In August 2022, President Biden snatched victory from the jaws of defeat and delivered a major climate win. After over a year of often futile-seeming negotiations with a single legislator – Senator Joe Manchin, Democrat of West Virginia – Biden and congressional leadership delivered the Inflation Reduction Act (IRA). Unlike the previous major US attempt at climate legislation (i.e. the failed Waxman-Markey Act of 2010), the IRA focused on tax credit carrots rather than regulatory sticks, offering a sticker price of $391 billion in spending on clean electricity, transport, manufacturing, agriculture, building, and more (CRFB 2022). By some estimates, this amount of spending will enable the US to meet two-thirds of its Paris climate commitments (R. Meyer 2022). However, the total spend could be two or three times the sticker amount. This is because the credits are “uncapped” and disbursable by so-called “direct pay” methods from the Treasury, meaning they can be made to start-up firms, local governments, and non-profits that owe little to no federal tax (Jiang 2022) (Berndt, Siler, and Aves 2022).1

This looming torrent of spending has led to a very public and pointed reaction across the Atlantic, with EU and UK leaders criticizing the perceived divergence from “free trade” norms and predicting an imminent decamping of European manufacturing for America (Abboud 2022). Having just gotten back from Europe to meet with policymakers there, I can report that the anxiety is real, but so is the policy window. This memo explains why the US is taking the carrot-heavy route to decarbonization,2 and what opportunities lie ahead for deeper Trans-Atlantic cooperation on climate.

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1 Already, this is reshaping the role of finance in industrial policy. Infant industries no longer have to be beholden to Wall Street firms that trade upfront capital against the value of future tax credits, when firms graduate from their (initially unprofitable and therefore untaxable) start-up phase, to a more mature phase when taxable profits are generated. At the same time, other types of trade in tax credits are empowering lawyers providing different types of transactions (Foley and Brower 2023).

2 The notion that the US’ new green industrial policy is just carrots is a tad oversimplified. Ironically, the parts of this new strategy that received some bipartisan support go beyond just carrots. The Bipartisan Infrastructure Law includes demand-side provisions to put federal procurement behind the clean energy push (including revamping Made in America requirements), and includes $550 billion on new spending in sectors like electric vehicle charging (Badlam 2021) (Harvey 2021). The CHIPS and Science Act contains over $50 billion in appropriations for semiconductor grants and tax credits that will help further electrification, and over $200 billion in authorizations for boosting government and private sector clean energy capacity (Ambrose, Jacobs, and Tham 2022) (Badlam 2022). All three of these pieces of legislation add up to a comprehensive energy strategy that goes far beyond tax cuts (Carey and Ukita Shepard 2022). Meanwhile, the administration has contemplated using bipartisan-supported tools like the Defense Production Act that could lead to substantial governmental direction of the flows of goods and services in the civilian market (Datta et al. 2022) (Dodge et al. 2022).
Why the US Chose Carrots Rather Than Sticks

We are in an industrial policy moment. From being a forbidden policy domain just a few short years ago, the US and its trading partners are throwing trillions of dollars into industrial policy. To be sure, the Defense Department has long invested in the resilience of the defense industrial base, and the Obama administration quietly spent money on select green industry technologies. But a robust and visible federal industrial policy for the civilian economy has not been attempted since the Franklin D. Roosevelt administration, thanks to blockages from political forces pushing states rights, austerity, neoliberalism, or some mix of the above. Internal factors like the rise in domestic inequality has interrupted some of that policy inertia, while external factors (like the 2015 launch of the Made in China 2025 plan and the European Union’s expansion of “off-budget” financing mechanisms like the European Investment Bank) have triggered national competitiveness concerns.

There are still other factors that help explain the shift to industrial policy, including:

- **Timing and learning.** Mainstream economists’ long preferred solution to climate change is a carbon tax. However, this method has had relatively little bite in reducing carbon emissions, while producing some highly visible political blowback. The US’ relative laggard pace in addressing climate meant that it could learn from the relatively poor record of carbon pricing abroad, relative to “policy experimentalist” regimes like industrial policy (Green 2021) (Victor and Sabel 2022). In my own conversations with policymakers, there does seem to be anecdotal evidence of a “learning effect” (Dobbin, Simmons, and Garrett 2007), especially vis a vis the French gilets jaunes experience. In this respect, like Germany and Japan’s initial economic development trajectory vis a vis the UK (Kohli 2016), the US had some advantages as a “late developer” on climate.

- **Political strictures.** The Republican Party is the biggest threat to US international credibility on climate. Donald Trump gave notice to pull the US out of the Paris Accords early in his administration, and not a single Republican in either chamber voted for the IRA. US negotiating partners reasonably question whether the US taking action on climate under a Democratic administration will be continued under a Republican one. Biden addressed that credibility problem by turning the US climate response into a jobs and economic development strategy – one that stands to disproportionately benefit red states and districts. Already, Republican legislators that voted against the IRA and red state governors are attending ribbon cuttings and overseas trade shows to tout green investment possibilities from their states (Malhotra and Tucker 2022) (Tamborrino and Siegel 2023) (Chu, Brower, and Williams 2023). The effect of these investments will hopefully be to convert red-state climate blockers to climate enablers (Mildenberger 2020), and to enable policy feedback loops that make ongoing appropriations more likely (Hacker and Pierson 2019). In this, the IRA bears some resemblance to that previous highly stable US policy regime: military industrial complex appropriations. That system – with defense dollars and jobs in virtually every congressional district – ensured a steady

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3 For a sense of this rapid trajectory, compare the relative novelty of the ideas explored in (Tucker 2019) to their embrace by the highest levels of government three years later, explored in (Tucker 2022).

4 Cool idea for your PhD students: do a systematic interview study to test this diffusion mechanism!
flow of appropriations across years, geographies, and shifts in party ideologies (Thorpe 2010) (Brenes 2020). Even hardcore pacifists reliably voted for military hardware manufacturing that benefited their districts! The hope is that hardcore climate deniers will do the same once the battery facilities are up and running.

- **Legal strictures.** Given that no Republicans in the Senate supported Build Back Better or the IRA, Democrats in the 50-50 Senate could not meet the 60-vote threshold needed to overcome the filibuster. As a result, Biden was forced to abide by reconciliation rules that allow passage of legislation on a 50-vote majority basis (with Vice President Kamala Harris as a tiebreaker) for bills narrowly tailored to impact the federal budget. In that scheme, tax credits qualify for reconciliation treatment, but not more traditional command-and-control regulations (Reynolds 2017) (Scott 2021). But in addition to the near-term reasons for focusing on carrots, there was a medium-term reason: the Supreme Court. The Roberts Court presides over the most anti-regulatory judiciary since the dawn of the administrative state (Tucker 2018). If Biden had insisted on a landmark bill with a sticks-focus, there was a good chance that the Court would have set it aside. (See above point about low US credibility on climate.) He used his “one shot” wisely, because the Court has not in over 200 years overruled a federal tax and spending bill (Fishkin and Forbath 2022, 296).

In short, even if subsidies to the private sector are not one’s first (or second or third) most preferred policy device, there were historical and institutional reasons why the US was likely to take this path in the narrow domestic window it had to pass climate legislation.

**What Trans-Atlantic Opportunities Does the US Approach Open Up?**

As noted, the immediate European response to the IRA’s passage was a very public rejection of many of its provisions. Yet this reaction – and the press coverage to it – exaggerated the novelty of the steps Biden was taking, and minimized the difficulty of meeting Europe’s stated demands. While the late 2022 criticisms came from the highest political levels (i.e. presidential and at state visits, in the case of Macron), the European Commission had actively sought to water down IRA provisions for the year prior – and succeeded in getting Manchin to eliminate EV tax credit top-ups for unionized facilities. Moreover, some European voices appear to be subdividing up normal phases of the policy implementation process into discrete opportunities for new indignation. The Bipartisan Infrastructure Law, for instance, passed over a year ago and included clear requirements to bolster local content requirements. Yet even normal follow-on actions like the issuing of final regulatory guidance are treated as new actions that Biden is taking (Williams 2023). Finally, while some press coverage focused on tensions over the electric vehicle consumer tax credits newly conditioned under Biden on US production and supply chains, the European Commission’s formal submission took aim at a much wider range of IRA provisions – including production and investment tax credits with a longer US history. Indeed, the stated

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5 Another cool idea for your PhD students: whether and to what degree this precedent informed key decisionmakers and congressional staffers.
6 See timeline here: https://twitter.com/toddntucker/status/1616420285158199296.
7 For more on this submission’s contents and its impact on the policy debate in Washington, see https://twitter.com/toddntucker/status/1589642234152235009.
demand to treat foreign products as on par with US production would have been an outright contravention of Congress’ stated intent. In short, European demands would have likely involved the Biden administration breaking US law or triggering a constitutional crisis.

There is growing awareness on the lack of merit of some of Europe’s critique. In Davos, Senator Manchin noted that European automakers had long benefited from relatively high tariff protection, and that their US operations could benefit from the subsidy schemes (Ward and Lynch 2023). Other commentators questioned whether European producers might not have an advantage over their American competitors in decoupling from China (as incentivized under the IRA) (Meyers 2023). Even the neoliberal Peterson Institute has chimed in, noting “Despite the damage done to trade rules, this transatlantic competition is a good thing for the fight against climate change,” and “If Europe wants to engage in a green competition, it should realize that the problem is not a lack of funding resources and abilities but the obstacles of its own rules and rivalries among EU member countries.” (Kirkegaard 2023).

Yet… in spite of this bitter reaction, there were and are reasons for hope. First, the supply chain crises wrought by COVID have led to a growing skepticism of the resilience of private markets, and a renewed openness to using the power of the state to structure markets. The resonance of this in international forums could be seen by shifting tones in G7 declarations and expert panels in 2021 and 2022, which envisioned sustained state involvement in the economy to address the climate crisis (Sedwill et al. 2021). Second, arenas of discrete cooperation are emerging, such as around sectoral negotiations like the Global Arrangement on Sustainable Steel and Aluminum (GASSA), a joint US-EU initiative to decarbonize highly traded, high emissions producing industries. Notably, this is happening institutionally outside of the WTO, and is slated to introduce market access restrictions that deviate sharply from core WTO norms like most-favored nation rules (Stiglitz, Tucker, and Estevez 2022).8 Finally, the process of policy diffusion (rhetoric aside) does appear to be following more of a race-to-the-top dynamic. It’s hard to imagine a GASSA without Europe’s proposed carbon border adjustment mechanism (or CBAM), and hard to imagine an IRA without Made in China 2025 and the EU’s doubling down on its system of development banks since 2015. More recently, the EU appears poised to centralize revenue generation and expand its own green subsidies in response to the IRA (Wong and Tucker 2023).

These modes of cooperation are just scratching the surface of what is possible. I am surprised in conversations how the mood in Washington policymaking circles these days is less about whether an idea is radical or not, and more about whether it solves problems or not. There is surprising receptivity to the idea of commodity clubs and buyers clubs for climate products, for instance. There is a long but forgotten history of using this type of mechanism (Martin 2022), and the Europeans have proposed one version of it as an arena for cooperation (Kraemer 2023). This type of mechanism could be deployed through other novel trading arrangements like the Indo-Pacific Economic Framework, Americas Partnership for Economic Prosperity, or the US-EU Trade and Technology Council (Datta and Turnbull 2023). Once the industrial goals are specified, a new system of trade rules can memorialize and accommodate them. Ironically, the

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8 Yet, ironically, this approach may be relatively defensible under environmental exceptions to WTO rules. For more background on this approach, see (Tucker and Meyer 2021) (T. Meyer and Tucker 2021) (Swanson 2022).
very weakness of the traditional liberal order\(^9\) has created the opening for something more sustainable to take its place.

Bibliography


\(^9\) See most recently, (Spiegelman 2023).


