
MCCR Windpower FAQ #1:

How good is South Dakota's wind resource?

This is an excellent question, and, of course, plays a critical role in the future development of South Dakota's wind industry. In 1991, the Pacific Northwest Laboratories (now Pacific Northwest National Laboratories) released a study descriptively titled "An Assessment of the Available Windy Land Area and Wind Energy Potential in the Contiguous United States". This study contained, among other things, a list of the lower 48 states ranked according to their potential to produce electricity from the wind. In terms of wind power potential, this study ranked South Dakota fourth, behind North Dakota, Texas, and Kansas. (You can access a summary of this study on the American Wind Energy Association's web site, at <http://www.awea.org>.) However, all of the top five states on this list (number 5 is Montana) have outstanding wind resources.

Wind resources are often described according to a system of "wind power classes" that ranks sites from Class 1 to Class 7. A Class 1 site has a low average wind speed and a poor wind resource, and a Class 7 has a very high average wind speed. Generally, for a site in the U.S. to be considered as a candidate for windpower development, it must have at least a Class 3 wind resource. The National Renewable Energy Laboratory (NREL) in Golden, CO, maintains a map of South Dakota that shows the wind class of any site in the state. This map shows that almost the entire state has a Class 3 or higher wind resource, with much of our land area ranking as Class 5 or 6. In addition, recent data collected by the South Dakota Wind Resource Assessment Network has shown that a few sites in the state previously thought to

be Class 3 or lower may in fact be significantly better than that. It is clear that South Dakota has a wind resource that will be very attractive to windpower developers. When this is coupled with South Dakota's high-quality work force, public interest in windpower development, and lack of major obstacles to construction (mountains, rivers, etc.), one must conclude that the future of the windpower industry in South Dakota is bright.

Unfortunately, when one looks at the aforementioned NREL map, Miner County doesn't seem to compare well; it is shown as having among the poorest wind resources in the state, with almost the entire county being Class 3. However, this is not the final word. As was discussed previously, measurements taken on certain sites have shown that many areas thought to be less favorable for windpower have actually turned out to be quite good. Similar measurements on carefully selected sites in Miner County could indicate a similar trend. Also, somewhat ironically, almost all the functioning utility-scale turbines in South Dakota are in Miner County. This is because Miner County has community action organizations like MCCR that have aggressively promoted windpower as an economic development tool for the region. It is clear that strong leadership and clear vision are almost as important as strong winds in bringing windpower development to an area.

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