THIRD WAY

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On the Grid: Jumping Into Action 6/09/23

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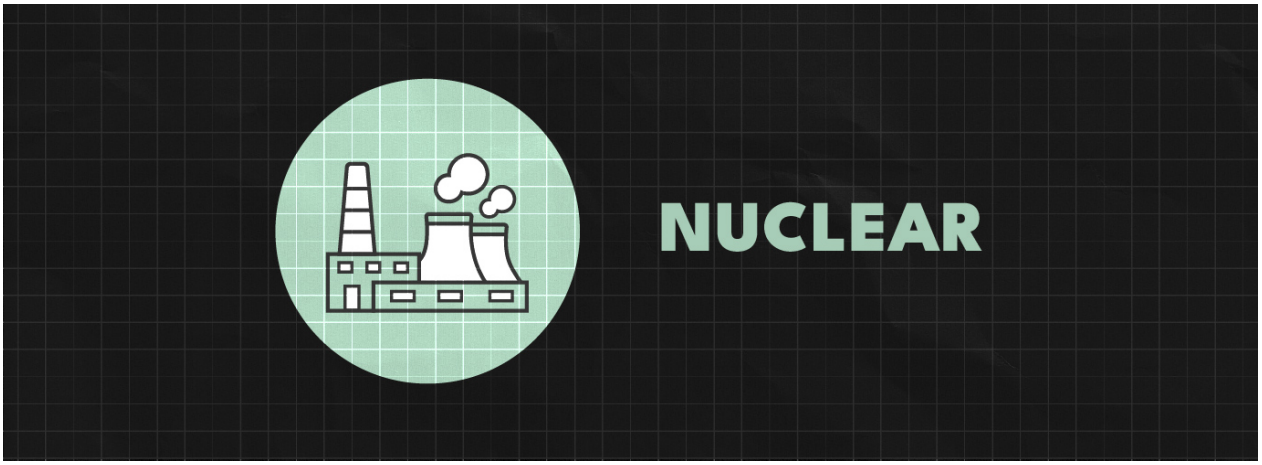
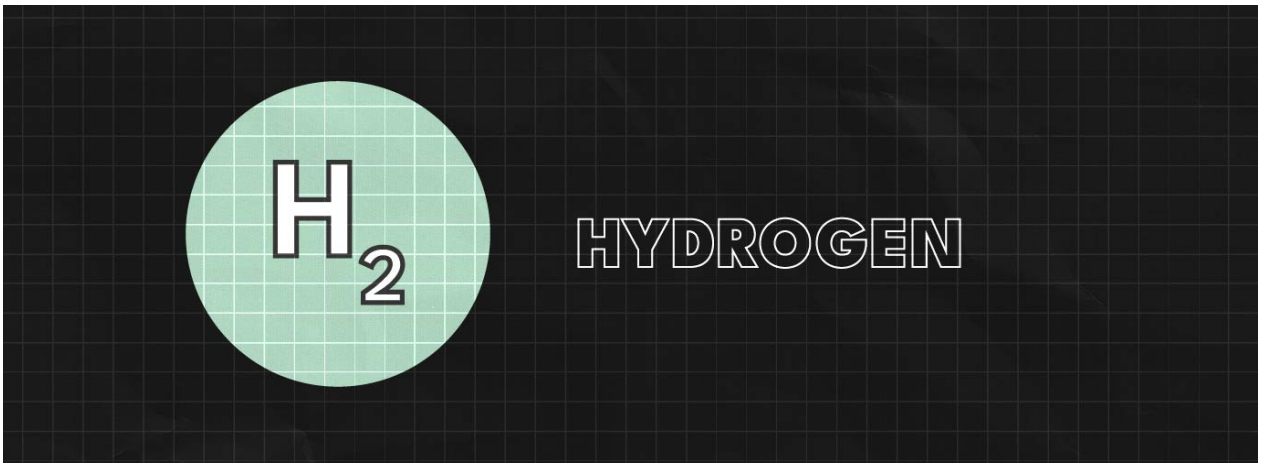
With a thick blanket of smoke cloaking Washington this week, the urgency for a cleaner, more secure future has become even more palpable for us East Coasters not used to wildfires. While popular media draws the comparison to a dystopian novel or pure science fiction, more than anything, this moment is a suffocating reminder of the unpredictability and dangers a warming planet presents.

Here's the reality–we do not have the luxury of time on our side. We need to act *now.* That means deploying *every* clean energy technology we have, getting more of it on the grid, and cutting through every barrier that is holding us up. The longer we idle behind the smoke screen of perfectionism, the more the smoke will build up around us. That's why this week, we're focusing on solutions that will help deploy clean energy technologies as quickly as possible.



This week, the Department of Energy (DOE) announced that the agency is seeking feedback on two draft Request For Proposals (RFP) aimed at developing a domestic supply chain for high-assay low-enriched uranium (HALEU), an essential fuel source for our emerging advanced nuclear reactors. Given Russia's monopoly on the global HALEU supply chain—one that doesn't show any sign of slipping even amid the ongoing conflict in Ukraine—these draft RFPs are a critical first step to jump-start our domestic HALEU supply chain. But while Congress is certainly not shy about cutting dependence on Moscow for nuclear fuel, they have so far been underfunding the amount of money required to build an American nuclear fuel supply chain that can compete globally.

The true cost of a domestic HALEU supply chain—including production and processing capabilities—will require *billions* of dollars in federal investment, well above the appropriated amount available for the RFPs. Furthermore, due to perceived NEPA obligations, the suggested timeline for the RFPs ensure that DOE can only begin providing HALEU to fuel fabricators in 2028, which does not align with the needs of our earliest demonstration reactors. As such, while the draft RFPs are steps in the right direction, additional urgency and resources will be required to definitively tackle this challenge.



To bolster our domestic clean hydrogen industry, DOE unveiled the US National Clean Hydrogen Strategy and Roadmap this week. It details how the US can scale up the production, transport,

storage, and consumption of low-carbon hydrogen, producing 10 million metric tonnes (MMT) annually by 2030, 20 MMT by 2040, and 50 MMT by 2050.

A versatile next-generation fuel, hydrogen has the potential to transform the clean energy landscape. It offers a path to decarbonize some of our most carbon-intensive industries without sacrificing economic growth. DOE's roadmap provides a clear guide for industry and government that will create 100,000 jobs by 2030, cut emissions by 10% by 2050, and build a globally competitive domestic market. Here are DOE's three key strategies:

1. **Targeted Application:** By targeting sectors with few decarbonization alternatives, like heavy industry and long-duration energy storage, we can ensure early deployment of hydrogen fuel has the highest impact.

2. **Cost Reduction**: Focusing on overcoming the biggest barriers to cost reduction, agencies will work to ensure hydrogen is affordable, partnering with industry to stimulate private sector investment, building on DOE's Hydrogen Earthshot Initiative to catalyze innovation, and supporting a durable domestic supply chain.

3. **Regional Focus**: To achieve large-scale commercial deployment of low-carbon hydrogen, this strategy focuses on establishing regional networks of clean hydrogen production near areas of high demand to optimize the use of shared infrastructure and minimize transportation and distribution costs.

While DOE is tackling some of the biggest challenges, a few hurdles still remain. Namely, regulatory barriers that make it difficult to obtain local permits for hydrogen infrastructure and hesitation from industry to widely adopt a relatively novel fuel.

Third Way's memo, based on analysis from Boston Consulting Group, outlines additional policy recommendations for the US to build and maintain a durable competitive advantage in the emerging global hydrogen market. By combining the strengths of the DOE's roadmap and the strategic recommendations from Third Way, the US can position itself as a frontrunner.

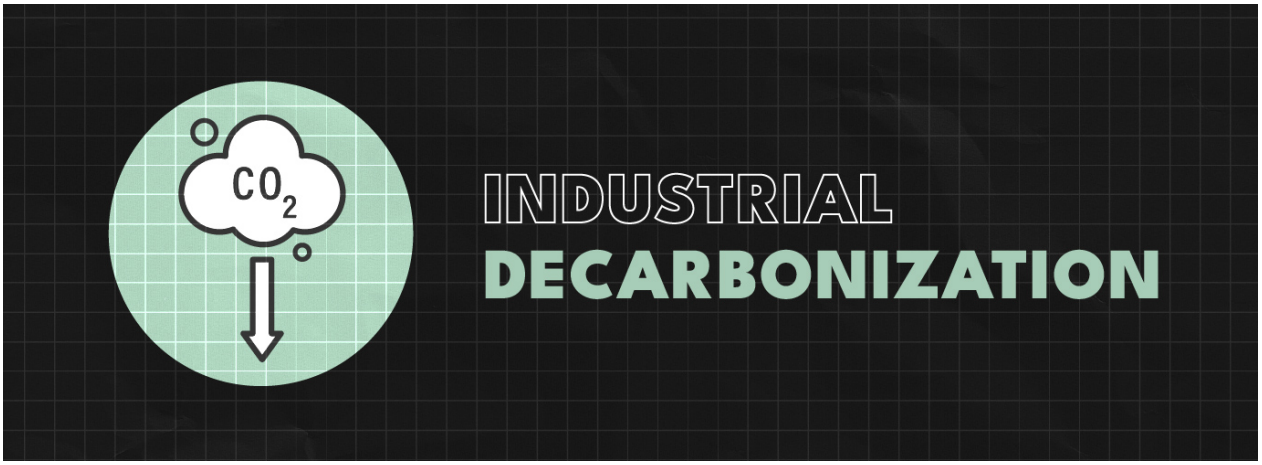
This week, Carbon-Free Europe (CFE), Third Way's transatlantic initiative focused on building support for clean energy policies across Europe and the United Kingdom, released its Annual Decarbonisation Perspective (ADP) in partnership with Evolved Energy Research. The research uses energy-systems models to provide key insights into the energy policy and technological advancements needed to reach climate targets. Here are some key findings from the updated modeling:

1. **Technology-inclusive policies decrease Europe's dependence on energy imports:** By 2050, the majority of the energy used by the EU and the UK will be produced within its borders, only importing some forms of energy like hydrogen, zero-carbon fuels, and clean electricity. However, our modeling shows that if they use fewer technologies, omitting nuclear and carbon capture, for example, then they would need to import *way more* energy to meet future demand.

2. **Ukraine can become a unique contributor to the rest of Europe:** Ukraine has huge potential to provide 300 TWh of new renewable energy to the EU, converted either into hydrogen or in the form of electricity, both of which would require new infrastructure given the damage sustained by Ukraine's power grid.

3. **Some countries will max out the usage of their renewable resource potential**: By 2050, some countries will hit a limit on their renewable energy resources, in particular running out of options to site onshore wind and high-quality utility solar. This highlights the need for better resource and infrastructure planning to diversify the energy mix and expand transmission to other regions. Even though certain technologies like advanced nuclear power, enhanced geothermal, and floating offshore wind are not the cheapest options now, they will become more cost competitive as this future becomes a reality and can ultimately bring down system-wide costs.

Above all else, CFE's modeling shows how the EU has set the regulatory framework in place to get off Russian gas and achieve 2030 climate targets. The level of investment needed in clean energy and supportive infrastructure like transmission and hydrogen/carbon pipelines is the next big challenge. Low on funds and constrained with what it can do with fiscal policy, like tax credits, the EU now needs to get creative to ensure sufficient investment to drive this transition.



This week, Senators Chris Coons and Kevin Cramer introduced the Providing Reliable, Objective, Verifiable Emissions Intensity and Transparency (PROVE IT) Act, directing DOE to conduct a comprehensive study on the emissions intensity of certain carbon-heavy goods–like steel, aluminum, cement, fertilizer, and iron–that are produced both here at home and abroad.

American industries are already some of the cleanest in the world, but with the European Union set to phase in a Carbon Border Adjustment Mechanism (CBAM) in 2026–a tax on certain goods based on their carbon footprint–this study will help us collect reliable data to implement cleaner industrial practices that ensure American goods remain globally competitive and are well-positioned to stand up to a European CBAM. You can read Third Way's short statement on the bill here.

While the electrification of cars, heating and cooling systems, and parts of industry is the most efficient, affordable path to decarbonization, unfortunately, some things simply can't be electrified.

Lindsey Walter, co-founders for Carbon-Free Europe and Third Way's Director of International Policy, and Kadri Tastan, Carbon-Free Europe's Government Affairs Manager saw this up close this week, on a visit to a steel facility in Remscheid, Germany.

Lindsey Walter (left) and Kadri Tastan (right)

The Dirostahl steelmaking company has provided jobs for decades in this important manufacturing region of Germany, providing critical components to wind turbines, among other products. While they can electrify some aspects of their production, their higher temperature processes of up to 1200°C require reliable, clean energy sources that can provide both radiation and convection. Right now, they use natural gas but are looking toward green hydrogen as a replacement. The problem? Green hydrogen would cost them five times more.

While the cost of low-carbon hydrogen remains a significant barrier, legislation like the Inflation Reduction Act (IRA) can help lower the cost of clean hydrogen technologies not only domestically but globally, giving facilities like those in Remscheid access to more affordable, reliable, secure, and clean solutions to their energy needs. Internationally, there is concern about the IRA being viewed as a protectionist measure. Aspects of the policy certainly encourage domestic production, but it's important to understand that the US, by flexing its financial muscles—something Europe currently can't do—is helping bring down the costs of key clean energy technologies, effectively providing a platform to introduce more affordable, cleaner solutions for energy needs, not only within its borders but also globally.

- Tim Ryan in *The Liberal Patriot* makes the case for electric vehicles, outlining how the industry will reinvigorate American manufacturing and bring economic opportunities to the communities hit hardest by the shift.

- Jeff St. John in *Canary Media* offers fresh criticism of the transmission provisions in the recently passed debt ceiling bill, talking with Third Way's Shane Londagin on the importance of maintaining momentum to expand and strengthen the US power grid.

- Jason Bordoff in the *Columbia Energy Exchange* podcast series sits with Jason Furman, Harvard Professor and Former chairman of the White House Council of Economic Advisers, to discuss how green industrial policy will impact the clean energy transition and the associated international risks.

The Carbon Free Europe Program highlights key discussions from the launch of the newest Annual Decarbonisation Perspective modeling.

Carbon-Free Europe
@CFEurope2050

"With smart policy, the EU can have clean, reliable, affordable and secure clean energy resources.

We partnered with @evolved_energy to conduct this analysis for the EU & UK," @LindseyNWalter says as she kicks off the event.