HIRD WAY

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On the Grid: What Now? 7/15/22





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As we end the week, the fate of the budget spending bill known as reconciliation is unclear. What we do know is that the clean energy investments being considered in it would lay the foundation we need to reduce household energy costs by as much as <u>\$300 per year</u>. Here's what Josh Freed, our Senior Vice President for Climate and Energy, has to say:

"Democrats need to be the party of building things and helping Americans solve their big problems, like reducing inflation as well as increasing access to affordable, clean energy. Sen. Joe Manchin's support of lowering health care costs is critical and good to see. However, his apparent decision to delay, if not kill, targeted tax increases to reduce the deficit and walk away from an all-of-the-above energy plan that included investment in nuclear, advanced manufacturing, carbon capture, support for coal communities, and more fossil fuel exploration is shortsighted and the wrong approach to meet the moment. For the good of the country and West Virginians, Sen. Manchin should get back to the table and negotiate an antiinflation plan that includes deficit reduction, making health care more affordable, and expanding clean energy now."

Americans continue to struggle with inflation and particularly high energy prices. This means addressing our short-term energy demand problems while continuing to invest in a clean energy future that will guarantee affordable and reliable energy. This week, we're sharing details on some clean energy technologies that the United States needs to make energy clean, affordable, reliable, and secure.



1. Carbon Removal: Snake Oil or The Real Deal?

In April, the United Nations made it very <u>clear</u>—we cannot abandon carbon removal *and* hope to meet our decarbonization goals over the next three decades. But with the clock ticking, some believe that carbon removal is setting us up for failure by allowing big-polluting companies to continue emitting mass amounts of carbon. In <u>MIT Technology Review</u>, Zeke Hausfather and Jane Flegal unpack the consequences of this way of thinking and why carbon capture absolutely must remain on the table.

Here's the CliffsNotes version:

- Heavy-polluting industries like aviation and cement production do not have affordable carbonfree technology that can be deployed at scale to drive emissions down.
- It's not all about the CO2! We need to sequester other compounds, like methane and nitrous oxide, that are directly responsible for warming. The blazing temperatures and warming effects we are currently experiencing are due to the carbon that is *already* in the atmosphere. If we want to limit warming to 1.5°C, then we need to be actively removing carbon.
- Climate modeling, though incredibly helpful for long-term planning, has its limitations and active carbon removal is a good safeguard against any uncertainties and helps ensure we stay on track with our decarbonization timelines.

But, as Hausfather and Flegal state, we have to manage our expectations. While carbon removal is key, we have a huge task ahead of us, and must not rely on any single technology to get us over the finish line.



2. Coal Plants Get a Glow Up

While the cost of clean energy continues to drop, long-bureaucratic hurdles make connecting to the grid an arduous process. However, we have the perfect opportunity to <u>plug into existing</u> <u>transmission infrastructure</u> left behind as more and more coal plants retire. Coal-burning plants across the country are already connected to the grid, making them an attractive option for renewable technology like solar panels and battery storage facilities. What's more, as clean power companies begin to retrofit and take over retired coal plants, they are re-investing in the surrounding communities.

With over 600 coal-burning generators retired across the US over the last twenty years, there is massive potential to switch over to cleaner, cheaper, and more reliable energy, especially as <u>grant</u> programs become more commonplace.

The phenomenon of repurposing retired coal plants is not original. Bill Gates's trailblazing nuclear company, TerraPower, is leveraging a <u>retired coal facility</u> in Wyoming to build out advanced nuclear demonstration projects while supporting thousands of construction jobs. These initiatives are examples of the kind of visionary, long-term strategies we need to push the clean energy transition forward, especially in heavy coal-burning states.

3. Carbon Management...It Takes A Village



If we want to reach net-zero emissions by 2050 in the fastest, fairest way possible, then it's high time we embrace a decarbonization strategy that deploys a diverse suite of clean energy technologies. But if we hope to substantially cut back on carbon pollution, carbon capture and carbon removal are absolutely essential tools. Already a priority for the <u>Biden Administration</u>, it's important that we navigate the carbon capture policy arena by learning from our partners and allies abroad.

This week, we partnered with Public Policy Projects to host a roundtable discussion on the international approach to carbon capture and removal, featuring Brad Crabtree, Assistant Secretary for Fossil Energy and Carbon Management in the Department of Energy, Bong-Yong Jeong from Korea's CCUS Association, and Emilien Gasc, Climate Attaché for the EU Delegation to the UK. Afterward, I sat down with Dr. Rudra Kapila, Third Way's Senior Policy Advisor for Carbon Management to unpack key takeaways from the event.

Third Way: During this webinar, the panelists provided updates on carbon capture and carbon management projects not only in the United States but also in Korea and Europe. Why should Americans pay attention to international projects and not just what's happening in the States?

Dr. Rudra Kapila: Even if America builds all the carbon capture projects laid out in the Bipartisan Infrastructure Law, all of the direct air capture (DAC) and carbon capture, utilization and storage (CCUS) hubs, it would only be a drop in the carbon ocean we need to sequester to reach our 2050 goal. So while we want to build out this infrastructure at home, we need this to be done on a global scale. The US cannot carry the burden alone. Also, international cooperation is great for the innovation ecosystem, to develop and build out the next generation of this technology.

TW: What was one thing you were excited about coming out of this discussion?

RK: Carbon management can be siloed into three main areas—capturing, transport, and storage. This roundtable showcased three continents and each is engaging and bringing its expertise to the table in each of these three areas. The US is leading the path in carbon capture and onshore storage, Europe is trailblazing in off-shore storage and carbon utilization, while Korea is developing an innovative network

for carbon shipping and transport. For someone who's been working in this area for over 17 years, it's really exciting to see three different continents working together for a larger goal like this.

4. What We're Reading and Listening To



- Justin Fox, in *Bloomberg*, draws attention to a common misconception around electrification. As more state and local governments enact policies that move away from fossil fuels, data shows that the stereotype that conflates traditional political leaning with oil and gas dependence is flipped, with more homes in southern, Republican states free of fossil fuels while blue states continue to rely on gas the most.
- <u>Robert Hargraves</u>, in the *Wall Street Journal's Opinion*, writes on the cost-saving capability of nuclear power to cheaply heat homes via cogeneration and how other countries like China are already harnessing this kind of nuclear power to generate affordable and reliable power.
- <u>Ezra Klein</u>, in his podcast *The Ezra Klein Show*, sits down with author Kim Stanley Robinson, a long-time science-fiction writer who took a recent shift into non-fiction, to discuss the intertwined topics of psychogeology, human nature, and climate change.