Ohio River Valley Institute

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Carbon Capture, Use, and Sequestration (CCUS) Would Decarbonize the Electric System…in the Worst Possible Way

With a price tag of $100 billion/year, the broad-scale adoption of CCUS would spark outrage if its cost showed up in our electric bills. But some climate hawks and climate skeptics in Congress are coalescing around legislation that would make us pay through our taxes instead.

Supporters claim that Carbon Capture, Use, and Sequestration (CCUS) technology could vastly reduce carbon emissions from America's power system and that it would save jobs in coal mining and natural gas and in power plants. They are wrong. Here's why:

- **CCUS hasn't worked for 40 years and it may not ever.** Despite $7.5 billion invested over 40 years and federal tax incentives going back 15 years, CCUS remains unproven and is not used in any large American power plant.

- **If CCUS does work, it will be prohibitively expensive.** Widespread adoption of CCUS would raise the retail price of electricity by 25% - $293 per year for the average American household. Various bills in Congress would force us to pay through our taxes instead and would cost the industry nothing.

- **CCUS subsidies will block clean, renewable resources and leave unaddressed the problem of air and water pollution from coal and gas-fired power plants.** Clean, renewable resources including wind, solar, battery storage, and energy efficiency would do a better job of reducing carbon emissions for little more than we're already paying and they would eliminate local air and water pollution as well.

- **CCUS would add no new jobs and it would prevent the creation of hundreds of thousands of new, well-paying clean energy jobs.** CCUS implementation would lock economically suffering regions such as the Ohio River Valley into a fossil fuel economy that has fostered declines in jobs and population for decades. And it would prevent transition to the clean energy economy that is fostering job growth and prosperity in old coal towns such as Centralia, Washington.

- **CCUS may be applicable in some hard-to-electrify industries such as steel-making and cement-making, but it is uneconomic for electricity generation.** A few industrial processes produce up to a quarter of carbon emissions, but are hard to electrify. In those cases, CCUS may be a viable solution, but not for the power system.

To see what the adoption of CCUS would do to electric bills in your state, visit:
https://ohiorivervalleyinstitute.org/how-much-would-you-pay-for-ccus/.

And read the full report at:
https://ohiorivervalleyinstitute.org/wp-content/uploads/2021/10/CCUS-Report-FINAL-3.pdf.

Possible Objections and Responses

- **You're exaggerating the cost of CCUS and its effects on electric bills.** We're not. The cost figures for carbon capture, sequestration, and storage in the brief come from and are consistent with multiple published studies, which are cited in the endnotes.

- **You're not taking into account the market value of captured carbon, which can be used in manufacturing and other activities.** If carbon capture occurred on a scale that would preserve coal and gas-fired energy production at current levels, the amount of carbon flooding the marketplace would far exceed any plausible level of demand and would probably reduce its value to little or nothing. To the degree captured carbon has to be stored underground, that represents a negative value.

- **Without CCUS, we could lose the coal and natural gas jobs we have left.** Transitioning from coal and natural gas in the energy system to energy efficiency and renewables will create far more well-paying jobs than the number of jobs that may be lost without CCUS. That's especially true for communities whose economies are closely tied to coal and natural gas and it's the subject of an ORVI report, The Centralia Model for Economic Transition in Distressed Communities, which describes how one coal community that lost its mine and is losing its coal-fired power plant has given us a model for successful recovery, job growth, and prosperity.

- **Switching the power system to wind and solar will cost even more.** The federal government's Energy Information Administration and private companies regularly track the levelized cost of electricity from various sources and utility-scale wind and solar are now less expensive than coal and natural gas and the advantage is growing. That's true even when you factor out subsidies.

- **Switching to wind and solar will make the electric system less reliable.** Threats of system unreliability are an old coal industry scare tactic that goes back to the dawn of the Clean Air Act in the 1970's. The electric system is undergirded by a network of public utility commissions, regional transmission organizations, and independent system operators whose job it is to ensure that system reliability is maintained as the mix of energy resources changes. Every new power plant, including wind and solar farms, are evaluated for their impact on reliability before they are introduced to the system.

- **The Ohio River Valley Institute is a bunch of environmentalists with an agenda.** ORVI's mission is to develop ideas and policies that improve the economy, create jobs, and help restore the quality of life in the greater Ohio Valley and northern Appalachia. It's because good environmental policy is great for the economy and jobs that this and other ORVI reports support the transition to a clean energy economy and other environmental policies.