



Cold Show

BY GARRY BOULARD

If history served as a guide, the application on behalf of the Sunflower Electric Power Corporation to build two new coal-fired power plants in western Kansas should have been a pretty routine thing.

After all, Kansas receives 75 percent of its electricity from such plants with 15 similar ones operating in seven different counties.

But last October, Kansas Secretary of Health and Environment Rod Bremby dropped a bombshell felt across the country when he rejected Sunflower's application. Backed by Governor Kathleen Sebelius, Bremby said his decision was based on concerns about health risks associated with carbon dioxide emissions.

"I believe," Bremby said in a statement,

Garry Boulard who freelances from Albuquerque, N.M., is a frequent contributor to State Legislatures magazine.

"it would be irresponsible to ignore emerging information about the contribution of carbon dioxide and other greenhouse gases to climate change and the potential harm to our environment and health if we do nothing."

Bremby's decision naturally angered Sunflower officials. Earl Watkins, the president and CEO, called Bremby's decision "arbitrary and capricious." He said the action destroyed the opportunity for "\$200 million of direct benefit for central and western Kansas cooperative and municipal customers and diminishes the ability to build transmission necessary for additional wind power growth."

NATIONAL IMPLICATIONS

Michael Morris, the CEO of American Electric Power, based in Columbus, Ohio, and the largest electricity generator in the country, says the Kansas decision illustrates the challenges utility companies face in states nationwide. "It is becoming more difficult for

anyone who is at the state level to approve an application for a new coal-fired power plant."

"But if I am the CEO of my state," says Morris, "I do not want to run out of electricity. This is not a doomsday scenario. You can pick a time line in different states of three, four, five or eight years. Whatever the situation, the threat of an energy crisis is a very real thing."

Martin Kushler, the utilities program director at the American Council for an Energy-Efficient Economy, says the Bremby decision represents what he calls "an awakening among various officials and people at the state level who feel that there really is a serious problem with climate change." Kushler says the most important question we face is "whether or not we are going to finally do anything to reduce carbon emissions."

"Building a new coal plant locks you into

THERE'S HOPE IN RENEWABLES

Order for Coal

Concerns about the environment have stopped the building of new coal-fired power plants. But what will take their place?

big carbon emissions for the next 40 or 50 years,” says Kushler. “From an environmental view point, more and more people are beginning to realize that these kinds of plants are not really desirable power sources for the future.”

For Kansas lawmakers, many of whom favored the construction of the Sunflower facilities, the rejection has placed the issues of increased energy needs and concerns about the environmental impact of coal-fired plants front and center.

“We are more aware than ever of the importance of addressing the energy needs of our

entire state, but particularly in western Kansas where the new plants were supposed to go,” says Representative Tom Sloan, who is a proponent of wind generation.

“We are not unmindful of the arguments about health,” Sloan says. “Anything that emits carbon dioxide, and it is not just the power plants that do that, has to be a matter of concern.”

Carl Holmes, chair of the Kansas House Utilities Commission, agrees. “We have tried to do whatever we could, for our part, to look at the issue in a balanced way.”



REPRESENTATIVE
TOM SLOAN
KANSAS



REPRESENTATIVE
CARL HOLMES
KANSAS

Carbon capture technologies on coal-fired power plants will increase the cost of coal-fired electricity. And some renewable energy, such as solar power, is currently more expensive than fossil fuel-fired power plants. But the toolbox of energy supply is expanding, and many states and companies are using innovative ways to meet CO₂ reduction goals at no cost or even with net savings.

Wind energy is becoming competitive with conventional power and the technology is still in its infancy. Solar, which is a younger industry than wind, is expected to become competitive around 2014. In states that require utilities to increase the percentage of energy production that comes from renewable energy, the impact on rates has been, on average, negligible. Still, if one assumes that renewable energy and carbon capture increase the cost of electricity, an increased use of energy efficient technologies has the potential to counteract higher costs.

In Delaware, the emergence of a new Sustainable Energy Utility has this potential. The utility will sell energy efficiency and renewable energy in the free market in competition with conventional energy. It's expected to cut Delaware's greenhouse gas emissions by 30 percent when compared to business as usual.

“By 2019, our emissions will be at 2002 levels, and we will be meeting energy demand at a net cost savings, with consumers paying less for their total energy costs,” says Senator Harris McDowell, author of the legislation that created the utility. In the end, low-carbon energy may end up costing more per kilowatt hour, but increased energy efficiency means customers will be consuming less, and may be paying less for energy use than they do today.

—Glen Andersen, NCSL

REGULATORY UNCERTAINTY REMAINS

The U.S. Court of Appeals for the District of Columbia voided two U.S. Environmental Protection Agency (EPA) regulations in February when it ruled on *State of New Jersey v. EPA*. The case involved EPA regulations issued in 2004 and 2005 dealing with clean air regulations designed to reduce ozone and fine particle pollution, diesel emissions from agriculture and construction, and power plant emissions of sulfur dioxide, nitrogen oxides and mercury.

EPA sought to remove power plants from a list of hazardous air pollutant sources and regulate their mercury emissions through a more discretionary cap-and-trade program under the Clean Air Mercury Rule (CAMR). The court determined that EPA had failed to adequately justify removing power plants from the list and, in effect, overturned both actions.

Numerous states have established their own rules for regulating mercury emissions from power plants in part to comply with the CAMR. It is now unclear what the implications are for those state programs. Also unclear at the moment is what role state decisions that go beyond the minimum federal requirements will have. Whether EPA appeals the decision is now under agency review.

—Tamra Spielvogel, NCSL

But Holmes believes that no matter what lawmakers do when it comes to permitting or not permitting new coal-fired plants in their states, they will still be hamstrung by a lack of federal policy governing carbon emissions. “Without that, you are left to deal with these kinds of applications on an individual basis. And I am not sure what impact if any that has on the overall picture.”

A WORLDWIDE PROBLEM

Holmes regards the coal-fired power plant question as one that goes beyond the boundaries of national policy, with other countries embracing such plants at an accelerated pace.

“From the environmental standpoint, China and India both have approved and are operating a growing number of coal-fired power

plants,” Holmes says. “That means no matter what we do here, there will still be carbon emissions in the air from what they are doing over there.

“From an economic standpoint,” Holmes adds, “I am also worried that if we in the states clamp down on these kinds of facilities here, we will end up driving more and more jobs overseas where there are very few controls on coal-fired power plants.”

Although the Kansas Legislature ultimately voted in favor of constructing the new Sunflower plants, the role of state lawmakers is a questionable one, says John Deutch, a professor at the Massachusetts Institute of Technology and former director of the Central Intelligence Agency.

“These really are not the kind of problems that are addressed naturally or efficiently by our state legislatures,” says Deutch. “This is basically a global problem.

“Yet you see states like Massachusetts or California or others believing that in the absence of a national policy they have to do something,” says Deutch. “Applications come in to the various public utilities commissions, and the states have to decide what path to take.”

States are doing what the federal government has so far declined to do—regulate carbon emissions, Deutch says. “Whether you think it is a good or a bad thing” he says, “the important decisions are being consistently made at the state level.”

And those decisions have been telling. Of the more than 150 coal-fired plants proposed by utility companies since 2000, 10 are up and running and 25 more are under construction, according to the Center for Media and Democracy, a pro-environment watchdog group. The rest have been either outright rejected or put off due to opposition.

“As soon as people concerned about carbon dioxide emissions got organized and let their voices be heard, things happened,” says Texas Representative Charles “Doc” Anderson.

That certainly has proved to be the case in Texas, after the TXU Corporation announced plans in early 2007 to build 11 new coal-fired plants that would have cost a record \$10 billion and added 9,900 megawatts of new capacity, roughly 3.5 percent of the entire country’s coal-fired capacity.

The extensive plan immediately encountered resistance from environmental activists, state lawmakers, and 17 mayors. “It was



REPRESENTATIVE
CHARLES “DOC”
ANDERSON
TEXAS

just too much, too big, all at one time,” says Anderson, as he explained why the TXU Corporation plan engendered such strong local opposition.

In February 2007, Anderson filed a resolution calling for a 180-day moratorium on all new coal-fired plants permits in order to give state officials more time to study the health and environmental impact of the proposed plants. Two weeks later, TXU announced that it would build only three of the proposed plants and that it was committed to reducing carbon-dioxide emissions at its existing facilities.

That decision, TXU officials said, was part of a package negotiated by the lender Goldman Sachs with two private equity firms, the Texas Pacific Group and Kohlberg Kravis Roberts & Company. Together the participants agreed that it made more sense to work with the environmentalists rather than go to battle.



SENATOR
CRAIG PRIDEMORE
WASHINGTON

“No one party can take credit for what happened,” says Anderson. “But the fact that so many got involved and let their feelings be known, obviously had an impact.”

WASHINGTON'S EXPERIMENT

Lawmakers in Washington state passed legislation in 2007 that establishes a timeline for reducing global warming pollution from utilities, places a moratorium on building new plants, and forbids purchasing power from any facility that pumps out more emissions than a natural gas-fueled plant.

“What we did does not in any way ban coal or coal plants,” says Washington Senator Craig Pridemore, who introduced the legislation. “It simply says that if you are going to build a coal plant it has to have a plan for sequestering carbon or reducing emissions.”

After the law passed, regulators with the

state's Energy Facility Site Evaluation Council rejected an application for a \$1.5 billion coal-gasification power plant submitted by Energy Northwest, a consortium of 20 public utility companies in the state.

Council officials said the proposed plant, which would have been located at the Port of Kalama, fell short of the new law. Energy Northwest's proposal to outfit the plant with a device that would shoot the carbon emissions underground (a technology it admitted was not currently economically feasible), was dismissed as “a plan to make a plan.”

“This is how the legislation was designed to work,” says Pridemore, who admits his bill was easy to pass because of a state populace that is “very worried about addressing these various environmental challenges.”

Energy Northwest has not given up on the project. In a letter to the Vancouver-based *Columbian*, Brad Peck, the company's public information officer, said it is still hoping to move the Port of Kalama project forward, but in a way that would satisfy the Energy Facility Site Evaluation Council.

Peck took issue with arguments that wind power can replace coal in meeting Washington's energy needs. He additionally warned that rejecting coal-gasification “is the first step toward blackouts, sky-high prices and power-shortage panic like that we saw in 2000-2001.”

It is a point that the American Electric Power's Morris thinks is not being addressed seriously enough.

“We are facing a very pressing future electric shortage of a serious magnitude,” he says. Utilities have stepped up applications for both coal-fired and gasification plants in recent years because there are few realistic alternatives. “Electrical use continues to go up by 1 percent or 2 percent in most parts of the country,” says Morris. “So what are you going to do for power?”

Morris argues that while solar, wind and customer conservation are all options that should be encouraged and further explored, they are not—even combined—capable of addressing all of the country's energy needs. That leaves the states with just two other options, says Morris, nuclear power or more coal-fired plants.

“Throughout the 1990s, the natural gas share of the national market grew substantially,” explains Morris. “Then in this decade we began to realize that we were running out

of base load capacity and that we needed to do something about it. That is the genesis of where we are today.”

But as more states have become involved in either delaying or outright rejecting new coal-fired plant applications, some experts believe coal-based solutions are becoming increasingly impractical. “Even though there are right now more arguments coming from the utilities in favor of coal than we have seen in recent years, I think the states should be very skeptical,” says Kushler of the American Council for an Energy-Efficient Economy.

“The price of electricity from coal-fired plants is soaring because the capital costs to build these plants has soared by more than 50 percent in the last few years,” says Kushler. “These plants, just from an economical standpoint, are becoming more expensive to build, and this is before any federal legislation on carbon.”

“There are many issues that need to be raised beyond the carbon dioxide problem,” says Texas Representative Anderson. “Questions need to be asked about mercury output and the fine soot that comes from these plants that once inhaled stays in the lungs.” He says lawmakers have a role to play in these decisions.

Noting that railroad cars transport the coal needed for coal-fire plants, Anderson asks: “What is the effect on smaller communities that the trains pass through, coming and going all of the time?”

In the long run, says Representative Sloan, the question of whether or not to embrace coal-fired plants will ultimately be determined by the answer to a larger question: What price are consumers willing to pay for power to maintain their quality of life?

“There are technological ways to deal with not having greenhouse gas emissions, but any new technology is going to add to the price. That's why it is important that everyone knows as much as possible about the issues at hand and the alternatives,” Sloan says.

“If the debate that we have seen in our state and other states does one thing,” says Kansas Representative Sloan, “I hope that in the end it will get people thinking about how energy arrives at their light switch.”

 **CHECK OUT** a Q and A with Professor John Deutch of the Massachusetts Institute of Technology about the future uses of coal and advances in making it cleaner at www.ncsl.org/magazine.