

Integrated Test Center ahead of schedule

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The Integrated Test Center is scheduled to be complete and ready by May 2017 to conduct research into how coal-fired power plants can capture and repurpose their carbon dioxide emissions.

Jason Begger, executive director of the Wyoming Infrastructure Authority who heads up the ITC project at the Dry Fork Station power plant north of Gillette, and Tom Stalcup, plant manager for Basin Electric, spoke about the progress of the ITC at the Energy Capital Economic Development group's annual meeting Thursday at the Gillette College Tech Center.

Begger said coal is a huge part of the reliability of energy and electricity in American homes, but the Clean Power Plan has aimed to reduce the amount of CO₂ emissions by 32 percent from coal-fired power plants by 2030. That regulation, virtually unobtainable with current technology, has already begun to affect Wyoming's coal industry.

"Coal is vitally important to Wyoming industries," Begger said. "It is an important part of jobs, school construction funding and gives almost \$2 billion annually in payments to Wyoming. But nationally, there has been a 43 percent decrease in the coal budget."

Begger said the Obama administration has budgeted \$4.2 billion on renewable energy, but just \$600,000 on coal, even though coal "provides a million times more electricity."

"You need (research and development) time," Stalcup added about finding ways to comply with the Clean Power Plan. "That's one of the flaws of the Clean Power Plan. The timeline is crunched too tight. But this has proven that we will find a solution."

The ITC will allow for 225,900 square feet of research space when it is finished and was given \$15 million by the Wyoming Legislature to move forward with it. In addition, \$5 million more came from Tri-State Generation and another \$1 million from the National Rural Electric Cooperative Association, bringing the total for the project to \$21 million.

Stalcup said work on the center's six research bays is progressing more quickly than anticipated. The first phase of construction was finished in January and phase 2 is underway. The final phase would be the start-up commissioning and energizing the electricity.

However, Begger said the coal power plants of today are much more efficient and safe compared to 20 years ago. In that time, the production of coal has increased nationwide by 163 percent, while there also has been a 90 percent decrease in the average CO₂ emissions from power plants.

“That shows that given enough time and resources, this can work,” Begger said about burning coal to generate electricity.

The tools and designs have been made simple enough to allow for as inexpensive an operation as it could be. But the technology is still extremely rare on a large scale in coal plants, Begger said.

“There are only a handful of facilities in the world with this sort of technology at this scale to test if these work,” Begger said about the Dry Fork Station, one of the nation’s newest and cleanest-burning coal plants. “We’ve designed it very simply because it allows cost effectiveness and flexibility.”

The XPrize Foundation will be the main tenant of the ITC and will occupy its five smaller research bays. It has put up \$20 million in prize money for teams that can come up with ways to capture and repurpose CO₂ from burning coal and natural gas.