



Opportunity is blowing in the wind

More than 800 wind turbine towers are located within an hour's drive of Mason City. It is possible to view five different wind farm developments from the top of the tower at Pilot Knob State Park near Forest City.

The turbines already on line are capable of providing power for 300,000 homes. In other words, North Central Iowa is a wind energy exporter.

So, why are so many wind farms being developed in the top tiers of counties across the state? Regardless of the snickers you hear in the coffee shop, it's not because South Dakota blows and Wisconsin sucks!

It's because we have wide open spaces, mid-continental air pressure changes, entrepreneurial landowners, and most importantly, electric power transmission lines to relatively close population centers.

What does it mean for land sales?

The resale market for wind turbine sites has not been perfectly predictable, but there have been enough sales to observe a pattern. First, they bring more money than a similar farm with no wind turbines. Second, the impact of a turbine site on the land's value goes up or down as the easement income goes up or down.

What is easement income?

The easement income comes in many forms. There may be signing bonuses, along with a laundry list of easements for the turbine site itself, for access, for collection, for construction, for wind non-obstruction, for noise and for overhang, just to name a few.

To keep things simple, most people usually talk about the annual income for each turbine site. Twenty years ago, a good

rule of thumb was \$2,500/year for each megawatt of generating capacity, at a time when each turbine typically generated 750-900 kilowatts of energy.

The payment rates haven't changed a lot. The payments rates are now about \$3,000-\$3,500/MW, but the turbines are much bigger. The generators at the Turtle Creek Wind Farm near St. Ansgar are rated at 3.45-3.6 megawatts. That means the annual easement income on a new turbine could easily be triple that of older wind farms.

In fact, the original wind farm in North Central Iowa was south of Clear Lake. That installation had 56 towers. The faceplate capacity of each generator for the Clear Lake towers was only 0.75 MW per year. Within the past five years, all 56 original towers were removed and replaced with sixteen new towers. The 16 new towers have the same generation capacity as the original 56 generators.

So how does that compare to other types of investments?

Several farms have sold with wind turbine easements over the past 15 years. It's been interesting to watch the trends. In the beginning, the market was saying that wind turbine lease buyers were expecting more than a 10% cash-on-cash return. In 2020 and 2021, when even the U.S. Government 30 year bonds were selling for less than 3% yield, the wind turbine lease buyers were satisfied with returns less than 5%. Now, the wind turbine lease income investor has been following the action of the Federal Reserve Open Market Committee. The required rate of return on turbine lease investments has gone up along with the Fed's discount rate. The wind

turbine leases are now generating a rate of return of about 7.5%.



**Find a map of
area wind farms
on Page 3.**

Not an endless stream

While the easements are currently a profitable arrangement, we can't necessarily assume they will continue throughout the original 25- to 30-year term. These are mechanical machines with lots of moving parts. They will wear out. Also, as indicated earlier, most of the new wind farms are being developed with much larger generating capacity than the 750-kilowatt or 900-kilowatt generators that were common twenty years ago. In a sense, the original turbines are already obsolete.

That is why some of the original wind farms in North Central Iowa have already been "repowered." That means new turbine rotors and nacelles with higher capacity generators are replacing the original generators. This obviously indicates that the original generators are considered obsolete.

For all of these reasons, Benchmark has based its investment return calculations for appraisal purposes on a 20-year useful life for the generators.

The past sales of wind turbine sites have shown a boost to the selling price of anywhere from \$16,000 to \$40,000 per tower site.

The nuisance of farming around the access roads and the turbine sites hasn't been the big issue it was expected to be. There are two main reasons for that. First, the access roads between the tower sites are built on grade. All field equipment can cross over the driveways without needing to turn around. Second, the more recently developed wind farms have been designed with the towers placed in straight east-to-west lines. That's in contrast to the scatter gun placement of the towers in the original wind farms.

Some are "running against the wind"

There are other landowners who wouldn't agree to placing a wind turbine tower on their farms if the payment was doubled or tripled. A large, square, unblemished carpet of corn can be a great source of pride and a thing of beauty.

There are folks living within a quarter-mile of a tower with a totally different perspective than those of us admiring them from a distance. For them, a turbine tower might be blocking their view of the sunset.

Lest we forget, there was a prominent politician on the national level, who stated on the campaign trail that wind turbines cause cancer.

We'll take a breezy day

While there are those anecdotal incidents of negative impacts due to wind turbines, the hard evidence of many property sales over the last ten years tells the true story: There is a much larger percentage of us who are proud of our modern forests of windmills and the energy (and income) they produce. Since the first wind turbine towers started going up south of Clear Lake in 1998, over a thousand property owners have agreed to have the towers on their property. In all that time, I could count on one hand the number of property owners who have called us for our opinion about whether the wind turbine easement will affect the value of their farm.

I guess you could say they all have a firm grasp of the obvious.



Visit www.benchmarkagribusiness.com to learn more about the value of a professional appraisal in this rapidly changing market.

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North Iowa & Southern Minnesota Wind Farm Development

**as of June 2023*

	<p>Freeborn, MN</p> <p>500 megawatts online 2010</p>	<p>Mower, MN</p> <p>67 towers 98.9 megawatts online 2008</p> <p>43 towers 98.9 megawatts online 2006</p> <p>61 towers 101 megawatts online 2007</p>	
<p>81 towers 200 megawatts online 2020</p> <p>Winnebago</p> <p>10 towers 20 megawatts online 2008</p> <p>44 towers 66 megawatts online 2010</p>	<p>89 towers 80 megawatts online 2001</p> <p>Worth</p> <p>80 towers 160 megawatts online 2008</p> <p>56 towers 200 megawatts online 2019</p> <p>58 towers 100 megawatts online 2007</p>	<p>182 towers 200 megawatts online 2010</p> <p>Mitchell</p>	<p>66 towers 99 megawatts online 2009</p> <p>Howard</p>
<p>100 towers 150 megawatts online 2008</p> <p>Hancock</p> <p>148 towers 108 megawatts online 2003</p>	<p>Cerro Gordo</p> <p>16 towers 42 megawatts online 1998</p>	<p>1 tower 450 kilowatts online 2004</p> <p>Floyd</p> <p>50 towers 75 megawatts online 2007</p>	<p>Chickasaw</p>
<p>81 towers 200 megawatts online 2020</p> <p>Wright</p> <p>135 towers 200 megawatts online 2005</p>	<p>Franklin</p> <p>121 towers 200 megawatts online 2009</p> <p>60 towers 100 megawatts</p>	<p>Butler</p>	<p>Bremer</p>

Map courtesy of
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