

International conference highlights industry's technological advances

Officials: Energy naivete threatens coal

By DUSTIN BLEIZEFFER - Star-Tribune energy reporter | Posted: Thursday, June 24, 2010

LARAMIE -- For scientists and political leaders alike, the prospect of advancing technologies to capture and store carbon from coal -- the world's most abundant fossil fuel -- is both exciting and downright frustrating.

Exciting because the technology seems only years away from competing financially with traditional sources of energy. And downright frustrating because the public is largely disengaged from the hard realities of the energy challenge.

"Everybody wants a quick fix. There are no quick fixes. ... I find Americans are exactly the same as Australians: They want the solutions tomorrow and they think it's going to happen," said Peter Beattie, Queensland's trade commissioner to the United States.

Beattie, former premier of the state of Queensland, was a keynote speaker at International Advanced Coal Technologies Conference here on Wednesday. The two-day conference is a collaboration of the University of Wyoming and the University of Queensland.

The conference attracted some 170 professionals from six nations. The agenda highlights the latest advances in coal gasification, carbon storage, fuel cell technology and dozens of other energy research projects in a collective international effort to meet demands for more energy and reduced greenhouse gas emissions.

But it was the sense of frustration that was palpable among the keynote speakers who opened discussions at the conference on Wednesday morning. The speakers agreed that the research, testing and deployment of such technologies is hamstrung by a lack of financing. Financiers cannot fully support the efforts because of a lack of regulatory certainty.

And the regulatory uncertainty comes from a disengaged public and a political discourse that degrades complex energy challenges into demagoguery espoused over 30-second sound bites in the media.

"We reinforce the bias to the lowest common denominator, and that is, we want something for nothing and we want it now," Gov. Dave Freudenthal said. "This conference is focused on reality. And the reality is that these technologies are in reach and they are doable."

What the coal technology effort needs is a public with an open mind, said Joseph Strakey, chief technology officer for the National Energy Technology Laboratory.

"Recent events have probably made that more difficult," Strakey said, referring to the Gulf oil disaster. "No single nation can do this alone. This has to be an international collaboration."

Beattie said that perhaps the most important collaboration on advanced coal technologies will be between the United States and China. He said the U.S. has the engineering capability, and China has the market to buy it. And the rest of the world will benefit from participating in the collaboration.

"If there is partnership between the United States and China, then you can get energy solutions to deal with CO₂," Beattie said.

The challenge

With projections of an increasing world population, world energy consumption is forecast to grow 49 percent from 2007 to 2035, according to the U.S. Department of Energy's Energy Information Administration. Coal is expected to gain the largest share of energy use.

However, those forecasts are based on the current set of regulations, Strakey said. As the world moves to curb manmade greenhouse gas emissions, coal loses its viability -- unless the technologies to capture and store carbon are refined enough to compete financially with other resources.

"Unless we develop the technology, this scenario will change," Strakey said.

Monte Atwell, general manager of GE Energy's gasification group, said the U.S. doesn't spend enough on research and development for energy.

"Unfortunately, we don't have 20 years to get this going, in my opinion," Atwell said. "And I think the headwinds are building."

Much like Wyoming, a large part of Australia's economy depends on coal exports. Beattie said Queensland has put nearly \$1 billion aside for advanced coal technology research and development. Actually, \$600 million of that came from the coal industry there -- but only after giving coal companies an ultimatum: Contribute significantly out of a sense of good partnership, or contribute significantly through higher severance taxes.

"Our coal is contributing to CO2 emissions, so it is our moral responsibility," Beattie said. "There's a lot of cowardice in politics. Honesty about costs is pretty rare."

Beattie and other speakers noted that one reason China is ahead of the rest of the world in deploying renewable energy and utilizing coal gasification is because the Chinese government operates on a 20-year plan, which is reviewed every five years. Long-term energy strategies are difficult, or seemingly impossible, in nations where the election cycle is every four years, and especially in the U.S. where the election cycle is every two years.

Freudenthal said that as governor he sees a lot of interconnectivity between world events and energy. He said that on Wednesday morning he spoke to a group of Wyoming airmen going to Afghanistan. Today, he'll welcome home another group of airmen from Afghanistan.

"The fundamentals are, without energy there is no economic development. And without development, there is no social stability," Freudenthal said.

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