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Reducing US coal emissions through biomass and carbon capture

A new study, led by Piera Patrizio, a researcher in the IIASA Ecosystems Services and Management Program, has modeled the numbers associated with the impacts of cutting coal plants while at the same time employing techniques for BECCS.

“In the ambitious attempt to limit global warming below 2°C, BECCS features as the dominant technology, yet it’s been under considerable scrutiny for its unknown effects on the environment and society,” says Patrizio. “Our analysis shows that acting now and investing in this emission-mitigating strategy can be beneficial for employment in the US coal sector.”

BECCS is a proposed technology for reducing the release of greenhouse gases into the atmosphere. It combines carbon capture and storage, in which CO₂ is collected from large emission sources such as power plants and injected into underground geologic formations, with the increased use of biomass, like plant-based materials, as a source of fuel. Proponents of BECCS predict that more than 99% of carbon dioxide stored through geologic sequestration is likely to stay in place for more than 1,000 years. In the new study, the researchers studied in detail the major processes and steps involved in the potential energy supply chains for the US coal fleet. Specifically, they looked at the supply of sustainable forest resources for biomass and the design and cost of infrastructure for transporting and injecting CO₂ into appropriate geologic sites.

Source/ read more: IIASA <http://www.iiasa.ac.at/web/home/about/news/181101-beccs-us.html>