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**STATE SENATOR
JOE PITTMAN**
41ST SENATORIAL DISTRICT



Senate of Pennsylvania

February 12, 2020

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The Honorable Tom Wolf
508 Main Capitol Building
Harrisburg, PA 17120

Dear Governor:

I hope you will take interest in the recent and exciting announcement from the US Department of Energy's Office of Fossil Energy's National Energy Technology Laboratory (NETL) regarding Carbon Capture Technology (CCT). NETL announced \$64 million in federal funding for cost-shared research and development projects under the funding opportunity; Critical Components for Coal First Power Plants. I have attached a copy of the press release for your perusal.

As you know, our Commonwealth remains a rich source of coal resources and coal-fired electric generation. The continued, responsible use of this God-given natural resource remains extremely critical to providing family sustaining jobs to the constituents I represent.

Our Commonwealth should explore all avenues relating to CCT so we can use our resources efficiently while evolving into new technologies that ensure we limit carbon emissions when possible. Together, we can champion opportunities available to invest in innovation that will lead to the construction of the next generation of coal-generated power plants around the communities in which current facilities are located. We can meet your oft stated desire of reducing carbon emissions from electric generation while preserving economic opportunities in rural Pennsylvania.

It is my sincere hope your administration will take seriously the potential of CCT and recognize its capacity to ensure Pennsylvania remains a net exporter of electricity. I am available to discuss this further with you at any time and again encourage you to visit my district to discuss these great opportunities. Thank you for your consideration.

We really need your help + support!

Sincerely,

A handwritten signature in blue ink, appearing to read "Joe Pittman", enclosed in a blue oval.

Joe Pittman
State Senator, 41st District

JP/gj

Enclosure

cc: Mr. Will Danowski, Secretary of Legislative Affairs

U.S. Department of Energy Announces \$64M for Components of Coal FIRST Power Plants

February 07, 2020

The U.S. Department of Energy (DOE) and NETL have announced up to \$64 million in federal funding for cost-shared research and development (R&D) projects under the funding opportunity announcement (FOA), Critical Components for Coal FIRST Power Plants of the Future.

“Coal is a critical resource for grid stability that will be used in developing countries around the world well into the future as they build their economies,” said U.S. Secretary of Energy Dan Brouillette. “Investing in R&D for cleaner coal technologies will allow us to develop the next generation of coal plants for countries to use this valuable natural resource in an environmentally responsible manner.”

DOE’s Coal FIRST (Flexible, Innovative, Resilient, Small, Transformative) initiative will develop the coal plant of the future needed to provide secure and reliable power to the U.S. grid. Evaluation of potential future power plant concept designs assisted in defining the R&D sought under this FOA. DOE will solicit cost-shared projects focused on developing the critical components required by Coal FIRST and transformational coal-fired systems.

“The evolving U.S. energy mix requires cleaner, more reliable, and highly efficient plants,” said Assistant Secretary for Fossil Energy Steven Winberg. “Technologies developed for the Coal FIRST initiative will lead to just that—reliable, highly efficient plants with zero or near-zero emissions.”

The National Energy Technology Laboratory (NETL) will manage the projects supporting Coal FIRST, which is a joint initiative among the Office of Fossil Energy’s Transformative Power Generation, Supercritical Carbon Dioxide Technology, Advanced Turbines, Gasification Systems, and Carbon Capture research programs.

The FOA focuses on seven areas of interest (AOIs):

AOI 1: Pressurized Fluidized Bed Combustor with Supercritical Steam Cycle Power Plant System

Projects developed under this AOI will support a system based on pressurized fluidized bed combustion within a supercritical steam power plant that operates at an elevated pressure to enhance combustion with the capability of co-firing with natural gas or biomass. Specific critical components of interest include projects pertaining to the

pressurized post-combustion capture sub-system and integrated energy storage sub-system.

AOI 2: Indirect Supercritical Carbon Dioxide Power Plant System

Projects under this AOI will support the commercialization of the indirect supercritical carbon dioxide (sCO₂) power plant system, which delivers compactness, efficiency, modular construction, and operational flexibility. This combination has the potential to allow better competitiveness in the future energy market. Specific critical components of interest include the coal-fired primary heater sub-system, sCO₂ turbine seals and bearings, and the integrated energy storage sub-system.

AOI 3: Direct-Fired Supercritical Carbon Dioxide Power Plant System

Projects under this AOI will support the commercialization of the direct-fired sCO₂ power plant system, which has the potential to produce electricity at a lower cost than current state-of-the-art natural gas- and coal-fired systems. Specific critical components of interest include the syngas oxy-combustor and the sCO₂ turbine.

AOI 4: Gasification-Based Poly-Generation

Projects under this AOI will support the commercialization of critical components for a gasification-based, poly-generation system, which leverages an innovative application of largely established technology components to design and develop a coal-based, poly-generation system that contributes to the modern bulk power system. Specific critical components of interest include the pre-combustion capture sub-system and the devolatilizer/gasification subsystem.

AOI 5: Coal-Fired Direct Injection Combustion Engine & Gas Turbine Compound Reheat Combined Cycle Power Plant System

Projects under this AOI will support the commercialization of critical components for a coal-fired direct injection combustion engine and gas turbine compound reheat combined cycle power plant system. Specific critical components of interest include the micronized refined coal production subsystem and the direct injection combustion engine.

AOI 6: Modular Staged Pressurized Oxy-Combustion Power Plant System

Projects under this AOI will support the commercialization of critical components for a modular staged pressurized oxy-combustion power plant system, which is a near-zero emissions source of coal-fired power with high efficiency and flexibility. Specific critical components of interest include the integrated staged pressurized oxy-combustion subsystem and direct contact coolers.

AOI 7: Flameless Pressurized Oxy-Combustion Power Plant System

Projects under this AOI will support the commercialization of critical components for a flameless pressurized oxy-combustion (FPO) power plant system. DOE seeks R&D to design and test the operability and performance of the integrated FPO system.

DOE anticipates selecting up to 14 projects under this FOA.