-raw-materials-ira-supply-chains-china/>.

¹⁸ See, for example, R Shaw, ‘The Geological Potential of the UK for Battery Minerals’ (The UK Critical Minerals Intelligence Centre, January 2023), <https://ukcmic.org/reports/cmhc.html> and ‘Critical Mineral Maps’ (Wilson Center, 17 March 2022), <https://www.wilsoncenter.org/article/critical-mineral-maps>.

¹⁹ Dianne Dunne and Josh Gabbatiss, “Q&A: How the EU Wants to Race to Net-Zero with ‘Green Deal Industrial Plan’” (Carbon Brief, March 17, 2023), <https://www.carbonbrief.org/qa-how-the-eu-wants-to-race-to-net-zero-with-green-deal-industrial-plan/>.

²⁰ “Proposal for a Regulation of the European Parliament and of the Council on Establishing a Framework for Measures for Strengthening Europe’s Net-Zero Technology Products Manufacturing Ecosystem (Net Zero Industry Act),” COM(2023) 161 2023/0081 (COD) § (2023), https://eur-lex.europa.eu/resource.html?uri=cellar:6448c360-c4dd-11ed-a05c-01aa75ed71a1.0001.02/DOC_1&format=PDF.

²¹ European Commission, “Temporary Crisis and Transition Framework” (European Commission, March 9, 2023), https://ec.europa.eu/commission/presscorner/detail/en/ip_23_1563.

²² “‘France 2030’ Investment Plan – Policies,” in 8th Global Conference on Energy Efficiency (International Energy Agency, 2023), <https://www.iea.org/policies/14279-france-2030-investment-plan>.

²³ “Proposal for a Regulation of the European Parliament and of the Council on Establishing a Framework for Measures for Strengthening Europe’s Net-Zero Technology Products Manufacturing Ecosystem (Net Zero Industry Act),” COM(2023) 161 2023/0081 (COD) § (2023), https://eur-lex.europa.eu/resource.html?uri=cellar:6448c360-c4dd-11ed-a05c-01aa75ed71a1.0001.02/DOC_1&format=PDF.

²⁴ Standing Committee on Industry, Science and Technology, “Evidence -February 27 2020” (House of Commons of Canada, February 7, 2020), INDU-6, <https://www.ourcommons.ca/DocumentViewer/en/43-1/INDU/meeting-6/evidence>.

²⁵ Department of Finance Government of Canada, “Budget 2023” (Department of Finance Canada, March 28, 2023), <https://www.budget.canada.ca/2023/report-rapport/chap3-en.html>.

²⁶ Department of Finance Government of Canada, “Budget 2023” (Department of Finance Canada, March 28, 2023), <https://www.budget.canada.ca/2023/report-rapport/chap3-en.html>.

²⁷ Department of Finance Government of Canada, “Budget 2023” (Department of Finance Canada, March 28, 2023), <https://www.budget.canada.ca/2023/report-rapport/chap3-en.html>.

²⁸ Department of Finance Government of Canada, “Budget 2023” (Department of Finance Canada, March 28, 2023), <https://www.budget.canada.ca/2023/report-rapport/chap3-en.html>.

²⁹ Department of Finance Government of Canada, “Budget 2023” (Department of Finance Canada, March 28, 2023), <https://www.budget.canada.ca/2023/report-rapport/chap3-en.html>.

³⁰ Reuters, “Japan Lays out Plan to Issue \$157 Bln in ‘green Transition’ Bonds,” Reuters, May 19, 2022, sec. Sustainable Business, <https://www.reuters.com/business/sustainable-business/japan-lays-out-plan-issue-157-bln-green-transition-bonds-2022-05-19/>.

³¹ Ko Fujioka, “Japan to Subsidize Half of Costs for Lithium and Key Mineral Projects,” Nikkei Asia, April 23, 2023, <https://asia.nikkei.com/Economy/Japan-to-subsidize-half-of-costs-for-lithium-and-key-mineral-projects>.

³² “Green Innovation Fund” (Tokyo: Ministry of Economy, Trade and Industry), accessed June 6, 2023, https://www.meti.go.jp/english/policy/energy_environment/global_warming/gifund/index.html.

³³ Hitomi Komachi, Scott Neilson, and Matthias Voss, “Japan Unveils Green Subsidy Programme – Can It Compete with the U.S. Inflation Reduction Act?” (Allen and Overy, April 11, 2023), <https://www.allenoverly.com/en-gb/global/news-and-insights/publications/japan-unveils-green-subsidy-programme-can-it-compete-with-the-us-inflation-reduction-act>.

³⁴ Kan Hyeong-woo, “Seoul Looks to Make the Best of US Inflation Reduction Act,” The Korea Herald, December 29, 2022, sec. Industry, <https://www.koreaherald.com/view.php?ud=20221229000531>.

³⁵ “South Korea to Offer US\$5.3 Billion to North America to Support EV Battery Investment,” South China Morning Post, April 7, 2023, <https://www.scmp.com/news/asia/east-asia/article/3216330/south-korea-offer-us53-billion-north-america-support-battery-investment>.

³⁶ “Australia’s Critical Minerals to Drive USA’s EV Battery Program,” Minerals Council of Australia (blog), accessed June 5, 2023, <https://minerals.org.au/resources/australias-critical-minerals-to-drive-usas-ev-battery-program/>.

³⁷ “National Reconstruction Fund,” Australian Labor Party, 2023, https://www.alp.org.au/policies/national_reconstruction_fund.

³⁸ “Australian Budget Commits A\$25bn to Clean Energy and Renewables Projects | Global Australia,” Australian Trade and Investment Commission, Australian Government, 2023, <https://www.globalaustralia.gov.au/news-and-resources/news-items/australian-budget-commits-a25bn-clean-energy-and-renewables-projects>.

³⁹ Peter Hannam, “As Australia Faces a ‘Hydrogen Tipping Point’, the Energy Industry Needs Smart Policies, Not Huge Handouts,” The Guardian, March 25, 2023, sec. Australia news, <https://www.theguardian.com/australia-news/2023/mar/26/australia-must-seize-hydrogen-tipping-point-or-miss-clean-energy-revolution-experts-say>.

⁴⁰ “The State of Net Zero Investment: Analysis of \$2.1 Trillion Managed in Australia” (Investor Group on Climate Change, March 2023), https://igcc.org.au/wp-content/uploads/2023/03/IGCC-The-State-of-Australian-Net-Zero-Investment_March2023.pdf.

⁴¹ Tess McClure, “Coalition Creaks as New Zealand Greens Watch Labour Dump Climate Policies,” *The Guardian*, March 20, 2023, sec. World news, <https://www.theguardian.com/world/2023/mar/20/coalition-creaks-as-new-zealand-greens-watch-labour-dump-climate-policies>.

⁴² “The Climate Emergency Response Fund,” Te Tai Ohanga, The Treasury and Te Kawanatanga o Aotearoa, New Zealand Government, June 2, 2023, <https://www.treasury.govt.nz/information-and-services/nz-economy/climate-change/climate-emergency-response-fund>.

⁴³ <https://www.iea.org/policies/14055-government-investment-in-decarbonising-industry-fund-gidi>

⁴⁴ “About the Government Investment in Decarbonising Industry Fund | EECA,” EECA: Energy Efficiency and Conservation Authority (Te Tari Tiaki Pungao), 2023, <https://www.eeca.govt.nz/co-funding/industry-decarbonisation/about-the-government-investment-in-decarbonising-industry-fund/> and “GIDI Fund Overview” (EECA: Energy Efficiency and Conservation Authority (Te Tari Tiaki Pungao), April 2022), <https://www.beehive.govt.nz/sites/default/files/2022-04/GIDI%20fund%20summary%20infographic%20Final.pdf>.

⁴⁵ “Resilience for the Future: The UK’s Critical Minerals Strategy” (London: Department for Business Energy and Industrial Strategy, March 13, 2023), <https://www.gov.uk/government/publications/uk-critical-mineral-strategy/resilience-for-the-future-the-uks-critical-minerals-strategy>.

⁴⁶ “The Better Business Roundtable Summary Report: Engagement, Inspiration & Collaboration” (Edie, December 22, 2022), <https://www.edie.net/the-better-business-roundtable-engagement-inspiration-collaboration/>.

⁴⁷ Sarah George, “Survey: 80% of Business Leaders Say More Regulation Is Needed to Deliver Net-Zero - Edie,” *Edie* (blog), September 22, 2022, <https://www.edie.net/survey-80-of-business-leaders-say-more-regulation-is-needed-to-deliver-net-zero/>.

⁴⁸ “Press Release: The Green Deal Industrial Plan” (European Commission, February 1, 2023), https://ec.europa.eu/commission/presscorner/detail/en/ip_23_510.

⁴⁹ “International Trade in Products Related to Green Energy” (Brussels: Eurostat, October 2022), https://ec.europa.eu/eurostat/statistics-explained/index.php?title=International_trade_in_products_related_to_green_energy.

⁵⁰ “Renewable Energy Directive,” Pub. L. No. 2009/28/EC, accessed June 6, 2023, https://energy.ec.europa.eu/topics/renewable-energy/renewable-energy-directive-targets-and-rules/renewable-energy-directive_en.

⁵¹ “European Critical Raw Materials Act” (European Commission, March 16, 2023), https://ec.europa.eu/commission/presscorner/detail/en/ip_23_1661.

⁵² “Press Release: The Green Deal Industrial Plan” (European Commission, February 1, 2023), https://ec.europa.eu/commission/presscorner/detail/en/ip_23_510.

⁵³ Press Release: The Green Deal Industrial Plan” (European Commission, February 1, 2023), https://ec.europa.eu/commission/presscorner/detail/en/ip_23_510.

⁵⁴ “Mexico,” CIF: Climate Investment Funds, 2023, <https://www.cif.org/country/mexico>.

⁵⁵ Coalition of Finance Ministers for Climate Action, “Ministries of Finance and Nationally Determined Contributions: Raising Ambition and Accelerating Climate Action” (Washington D.C.: Coalition of Finance Ministers for Climate Action, November 2022),

<https://www.financeministersforclimate.org/sites/cape/files/inline-files/MoFs%20and%20NDCs%20-%20Raising%20Ambition%20and%20Accelerating%20Climate%20Action.pdf>.

⁵⁶ “Mexico - Country Commercial Guide,” International Trade Administration Department of Commerce, 23 2022, <https://www.trade.gov/country-commercial-guides/mexico-renewable-energy>.

⁵⁷ “General Law of Climate Change (Mexico),” International Energy Agency, 2022, <https://www.iea.org/policies/8683-general-law-of-climate-change-mexico>.

⁵⁸ Department of Finance Government of Canada, “Budget 2023” (Department of Finance Canada, March 28, 2023), <https://www.budget.canada.ca/2023/report-rapport/chap3-en.html>.

⁵⁹ “UK Car Production down but Electric Vehicle Output Surges to New Record,” SMMT (blog), January 26, 2023, <https://www.smmt.co.uk/2023/01/uk-car-production-down-but-electric-vehicle-output-surges-to-new-record/>.

⁶⁰ Department for Energy Security & Net Zero and Department for Business, Energy and Industrial Strategy, ‘Energy Security Bill Factsheet: Low-Carbon Heat Scheme’ (London, 6 June 2023), <https://www.gov.uk/government/publications/energy-security-bill-factsheets/energy-security-bill-factsheet-low-carbon-heat-scheme>.

⁶¹ See, for example, ‘What Does the US Inflation Reduction Act Mean for the UK’s Green Economy? » Green Alliance’ (Green Alliance, Green Alliance), <https://green-alliance.org.uk/publication/what-does-the-us-inflation-reduction-act-mean-for-the-uks-green-economy/> and Jim Pickard, ‘Labour Accuses UK Government of Complacency over Biden’s Green Plan’, Financial Times, 14 March 2023, sec. Climate change, <https://www.ft.com/content/7c6cd349-0570-4394-9220-57ab4e6e409a>.