

ZONING COMMISSION  
Work Session – Special Presentation on Wind Energy  
April 8, 2010

Version I  
Approved 5/6/10

Members present: Chairman, Tom Kelley, Richard Bradner, Carol Franklin, Joy Kosiewicz, Ed Mazak and Bruce McMakin and Zoning/Administrator Bill Funk and Recording Secretary Martha Ferch.

Minutes for February 1, March 4, 2010 and February and March Zoning Report will be presented at next month's meeting.

Chairman explained the reason we are holding this work session. We have had some interest in the past few months on wind energy systems and how we should regulate them. Before the Zoning Commission can include something in the Zoning Resolution, we need to gather information regarding wind energy systems, their impact on the township and look at how they can be regulated, should we regulate them and what ways to regulate them. We have invited a couple of experts to make their presentation on Wind Energy Systems. Comments and questions will be heard after the presenters are finished.

Robert W. Beaugrand, V.P. and partner of Atwell LLC. They are a 100 year old firm that specializes in civil engineering, surveying and environmental consulting. They are located in Solon, Ohio and have offices in the United States and overseas. He gave a short history of his company and for the past five year his firm has been working on renewable energy. They are working on utility scale wind parks, which use greater than 5 megawatts power and are regulated by the PUCO. There is also federal and state incentives that help drive the development for alternative energy. This presentation tonight will be to provide you with information on the energy market from the renewable prospective and bring it to the local level for the small scale wind energy which can be regulated by local zoning. Some of the issues for zoning small wind energy are: sound, setbacks, height, RPS (Wind) renewable portfolio standards, environmental concerns and zoning permitting. Transmission of wind power from the mid-west (strong wind sites) to the major metropolitan centers is hindered due to lengthy interconnections between states. Maintenance on the small turbines can be done by pulling of a pin at the bottom to lower the tower versus putting climbing pegs on them. The small scale turbines are small enough (30-40' height) that it wouldn't bother the migratory birds in their flight. (See attached presentation which is also available on Bath Township's web site).

Andrew F. Laudato, Windtechsolutions, presented that he mainly installs small wind turbines. He does behind the meter connection to the main systems. What that does is the meter will go backwards and when it over generates the supply of electricity and anything that is over the limit doesn't get stored. The technology for storage of this energy is not available yet. A residential house uses 8-10,000 KW per home and it is not cost effective

to manufacture turbines for this size and nothing has been installed in the residential area by him. Most of his customers are small scale wind energy systems, 100K or below and they are mainly farms and smaller businesses. Small scale wind turbines for residential cost about \$17,000 and after tax incentives, your return on your investment would take at least six-seven years for a residential installation and it also takes a long zoning process for applicant to go through. As technology advances it would be more affordable to use at the residential level. You also need an acre or more in order to place one of these structures on residential property and you need the height to be able to catch wind sufficient enough to run the machines. Zoning codes can be for minimal standards and then make it a Conditional Use provision for installation in residential areas and the rooftop models on houses would use 1.4KW. The other side is to do what Twinsburg did and that is to prohibit them. Has there been any unit designed for sub-division to have several houses such as cluster homes to use? They are allowed to install per parcel for one building only. They can't store energy made by the turbines but that technology is coming. Examples of other small scale machines were mentioned that are in Ohio. Should the board consider horizontal and vertical machines and for small scale wind turbines? Yes, and zoning codes should address this along with other factors. Standardization will come down from the county level that will address these. One commentator mentioned that he installs 1.4MW units for residential use. Tower height regulations were mentioned by him that are used in other municipalities. State of Ohio considers the roof top mounted systems as an appliance. He will submit the information he has on the small scale wind turbines for residential use. Cell towers do use similar systems to generate power to the tower. The technology is out there and it will be available for residential use. The University of Akron is working on building a small wind turbine that they would like to install by the Field Station on the Nature Preserve.

Brecksville has enacted codes for the small energy systems and has placed restrictions in this code for installation. They have also addressed the health and safety issues concerning small energy systems.

We need to look at other codes and see if this is something we should add to our Zoning Resolution. Mr. Laudato will give the commission some sample ordinances along with Richfield's code for wind turbines.

Motion to adjourn was made by Dick Bradner and seconded by Carol Franklin. Meeting adjourned.