UNIVERSITY OF THE PEOPLE

BUS 1103-01 Microeconomics- AY2024-T1

Learning Journal Unit 5

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The article "DOE ANNOUNCES $45 MILLION FOR CARBON CAPTURE, TRANSPORT AND STORAGE TO REDUCE CARBON POLLUTION" from May 2023 discusses the U.S. government's new funding initiatives to promote clean energy innovation in chemical manufacturing. The Biden administration aims to reach net zero emissions by 2050, so curbing pollution from these high-emitting sectors is crucial. The funded projects range from lab-scale research to engineering design studies for full-scale retrofit systems. Both post-combustion capture from flue gas and systems to filter emissions before release will be explored. Partnerships between companies, universities, and national labs leverage complementary strengths. While still an emerging solution, commercially viable carbon capture can create local jobs in distressed communities housing power plants or factories. The administration hopes this investment in de-risking innovative decarbonization technologies will pave the way for greater private sector adoption and largescale deployment. With apt coordination, public and private endeavor can jointly pioneer solutions to the urgent climate challenge. “In order to dramatically reduce carbon pollution in our fight against climate change, we must deploy all of the tools at our disposal, including the innovative technologies that capture CO2 emissions before they reach the atmosphere.” (DOE Invests $45 Million to Decarbonize the Natural Gas Power and Industrial Sectors Using Carbon Capture and Storage, 2021) I agree with this strategic government investment to develop greener technologies that can reduce emissions for a major industry.

Background

The Department of Energy announced $45 million in funding for research to decarbonize chemical production processes. This will support new technologies like carbon capture or hydrogen use that lower greenhouse gas emissions from chemical plants. Grants will facilitate partnerships between private companies, universities, and national labs to optimize and scale new innovations. “What’s truly exciting about these projects is that not only do they put us on a path to decarbonize existing infrastructure, but they also pave the way for good-paying, union jobs—in the communities that have been impacted the most from our dependence on fossil fuels.” (DOE Invests $45 Million to Decarbonize the Natural Gas Power and Industrial Sectors Using Carbon Capture and Storage, 2021)

Benefits

This effort can catalyze cleaner US manufacturing and support domestic jobs. The chemical industry is energy and emissions intensive. Enabling companies to cost-effectively cut carbon will help combat climate change while boosting competitiveness. Locally, it brings research investment and positions the US as a leader in sustainable technologies. “These projects demonstrate Colorado’s leadership in advancing innovative solutions to climate change while sustaining high quality jobs,” (DOE Invests $45 Million to Decarbonize the Natural Gas Power and Industrial Sectors Using Carbon Capture and Storage, 2021) Globally, breakthroughs can be adopted worldwide to slash emissions from chemical, plastics and fertilizer production which currently contributes over 3% of global carbon output.

Concerns

Some argue government should not fund private companies' sustainability initiatives. However, the spillover benefits for society outweigh this view. Others caution against making fossil-based chemicals "cleaner" which may prolong dependence instead of advancing alternatives. But pragmatically transitioning existing plants is crucial in the near-term while parallel work develops next-gen solutions. Safety regarding new process technologies also requires monitoring.

Agreement

I agree with the DOE's investment because public funding often kickstarts early-stage research too risky or expensive for individual firms. The grants enable exploratory development and de-risking needed to advance concepts to commercial viability. This drives innovation more rapidly than solitary efforts. Government stewardship can steer progress in line with emissions targets and environmental priorities. While not without caveats, thoughtful public-private collaboration can seed transformative decarbonization that pays dividends across the economy and environment. Initial investment may inspire much greater private follow-on funding as companies adopt and iterate on successful pilot projects.

Overall, I support targeted incentives that make sustainable choices profitable for businesses. With apt safeguards, this initiative harnesses America's entrepreneurial and scientific strengths for broader quality of life improvements. Technological innovation, when guided responsibly, can unlock solutions that benefit both industry and society.

Reference:

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