Several Midwestern states have taken legislative actions recently with the hope of boosting energy production. Among the sources of energy being targeted for greater production are coal and wind energy. Parts of the Midwest have an abundant supply of coal, and states are trying to work on technologies that make the fossil fuel more environmentally friendly. In addition, several states in this region have among the greatest wind energy potential in the United States. (photo: National Renewable Energy Laboratory)

Fueling the future

Wind, clean coal among energy sources of interest to Midwest

by Tim Anderson

For years, South Dakota Public Utilities Commission chair Bob Sahr says, his state has led the nation in at least one category—imaginary wind farms. While its location in the breezy Great Plains has always made South Dakota a suitable place to develop wind energy, the state now, more than ever, appears determined to tap into the potential power source.

“We’ve moved from the phase of trying to sell people on wind energy to the phase where we’re trying to see how we can get it done,” Sahr says. Meanwhile, a related story is playing out in another Midwestern state trying to make the most out of an abundant natural resource. Illinois Rep. Dan Reitz says his state has “enough coal to fuel the nation for the next 500 years.” Right now, though, it can’t even power the state.

Because of the high sulfur content of Midwestern coal, Illinois and other states in this region must import a more environmentally friendly variety of the fossil fuel from places like the Powder River Basin in Wyoming.

“For downtown Illinois, we have thousands of jobs that could be created if we just had the existing utilities burning Illinois coal,” says Reitz, a Democrat from Sparta. “The potential is even greater if we can build new generation and create the next generation of power plants.”

For that reason, Reitz and other state policymakers are pushing for state investments in clean coal technology.

“Considering the resources we have, it makes sense for the state to find a way to use them as much as possible,” he adds.

The Midwest in the past has used its fertile land to become the “breadbasket of the world.” Can this region now use its natural resources to boost energy supply in a way that benefits not only states in the Midwest, but the nation as whole? Finding an answer to that question has become an important priority for a growing number of state lawmakers due to several factors: recent electricity blackouts, worries about the U.S. reliance on foreign energy sources, rising natural gas prices, and concerns about the Midwest’s current and future rural economy.

Various alternative power sources are being touted as part of the solution to the country’s energy problems. Two of the more intriguing sources for the Midwest are wind and clean coal.

Investing in wind energy

Six of the top 10 states for wind energy potential are in the Midwest: North Dakota, Kansas, South Dakota, Nebraska, Minnesota and Iowa. Legislative actions taken in 2003 in South Dakota and Iowa illustrate how some of these states are trying to harness that potential.

South Dakota lawmakers this year overwhelmingly approved a tax incentive package intended to lure wind energy companies to the state. Under the new law, the production part of the business — propellers and generation units — will be exempt from property taxes, amounting to about a 70 percent property tax break, Sahr says.

“We’ve taken away the disincentives to invest in our state,” he believes. “We’re already seeing more interest from people who are very serious about wind projects.”

Iowa lawmakers approved a legislative package this year that will enable MidAmerican Energy to move forward with plans to build the world’s largest land-based wind energy farm in the state. The measure takes away state restrictions that had prohibited investor-owned utilities from buying the wind energy they produce.

Some lawmakers unsuccessfully attempted to place in the legislation a requirement that a portion of the wind energy development come from locally owned facilities. Others sought provisions that...
New U.S. energy bill would have significant impact on Midwest

The August electricity blackout in parts of the Northeast and Midwest refueled interest in a new U.S. energy bill, but as of early October, it was still unclear what would be included in the legislation or whether congressional leaders would even be able to reach the necessary compromise.

Midwestern leaders have been following congressional deliberation over a new energy bill closely. If sent to and signed by President George Bush, the legislation would have far-reaching implications for energy production, distribution and supply in this region. Below are brief summaries of some of the key energy issues that may be addressed in the final congressional bill.

Coal — The research and development of clean coal technology could get a boost in a new energy plan. For example, it could include a proposal offering an $800 million loan guarantee for a Minnesota power plant that uses coal gasification technology.

Ethanol — The new energy bill is expected to more than double the utilization of corn-based ethanol by requiring refiners to use it more in their gasoline blends.

Natural gas — Rising natural gas prices, along with predictions of a long-term decline in production, are leading to a greater emphasis on developing other energy sources and finding more natural gas. Proposals include construction of a new Alaskan gas pipeline, importing more liquefied natural gas, and exploring areas in this country previously left alone due to environmental concerns.

Nuclear energy — Along with putting more dollars into nuclear research and development, the energy bill could address some of the safety issues that have dampened interest in the power source. Proposals would give guards at nuclear power plants more authority and increase penalties for acts of nuclear sabotage.

Renewable energy — The U.S. Senate's bill included a provision requiring electric utilities to produce 10 percent of their power from renewable energy sources by 2020. This measure, though, will likely not be included in a final energy bill.

Transmission — A push to improve transmission systems has been aided by this summer's blackouts. Along with proposals to encourage electric utilities to invest more in transmission systems, federal lawmakers are considering a "nationalization" of the transmission grid. Utilities would be regulated by four regional transmission groups, which would be under the control of the Federal Energy Regulatory Commission.

Iowa should put itself in a position to be a national leader in the emerging wind energy industry, Hatch concludes.

Hope for clean coal technology

Some Midwestern states already are recognized as leaders in the development of clean coal technology. They also have quite a bit to gain from advances in research and development. Illinois exemplifies the Midwest’s interest in making coal a more environmentally friendly power source. At the beginning of the last century, Illinois alone produced more than 90 million tons of coal per year. In 1999, the state produced 40.4 million tons. This drop-off was caused by the environmental and health problems associated with high-sulfur coal.

The technology now exists to clean the coal in a way that at least meets federal clean air standards, but it does cost more money. To encourage the use of clean coal technology, the state now offers a variety of incentives to utilities willing to upgrade their coal power plants or build new ones.

The state passed legislation in 2003 that offers $300 million in bond funds to help finance the construction of new coal power plants. Also, earlier this year, the state announced that a 660-megawatt coal plant would be built thanks in part to the lure of $50 million in tax incentives.

Proponents say the plant will produce jobs in various parts of the state, but many environmentalists believe the state has taken a step in the wrong direction. They say even with the new technologies, coal is still a dirty fossil fuel that causes health problems and poses a threat to the environment.

These reservations give coal advocates an even greater incentive to seek further technological advances. For example, improvements in coal gasification (the conversion of coal to mainly hydrogen and carbon monoxide gases) ultimately could lead to the construction of coal power plants with minimal environmental impacts.

“With gasification, you’re going to have a fairly pollutant-free system,” Reitz says. “The problem is finding a way to do it on a larger scale. We need to find a company willing to assume the risk of building a gasification plant that uses some of the newer technologies and proves that it can work. When we get one to do it, then I think you’ll see others follow.”

Then, Reitz says, the power potential in Illinois may begin to be realized.