THE SCRAMBLE FOR ENERGY

he Inflation Reduction Act is the most significant piece of climate legislation in the history of the United States. It will deploy nearly \$400 billion over the coming decade to slash carbon emissions. By lowering the cost of clean energy technologies, the law can accelerate their deployment not only at home but abroad. But to achieve its full climate potential, US diplomats and trade officials must now ensure that the large subsidies and domestic manufacturing requirements in the law spur the right mix of competition and cooperation from other countries, rather than feed the growing forces of protectionism that could stymie a clean energy transition.

The law's successful passage after decades of congressional stalemate reflects not only growing

alarm over climate change but also two notable shifts in strategy. First, carrots work better than sticks to build political support, and thus the law subsidizes clean energy rather than taxing or restricting carbon pollution—despite a large academic literature demonstrating the economic efficiency of a carbon price. Second, the law explicitly favors clean energy manufactured in the United States, part of a broader shift evident elsewhere, such as a recent law to boost the domestic semiconductor industry, toward "industrial policy"—a catchall phrase referring to government intervention to promote and protect firms in targeted and strategic sectors.

This policy approach offers several benefits. It is likely more durable against political shifts, as opponents will be more wary of removing tax



benefits from households and firms than they might be of repealing a carbon tax. It addresses energy and national security risks stemming from China's dominance of supply chains, for everything from solar panels to electric car batteries. It promises to upskill the American workforce for higher-quality industrial jobs in the years ahead. Perhaps most of all, it worked—securing 51 votes with a broader political base of labor joining environmental groups to support the bill.

Trade conflict

Yet the approach also runs the risk of protectionism triggering wider trade conflict. Unless properly managed, these trade risks could undermine the rapid transition to clean energy, not to mention the economy.

Consider, for example, that the new climate law requires that electric vehicles be assembled in North America to qualify for the subsidies and that the batteries in them be made from components mined or processed in the US or its free-trade partners. Or that larger renewable energy subsidies are available if the projects use materials, such as steel and iron, sourced from domestic manufacturers. Or that its massive subsidies for hydrogen and ammonia made using renewable electricity (so-called green hydrogen) lower the delivered cost of such exported green fuels below that of competitors in the Middle East and Asia.

While they help build domestic industries and increase American influence over supply chains, such measures also risk alienating allies and sparking backlash. The European Union and South Korea have already indicated they may challenge the electric-vehicle restrictions, for example. EU Executive Vice President Frans Timmermans, who is responsible for Europe's Green Deal, warned in September in remarks at Columbia University about the protectionist measures contained in the landmark US climate law.

Moreover, countries worried that their own hydrogen or electric-vehicle firms will be undercut by large US subsidies may be tempted to respond by putting in place their own protectionist policies to counter the law's support for US firms and exports. Many companies have expressed new interest in investing in green-hydrogen projects in the US to take advantage of the generous subsidy, and several have hinted that existing projects in other countries might be scrapped and relocated to the US.

Trade risks are also prevalent in how the US might respond to a surge in taxpayer-funded export projects, as many of the proposed green-hydrogen and ammonia projects are intended for export given limited domestic demand at present. There are surely limits to the willingness of the American taxpayer to subsidize the cost of energy for consumers and businesses in Japan, Germany, or elsewhere.

The law risks exacerbating already growing protectionist impulses in other parts of the world. Indonesia's president, for example, has articulated a goal of banning exports of nickel, a vital input for electric vehicles, so that his country can build its own domestic manufacturing industry further up the value chain.

Broadly speaking, the Inflation Reduction Act is the latest action in a growing trend toward industrial policy measures to capture the full economic value of supply chains. After the global disruptions to supply chains caused by COVID-19 economic lockdowns, firms and governments alike are also reevaluating the security of supply, whether it's energy or other goods. Domestic job creation and supply security combine to form a powerful accelerant of already growing trends toward reduced global trade and integration.

Fragmentation

Following Russia's invasion of Ukraine, these economic headwinds for globalization will now combine with geopolitical drivers of fragmentation as political and economic alliances are reshaped into new regional blocs. This complex geo-economic and geopolitical backdrop means that the Inflation Reduction Act's requirements for production in the US or ally nations must be implemented with particular sensitivity to avoid further fueling the flame of fragmentation. These risks come on top of already growing trade tensions between the US and China that have darkened the outlook for US solar projects in recent years.

As it relates to combating climate change, tit-for-tat retaliation by America's trading partners would not only be economically and geopolitically problematic, it would risk undermining the energy transition itself if it limits access

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to the lowest-cost clean energy materials and products. To achieve net-zero emissions by 2050, the world must dramatically increase trade in clean energy across borders. Total energy-related trade declines as we decarbonize because more of the system is electrified, and electricity tends to be produced locally. But trade in the components for renewable energy, critical minerals for batteries, and fuels such as hydrogen must expand so fast that it is far costlier and harder to decarbonize without cross-border trade that leverages countries' own comparative advantages. According to the International Energy Agency, for example, achieving net-zero emissions by 2050 requires tripling the value of global trade in critical minerals and boosting global trade in hydrogen to 1,500 times its negligible level today.

The challenge for US officials is thus to ensure that the Inflation Reduction Act sparks a virtuous cycle of competition rather than a vicious cycle of protectionism. Countries around the world must vie with one another for leadership in the massive clean energy industries of the future, driving down costs and accelerating clean energy deployment in the process.

To realize this opportunity, American trade and climate officials should strengthen their commitment to the rules-based trading system and cooperation with free-trade partners to diversify clean energy supply chains. The reality is that we cannot produce everything domestically, but diversifying supply sources makes good sense to improve energy security and counter the influence of China, which today dominates certain industries—such as solar panel and battery manufacturing and critical mineral refining and processing—because of its own long-standing government programs to build domestic industries.

Climate cooperation

More specifically, US officials should leverage strong domestic climate action to bolster climate cooperation with other countries worried about the competitiveness of their domestic industries. The recent agreement of Group of Seven countries to form an alliance of nations that benefit from preferential trade terms if they achieve certain environmental standards is one example. The US may now be able to join with or mirror the EU's plan to impose a carbon fee on imports of high-emitting goods. The US is also in a stronger position to implement a recent deal with the EU to restrict imports of steel and aluminum from Asia and elsewhere if they do not meet emission standards.

More broadly, the new law presents an opportunity to engage with partners to create special trading rules that support clean energy. A rules-based trading system remains critically important: it would call for strengthening the hollowed-out World Trade Organization and for foreign policy and trade officials to build new mechanisms for economic cooperation.

It will require deft trade policy and diplomacy to avoid trade wars that stymie the energy solutions we need.

The COVID-19 pandemic and Russia's invasion of Ukraine are painful reminders of the importance of securing supply chains, diversifying supplies, and boosting domestic production, particularly for strategically important sectors like energy. Moreover, while the Inflation Reduction Act may be an example of industrial policy, it's admittedly nothing compared with China's efforts to promote and protect its own industries, so the US (and others) should not unilaterally disarm.

At the same time, these new imperatives heighten already rising risks to the global economic order. Geopolitically and geo-economically, globalization is in retreat: powerful new forces of fragmentation are spawning new geostrategic alliances and weakening global economic integration. If not carefully managed, industrial policy measures such as the new US climate law can exacerbate trade tensions, which would undermine a clean energy transition requiring much more, not less, trade in clean energy materials and products.

If done right, however, shoring up our energy supply chains can both stimulate new domestic industries and establish more durable trading arrangements. But it will require deft trade policy and diplomacy in the years to come to avoid trade wars that stymie the energy solutions we need.

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