Solid Carbon Fractionation: More Distraction & Hype

Frontier Applied Sciences have patented a technology called FASForm, which has introduced a new kind of energy recovery called Solid Carbon Fractionation.

*This technology is just another potentially dangerous lifeline to the fossil fuels industries!*

What in the world is “Solid Carbon Fractionation?”

The first paragraph of the summary of the patent for this technology reads, “This invention involves a coal treatment process that permits removal of moisture, sulfur, hydrocarbon compounds (referred to as volatile matter), and other components in a continuous-feed process by applying heat and steam, with hydrogen recirculation, in an oxygen deficient atmosphere. The result is separation of the volatile matter into valuable gas and liquid fractions for use or further processing in addition to a highly upgraded coal product.”

There is also mention that plastic waste could be thrown in for processing. However, Dr. Ted Schettler with the Science & Environmental Health Network (SEHN) states, “Waste plastics can be highly problematic in pyrolysis [low-or-no oxygen] facilities because they commonly contain significant amounts of PVC. When PVC undergoes pyrolysis, hydrochloric acid is generated—highly corrosive and damages equipment. Many pyrolysis efforts have failed for that reason and were shut down.”

SCF is coming to the Ohio River Valley

Frontieras North America, an Arizona-based company, has announced plans to begin operating in Mason County, WV along the Ohio River at the end of 2023. It intends to process 2.7 million tons of coal a year.

The promise is 500 jobs and large investments in communities in Mason County, as well as large contributions to local and state tax bases.

What isn’t the industry saying out loud?

First of all, there’s no mention of capturing carbon emissions here (a process called carbon capture, utilization, and storage, which is itself prohibitively expensive, dangerous, and unproven at scale—see our pamphlet on CCUS).

What is going to happen with the CO2 and equivalent greenhouse gas emissions from this facility and process? And, to quote Dr. Schettler again, “Many (or most) of the products from this process will ultimately be sold and burned as fuels, thus releasing CO2 later in their life cycles.”

Dr. Schettler also confirmed that a contaminated wastewater stream is generated, requiring treatment. How will treatment of this contaminated wastewater impact the Ohio River this facility sits on, already one of the most polluted and contaminated river systems in the country?

Another “decarbonization” scheme at our expense…

The company’s own public relations material states, “A key driver will be increased profitability and not be solely reliant upon environmental benefits.” This doesn’t sound like a company that is particularly interested in some of its own claims, like driving down greenhouse gas emissions and reducing emissions of sulfur and volatile organic compounds from hydrocarbons.
How many public and private dollars are we going to sink into this just to keep mining coal and fracking for oil and gas - processes that are removing mountains, contaminating water tables, causing increased seismic activity, and creating massive amounts of carcinogenic, endocrine disrupting and radioactive wastes in and of themselves (i.e., fracking residual waste and coal ash and slurry)?

There are Alternatives!

We don’t have to stick with this narrow vision of what the Ohio River Valley and the rest of Appalachia can be and do!

We can:

- Invest in renewable energy production (i.e. solar, wind, hydro) and battery and other energy storage technology
- Invest in EV and charging infrastructure production (one company coming to West Virginia is already doing that with production of electric school buses)
- Invest in maximizing energy efficiency in our built environments (there is SO MUCH federal and other money coming to states and localities for this)

For more information about our options, visit reimagineappalachia.org.

ReImagine Appalachia includes a diverse set of economic, environmental and community leaders, and grassroots organizations, who have come together to find common ground and build the future we want to see—a 21st century economy that’s good for workers, communities, and the environment.

Mid-Ohio Valley Climate Action is a 501(c)(3) nonprofit organization dedicated to educating, mobilizing, and coalition-building to address the global climate crisis in the Mid-Ohio River Valley and beyond.

See us on Facebook: Mid-Ohio Valley Climate Action
Visit our website: movclimateaction.org

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