CARBON CAPTURE COALITION

To: Carbon Capture Coalition Members
From: Carbon Capture Coalition
Date: 7/6/2023
Re: **IPCC Report: Negative Responses Talking Points**

"While the world's top scientists—and the governments that signed off on the report—recognized issues with CCS and CDR, climate campaigners expressed frustration that such technologies were featured as partial solutions."

- 'Climate Groups Reject 'Risky, Untested' Technofixes in IPCC Report', Common Dreams, May 20, 2023

"Implementation of CCS currently faces technological, economic, institutional, ecological environmental and socio-cultural barriers … Currently, global rates of CCS deployment are far below those in modeled pathways limiting global warming to 1.5°C to 2°C. Enabling conditions such as policy instruments, greater public support, and technological innovation could reduce these barriers.'

- Synthesis Report of the IPCC Sixth Assessment Report (AR6), Summary for Policymakers

Topline Summary:

- The enabling support for carbon management technologies [policy instruments, greater public support, technological innovation] cited by the IPCC ***is necessary to scale these climate mitigation tools at the rate necessary to achieve deployment***. The required federal policy framework to scale the carbon management industry at the rate to meet midcentury climate targets is only now in place through the funding made available under the Bipartisan Infrastructure Law and the enhancements made to the 45Q tax credit in the Inflation Reduction Act. As with other technologies, it will take some time to ramp up to where we need to be now that the necessary policy framework is in place. Rather than criticizing a necessary solution, we need to support ***all*** of the vital technologies required to address what is a global problem. Now is not the time to pick and choose from a limited set of options: we need to accelerate development and deployment of ***all*** available technologies that will help to address the problem.

- Relative to other low- and zero-carbon emissions energy technologies, carbon management technologies have ***historically suffered an overall lack of federal investment*** as well as the supportive policy ecosystem necessary to reach economywide deployment, until very recently. While there are a handful of

projects deployed over the past two decades that have proven the technology works at commercial scale, it was not until the groundbreaking investments in carbon management included as part of the 2021 Bipartisan Infrastructure Law and the enhancements to the 45Q tax credit recently enacted as part of the Inflation Reduction Act of 2022 that we now have a comprehensive portfolio of complementary policies to bolster widespread deployment of carbon capture, removal, utilization, transport and storage technologies in crucial sectors including heavy industry, power and direct air capture.

- Taken together, the investments made in these monumental laws, if implemented properly, put the nation on track to deliver a 13-fold scale-up of carbon management capacity by 2035, accounting for an estimated 210 and 250 million metric tons of annual emissions reductions by that same time.

"During the negotiations among researchers and policymakers over the final wording, Saudi Arabian representatives pushed for an emphasis on the technologies that aim to remove carbon dioxide from the atmosphere. This caused consternation among other participants who wanted a greater focus on cutting emissions 'rather than relying on unproven technologies', people familiar with the talks said."

- 'Saudi leads push to elevate carbon removal in UN climate science report', **Financial Times, May 20, 2023**

- ***Carbon Management is a widely supported set of effective technologies that are recognized as necessary tools for climate action by a broad, bipartisan group of stakeholders around the world and in the US.*** While passed as a partisan bill, the essential enhancements to the 45Q tax credit included in the Inflation Reduction Act had broad bipartisan support ranging from climate hawks like Senator Sheldon Whitehouse (D-RI) to energy state members including Senator John Barrasso (R-WY).
- Additionally, the package had support from a vast array of organizations including Coalition members, a group of 100+ organizations which includes energy, industrial and construction labor unions, environmental and conservation non-profits, as well as industry, energy and technology companies. Importantly, the Coalition includes 17 NGO members, which span the political spectrum and include conservation and energy policy groups.
- These technologies are being embraced worldwide as part of our overall climate solution, not just by a few countries. As the U.S. continues to lead the charge on supportive policy levers to enable economywide deployment of these technologies, globally, the momentum and support for carbon management deployment is making similar strides. **Around the world today, there are more than 150 facilities in various stages of development**, with more than half of those projects in construction or advanced phases of development with a **combined capture capacity estimated at nearly 200 million metric tons per year.**

"Friends of the Earth International is concerned that, despite the dire and profound warnings from scientists, many of the report's predictions for the future assume that the world will overshoot 1.5 degrees of warming, but can rely on negative emissions technologies to reverse it later on.

'It's very alarming to see carbon dioxide removal featuring so centrally in the IPCC report. We can't rely on risky, untested and downright dangerous removals technologies just because big polluters want us to stick to the status quo,' said Sara Shaw, Climate Justice and Energy International Program Coordinator at Friends of the Earth International. 'A fair and fast phaseout of oil, gas and coal needs to happen in this decade, and it can, with the right political will. We must heed the IPCC's urgent messages, without falling into the trap of assuming that carbon dioxide removal will save the day.'"

- 'Friends of the Earth International on IPCC Report: Betting on carbon removal is dangerous', **Friends of the Earth, May 20**

- Not only is carbon capture and removal not dangerous, it is a necessary and essential tool in reasonable climate mitigation strategies. It has become increasingly clear that both emissions reductions at point sources, as well as removal of CO_2 directly from the atmosphere will be necessary to meet midcentury climate goals. This isn't an either/or proposition, rather, both reduction and removal strategies are needed urgently.
- According to the International Energy Agency's Credible Pathways to 1.5˚C report, carbon management will play a complementary, but critical role, in limiting warming to 1.5˚C across a variety of sectors and is listed as a "critical area" to "preserve a reasonable chance of limiting global temperature rise to 1.5˚C by 2100".
- Indeed, according to IEA, even with aggressive and sustained deployment of clean energy technologies, including renewable energy and energy efficiency, carbon management is absolutely critical to reach net zero emissions by 2050.
- While it's true that historically, the carbon management industry has primarily been focused on oil production, the policy framework now in place dramatically shifts interest and the market toward secure geologic storage. Since the ***2018 reform and expansion of the 45Q tax credit***, there have been more than ***120 publicly announced projects*** in the critical to decarbonize industry and power sectors, along with the direct air capture sector, that are in various phases of development. Of these 120-plus projects, 34 were announced in the last year alone, with more projects being announced each month. , with more projects being announced each month.
- More than ***70 percent of these announced projects*** intend to store captured CO_2 deep underground ***safely and permanently in secure geologic formations***. The potential for geologic storage in the U.S. is enormous and represents a long-term, scalable climate solution.

- The IPCC has been consistent on the need for carbon removal as part of our overall climate strategy. The IPCC's most recent report uses seven specific pathways to illustrate economywide decarbonization strategies; only one excludes carbon capture and requires global energy demand to decrease by nearly 50 percent by midcentury. Among the pathways IPCC considers there is a median, or midpoint, of 665 gigatons (billion tons) of carbon dioxide cumulatively captured and stored between now and 2100, or nearly 9 gigatons captured or removed and stored on average, globally, per year.
- Even in scenarios that rely on high levels of renewable energy and electrification, IPCC estimates that globally, carbon management technologies will be needed to **capture a total of 2 gigatons of CO_2 in the industrial sector by 2030**. For comparison, the United States is responsible for approximately 15 percent of global emissions, at a rate of about 4.85 gigatons in 2020.
- The IPCC is clear that carbon management technologies as a solution that will be necessary to address hard to abate sectors and legacy emissions. From the report: "However, some hard-to-abate residual GHG emissions (e.g., some emissions from agriculture, aviation, shipping, and industrial processes) remain and would need to be counterbalanced by deployment of carbon dioxide removal (CDR) methods to achieve net zero CO2 or GHG emissions (high confidence)." (page 22, Summary for Policymakers).
- The IEA's Net Zero Emissions by 2050 Scenario estimates that the current slate of projects under development globally will be capturing and storing about 40 million tons of CO2 in the next five years. **That number must increase to 1.6 gigatons by 2030 and 7.6 gigatons by midcentury to reach net zero**. .

"The IPCC also reaffirms the dangers of governments and industries relying on the future availability of problematic technologies that are not proven at scale (like carbon capture and storage (CCS), technological carbon dioxide removal (CDR), and other geoengineering approaches) while taking grossly insufficient action now to immediately, urgently, and drastically reduce emissions."

- 'Lost in Translation: Lessons from the IPCC's Sixth Assessment on the Urgent Transition from Fossil Fuels and the Risks of Misplaced Reliance on False Solutions', **Center for International Environmental Law, March 6, 2023**
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    - This sentiment mischaracterizes the IPCC report, which does not imply that carbon management technologies are "problematic". The 2023 synthesis report summarizes the content of the earlier Working Group III: Mitigation of Climate Change, which confirms the critical role that dramatically accelerated deployment of carbon management technologies and associated infrastructure must play in managing emissions from existing industrial facilities and power plants, balancing emissions from challenging-to-decarbonize sectors, and removing legacy CO_2 emissions from the atmosphere. emissions from the atmosphere.
        - From the report: "Reaching net zero GHG emissions primarily requires deep reductions in CO_2, methane, and other GHG emissions, and implies net-

negative CO_2 emissions. Carbon dioxide removal (CDR) will be necessary to achieve net-negative CO2 emissions” (page 20, Summary for Policymakers)