
News

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Energy secretary nominee sees coal as 'nightmare' **Chu worries carbon capture won't work**

By **Ken Ward Jr.**
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CHARLESTON, W.Va. -- President-elect Barack Obama's pick for U.S. energy secretary isn't sold on the idea that technology to capture greenhouse emissions and pump them underground will save the coal industry. [Watch Chu's speech](#), the coal section is 28 minutes in. [Click here](#).

Carbon capture and storage research is still in its early stages, said Steven Chu, a Nobel Prize-winning physicist announced by Obama this week as his nominee to run the U.S. Department of Energy. Real-world projects to pump millions of tons of carbon dioxide might also be rejected unless scientists show it can be done safely, Chu said during an April speech.

"Coal is my worst nightmare," said Chu, director of the Lawrence Berkeley National Laboratory and a Stanford University professor.

Chu noted that coal is the current "default option" for meeting growing energy needs in the United States, China and India. But coal is also firing continued increases in worldwide carbon dioxide emissions, even at a time when scientists say the need to dramatically reduce those emissions is critical.

"We have lots of fossil fuel," Chu said during a talk outlining his views on energy policy. "That's really both good and bad news. We won't run out of energy, but there's enough carbon in the ground to really cook us."

Chu said existing pilot projects involving a few million tons of carbon dioxide sequestration are far too small to tell if the process would work on the scale needed.

"It's sort of a research and development issue," he said. "I think we have to do this if we're going to go forward with coal, but it's not a guarantee that we have a solution with coal."

Late last week, when word began leaking that Chu was a likely Obama Cabinet choice, his comments about coal began circulating on the Internet, primarily after they were posted on a Wall Street Journal blog.

Bill Raney, president of the West Virginia Coal Association, said he had not seen Chu's remarks, but that they gave him cause for concern.

"What I'm concerned about is how many coal mines has he been to, and what is his thought about the coal mines and their families who rely on this industry?" Raney said. "That may be his personal opinion, but that's got to be sobered up a bit."

Other coal boosters were familiar with Chu's comments, but also insisted they were less concerned.

"Any remarks Dr. Chu has made over the years, whether positive or negative

about coal must be viewed against specific public policy objectives laid out by President-elect Obama," said Carol Raulston, spokeswoman for the National Mining Association.

Raulston noted that Obama has emphasized "energy independence" and supports "the next generation of clean coal technology to capture and store emissions of carbon from coal-based generation."

She pointed to a presentation Chu gave to the Chinese Academy of Sciences in October 2007 in which he said, "Technologies for capturing and sequestering carbon from fossil fuels can play a central role in the cost-effective management of global carbon dioxide emissions."

Environmental groups and other advocates of swift and serious action to deal with the climate change crisis said Chu's comments on coal reflect a clear understanding of the scientific basis for concern and a practical view of the challenges for reducing the energy industry's greenhouse impacts.

"He isn't fooled by clean-coal claptrap," wrote Joseph Romm, an energy expert who edits the blog Climate Progress.

During the campaign, Obama pledged to reduce U.S. carbon dioxide emissions by at least 80 percent by 2050. In the near term, his campaign plan called for reducing emissions to 1990 levels by 2020.

United Mine Workers officials and some within the coal industry aren't as concerned about the 2050 target. But the near-term reductions scare coal industry backers. They say cutting back to 1990 emissions by 2020 doesn't provide adequate time to work out the long list of hurdles to implementing carbon capture and sequestration technology on coal-fired power plants.

Obama and Vice President-elect Joe Biden have also proposed to invest \$150 million over 10 years on a variety of energy programs - everything from plug-in hybrid vehicles to biofuels and "low-emissions coal plants."

They also said they would instruct the DOE to start a new public-private partnership to build five commercial-scale coal-fired plants that capture carbon dioxide emissions and pump them underground. But it remains unclear exactly how much government money Obama and Biden would chip in for those plants, or how much of the \$150 billion "clean energy" program would go toward coal.

Chu said carbon dioxide controls on power plants could increase electricity bills by about 25 percent. But he said the higher costs are not the biggest challenge.

Carbon dioxide that is pumped underground could form a big bubble that finds its way out, or could turn acidic and create cracks in geologic formations that prompt leakage, Chu said. These potential problems, he said, are likely to bring lawsuits from residents where such projects are proposed.

"Why would there be a legal challenge?" Chu said. "Because there would be people saying I don't want this done in my back yard because if the carbon dioxide ever does bubble to the surface, it could actually kill people."

He also said that fly-ash emissions from coal-fired power plants amount to 100 times more radiation than is released by nuclear power plants.

"If you're concerned about radiation, coal might be worse than a nuclear reactor," Chu said. "It's worse in every other respect."

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