Chairman Manchin's Opening Remarks During a Hearing to Examine the Opportunities and Challenges in Deploying Carbon Capture Utilization and Sequestration and Direct Air Capture Technologies on Federal and Non-Federal Lands

- The committee will come to order.

- Before we begin today's hearing, I want to just say that we are thinking and praying for the families and loved ones of the man killed at the Martin Coal Mine Prep Plant demolition site in Martin County, Kentucky this week, and the worker still trapped somewhere beneath the rubble.

- It's a tragic reminder of the dangers our coal communities face and the sacrifices they make to power our nation—in this case, the sacrifices continue even after this facility has closed.

- I also want to express my frustration that just this morning, the Bureau of Ocean Energy Management announced it will again delay Gulf of Mexico Lease Sale 261 – despite the director testifying before this committee one week ago that "all systems are go" to hold the lease sale on November 8th.

- BOEM is once again blaming the courts for delaying this sale, but the delays are entirely the administration's fault.

- The Department of the Interior was so eager to meet the demands of environmental groups to restrict the sale that it bypassed important legal requirements, leading to this litigation.

- Moving to today's topic, we're here to examine the opportunities and challenges our county has deploying carbon capture utilization and sequestration – or CCUS – and Direct Air Capture – or DAC.

- Both of these critical technologies have received significant bipartisan support from Congress in recent years.

- And that should come as no surprise, as they will play a vital role in protecting American energy security, keeping electricity reliable, and creating jobs here at home while we reduce our emissions in the decades to come.

- Between the improvements we made to the 45Q tax credit in the Inflation Reduction Act and the funding we included for deployment and demonstration in the Bipartisan Infrastructure Law, CCUS and DAC are now on the rise.

- In the IRA, we increased the value of the 45Q tax credit from $50 per ton to $85 for carbon captured and sequestered; from $35 to $60 per ton for carbon captured and utilized; and more than doubled the credit for direct air capture because that technology is currently more expensive.

- These IRA provisions built off of earlier improvements to 45Q that our colleague Senator Barrasso spearheaded, and I supported.

- In the IRA, we made important changes to the 45Q proposal in the BBB bill, which would have excluded many of our dispatchable coal and natural gas power plants from continuing to use the credit.

- Furthermore, our Committee's portion of the Bipartisan Infrastructure Law included over $10 billion in DOE programs to commercialize large CCUS and DAC projects.

- We've spent decades researching and proving CCUS technologies work.

- The programs in the IRA and Infrastructure Law were intended to accelerate the full-scale deployment of them.

- And this legislation is attracting unprecedented private sector investment.

- CCUS and DAC developers have submitted more than 120 applications to EPA for Class VI well permits to sequester carbon since the IRA passed, and there are 169 total pending applications.

- The current administration claims to be supportive of carbon capture, just as Congress has been.

- They issued a report in June of 2021 which stated: “The Administration is committed to accelerating the responsible development and deployment of CCUS to make it a widely available, increasingly cost-effective, and rapidly scalable climate solution.”

- The same report also argues that: “If the United States is to achieve its climate goals, research suggests that CCUS deployment should increase tenfold over the next decade.”

- But it is hard for me to square this Administration’s own report with its actions.

- Nearly two and a half years after that report came out – not a single Class VI well has been approved by this administration.

- The chart behind me shows the backlog – many of these applications have been pending for years.

- At the same time, this Administration is more than happy to mandate widespread deployment of carbon capture on gas and coal fired power plants.

- Let me be clear: issuing a mandate to use carbon capture on power plants while withholding Class VI well approvals is nothing more than a mandate to shut down all of our dispatchable coal and gas power plants.

- And the Supreme Court has been clear that Congress has not given EPA the authority to mandate a transition of our generation fleet.

- I'm disappointed that the "talk" from this Administration seems to be completely out of step with their inaction.

- However, I am optimistic that as more states – including West Virginia, Louisiana, and Texas – are granted primacy from the EPA to approve Class VI wells themselves, the backlog will decline and we will really scale carbon sequestration.

- I am also concerned that while the Bipartisan Infrastructure Law passed more than two years ago, much of the CCUS funding has yet to go out the door.

- As we wait for awards on the carbon capture large scale pilot programs, financial assistance for CO2 pipelines, and other programs, the clock is ticking to deploy this technology – and build out the infrastructure necessary to do so.

- I'm glad we have witnesses joining us from EPA and DOE to discuss how to get these important permitting and financial assistance programs back on track.

- Earlier this week, the EFI Foundation, which is led by former Secretary of Energy Moniz, released a report highlighting the potential infrastructure needed to meet the EPA's proposed power plant regulations.

- In fact, it was released on Halloween, which is fitting – because it presents a scary picture.

- As they explain, "permitting CCS is a highly uncertain process that can take years in *ideal conditions*" because "the CCS value chain covers multiple sectors" and there is "little federal coordination."

- As one example, the report predicts that we may need to increase the total miles of CO_2 pipelines from 5,000 to over 50,000 – a 1,000% increase in just over a decade.

- The report specifically notes that the current Class VI well and NEPA permitting processes call into serious question the feasibility of EPA's power plant proposal.

- I have already expressed my grave concern with the EPA's power plant proposal, highlighting its threat to electric

reliability and energy security. And EFI's analysis just adds to my concerns.

- If we are going to recognize the economic, energy security, and environmental benefits from CCUS and DAC, it will require much more coordination from the federal government.

- CCUS is also essential for applications much broader than coal or gas power plants.

- Hydrogen projects may rely on CCUS to realize the incentives for clean hydrogen production that we included in the Infrastructure Law and the IRA.

- Steel and cement companies will look to CCUS to decarbonize their manufacturing to compete in the global market.

- DOE's own analysis found that widespread deployment of carbon capture and removal technologies could add nearly $1.5 trillion to the economy by 2050.

- We are at inflection point: historic investment from Congress is meeting scientific innovation to deploy cutting-edge technologies and infrastructure.

- However, regulatory and permitting uncertainty could cause this tremendous opportunity to slip through our fingers.

- This is an opportunity not just for American companies here at home but for us to lead the world in the energy economy of the future.

- And it's also an opportunity to learn from our partners abroad. For example, our allies in Norway are ahead of us sequestering carbon in subsea formations. They are already sequestering carbon at depths of more than 3,000 feet beneath the sea floor, and are pursuing new projects beyond 8,000 feet.

- Yet here in the U.S., we are a year behind schedule even issuing the requirements to apply for carbon sequestration permits on our outer continental shelf – a permitting program that was required by the Infrastructure Law.

- The U.S. has led the world in developing both CCUS and DAC, and forgoing that leadership because of government inaction is unconscionable.

- Its success is crucial to our energy security, our economy, and our environment.

- I hope today's hearing will shed some light on what else is needed to ensure deployment of these critical technologies, and look forward to continuing to work with the Ranking Member and all of the Members of this committee to that end.

- With that, I look forward to an engaging discussion today with our panel of distinguished witnesses, and I'll turn it over to Ranking Member Barrasso to give his opening remarks.

  - As I mentioned, we have a distinguished panel of witnesses with us today, including:
    - The Honorable Brad Crabtree, Assistant Secretary for Fossil Energy and Carbon Management at the Department of Energy
    - Mr. Bruno Pigott, Deputy Assistant Administrator for Water at the Environmental Protection Agency
    - Ms. Erin Burns, Executive Director of Carbon180 and proud West Virginian. I would like to note that Ms. Burns previously served her home state in my office from 2011-2015. She earned her Bachelor of Arts from Carnegie Mellon University. It is always nice to have a fellow West Virginian here at the Energy and Natural Resources Committee.
  - And, I'd like to turn to my colleague Senator Barrasso to introduce our final witness, Ms. Barkau.
  - Now to witness opening remarks.
  - Assistant Secretary Crabtree, we'll begin with you.
  - Thank you. Next, we'll hear from Mr. Pigott

- Thank you. Now we'll go to Ms. Burns
- And now we'll go to Ms. Barkau
- Thank you all again for being here with us and for your testimony. We will now begin with questions.