Bloomberg Environment

Moniz Group Calls for $10.7 Billion Carbon-Removal Program

By Bobby Magill

Former Energy Secretary Ernest Moniz on Oct. 31 called for a 10-year, $10.7 billion federal carbon dioxide removal research and development program to help address climate change.

Congress has expressed some bipartisan support for carbon capture and storage programs, including direct air capture, but nothing on the level of Moniz's proposal.

Speaking at a Bipartisan Policy Center event in Washington, Moniz said that even if greenhouse gas emissions were eliminated, past emissions may also have to be removed from the atmosphere to address global warming.

Major investment in carbon dioxide removal technologies across 10 federal agencies over the next decade would jump-start the development of viable negative-emissions technologies that are essential to addressing climate change, but are only in their infancy today, said Moniz, who was Energy secretary under President Barack Obama and now leads the think tank Energy Futures Initiative.

Those technologies include special plants that suck carbon dioxide directly from the ambient air and then store the pollution underground; modifying trees and plants to store more carbon dioxide in their roots and soil; mineralizing carbon dioxide in rocks; liquefying the carbon dioxide and storing it underground; using captured carbon to enhance oil production; and converting the carbon into transportation fuel.

"Some will say that's just making the world safe for fossil fuels," Moniz said. "Others will emphasize this is the only way we're going to get to zero."

In 2018, Congress approved a tax credit known as 45Q, which provides incentives for carbon capture projects, including direct-air-capture technologies. The measure had support from fossil fuels industries, which are pioneering ways to use captured carbon dioxide to boost oil and gas production.

Negative Emissions

The Energy Futures Initiative published a report last month outlining how a federal research and development program might work.

The need to create "negative" carbon emissions—scrubbing the air of carbon dioxide emitted from tailpipes and smokestacks in the past to reduce the impact of global warming in the future—is so urgent that the entire government needs to mobilize to advance the technology to do so, the report says.

The report calls on the federal government to create a $2 billion carbon-removal technology demonstration fund, or roughly 15% of the federal energy innovation budget, Moniz said. Moniz also called for 10 agencies to spend more than $1 billion annually over 10 years for research and development on carbon capture programs.

Agencies that should be involved include the Energy Department, Environmental Protection Agency, Interior Department, Agriculture Department, Transportation Department, Defense Department, NASA,

National Science Foundation, National Oceanic and Atmospheric Administration, and the National Institute of Standards and Technology, the report says.

Elephant in the Room

Carbon removal has long been the elephant in the room in countries' discussions about how to tackle climate change. The technology is unproven to work at a large enough scale to make a difference for global warming, and its costs have never been calculated.

Scientific "reports conclude that we cannot meet our climate goals without having negative emissions technologies," Jennifer Wilcox, a chemical engineering professor at Worcester Polytechnic Institute, said at the event. "Carbon dioxide removal will be essential."

An Intergovernmental Panel on Climate Change report published in 2018 shows that capping global warming at 1.5 degrees Celsius (2.7 degrees Fahrenheit) requires slashing carbon emissions effectively to zero while also removing carbon from the atmosphere and storing it safely someplace forever.

The benefits of direct-air-capture technology is that countries can still use fossil fuels while reducing their climate impact to zero, and possibly remove more carbon dioxide than is emitted, said Steve Oldham, CEO of Carbon Engineering, a Canadian company that is demonstrating a direct-air-capture plant in British Columbia.

"This tech exists today," Oldham said at the event. "This essential technology employs less than 200 people in the world today. It's essential we bring more smart minds and smart money to the table."

Article Link: http://bit.ly/2pF7rUd