

# Research & Policy Brief Series

ISSUE NUMBER 34/MARCH 2010

## Industrial Wind Power: What Local Officials Need To Know

By **Kate McCarthy** and **Eric VanderMaas**, Cornell University\*

### What is the issue?

In recent years, the ridges of upstate New York have caught the interest of wind developers, spurred on by federal subsidies that have helped make industrial wind farms profitable. For some upstate residents, hosting a wind farm is an opportunity to stimulate economic growth and develop “green” industry in their towns. Other residents have voiced strong concerns over such issues as noise, bird and bat fatalities, visual impacts, and the impact on their rural community life. Do wind farms actually contribute to economic development in towns in upstate NY? What tools are available for local officials faced with decisions about wind power in their communities?

This brief addresses these questions by 1) describing industrial scale wind development and its economic development potential, and 2) suggesting four actions for managing it. We also include a list of additional resources on industrial wind and the development process<sup>1</sup>.

### What is “industrial” wind power?

Unlike small wind turbines in people’s backyards, or community wind energy (turbines that are at least partially owned by local landowners and other community members), an “industrial wind farm” can range from a few, to a few hundred turbines. All power produced on an industrial-scale farm is sold to, and distributed by, the “grid” - an interconnected network for delivering electricity from suppliers to consumers (non-industrial wind may or may not be sold to the grid). A turbine’s classification as “industrial” usually depends on its size and how much power it can produce, but turbines generating over one megawatt (enough to power about 495 homes) are commonly considered “industrial.” These structures stand, in some cases, over 400 feet tall from their concrete base to the tip of the blade. Wind companies usually sign 20-30 year leases with private landowners to erect turbines.

### Financial matters

For local officials considering industrial wind installations, the development process consumes significant time and resources. Taking a long term view of the structure of financial agreements can help to yield a more balanced return for those efforts.

Building a wind farm requires a large initial investment by developers. To compound this financial burden, the land value improvements result in higher property tax assessments. Since developers would generally absorb any tax increases, they contend that the potential expense could challenge industrial wind farms’ short-term financial viability. In addition, NYS’s real property tax law, §487 provides developers with a 15-year shelter from real property taxes for industrial wind installations. Therefore, as an alternative



to the routine payment of property taxes, towns, developers, and the county’s Industrial Development Agency (IDA) put together financial contracts like PILOTs (Payments in Lieu of Taxes) and host community agreements (HCAs). The advantage is that these contractual payments vary over time and are discounted from the standard property tax formula, resulting in a more developer-sensitive payment instrument. PILOTs and HCAs help the developers get started, while still providing the host municipality with revenue.

PILOT payments generally are “back-loaded”, starting off small at the beginning and growing over the life of the project, giving the developer a chance to recoup costs. Similar to taxes collected by a local government, PILOT revenue is split among the different public service providers and governments according to a standard tax formula. This can be problematic in places where a municipality’s share represents the smallest portion of a property tax bill, inadequately reflecting the time and money the municipality has spent in the process of review, negotiation, and permitting. For this reason, some municipalities have designed a Host Community Agreement (HCA) to balance the small PILOT payments early in the process. With an HCA, the developer makes up front payments to the municipality which invests its resources to negotiate the development, and can negotiate to cover the wind farm development costs up front and distribute the revenues with respect to impact and involvement.

### Economic development potential

The economic development potential of industrial wind farms can take several forms. First, as described, industrial wind development can reduce a community’s property tax rate as well as diversify its sources of revenue, leaving more money in residents’ pockets and the community less reliant on the more traditional revenue sources.

Second, it can benefit individual property owners who lease their land and generally receive yearly payments for the turbine(s) on their land, increasing the community's net wealth. This assumes, of course, that the increased wealth of a relatively few landowners benefits their community as they spend and invest within it. Third, some claim that wind farms can be a draw for tourists and create a "multiplier effect" by creating demand for other services in the area. Because multipliers attempt to measure the "ripple effects" of development, however, these benefits are harder to measure.

An important economic development question is how many jobs are created by wind farms. Wind farms create few long-term jobs as compared with other types of economic development, such as regional retail. Most jobs are created during the construction phase, sometimes but not always relying on the local work force. For longer term day-to-day operations, estimates suggest that one job is created for every ten to twenty turbines installed. The exact number of jobs, and the required training will depend on the type of turbines and the location of the wind farm. While the regional economy may benefit as money earned from these jobs is spent in area businesses, the broader impacts, are uncertain. This is an important factor for local officials to consider when deciding if wind energy is a good economic development strategy for them.

## Taking charge of the process

In order to proactively address wind development, local officials need to understand who is involved in the development process and what tools are available to guide how (and if) development happens. This may help officials manage or regulate development so that it supports, rather than undermines, local goals.

## Understanding roles

Understanding the roles and constraints of each actor in the wind development process is essential. Like many general contractors, a developer works for a large wind energy company, often a multinational firm (Aeon or First Wind are examples of such companies working in NYS). Developers assemble land leases, work on obtaining permits, and purchase and install the turbines. They are a bridge between a global industry (turbine and parts manufacturing) and a local project (the wind farm). While competing for turbines with other sites across the world, developers must also contractually "reserve" space on the electrical grid for their project. Failure to meet the capacity of the reservation or delivery date results in a loss of the "slot" – as well as penalties for the developer. The coordination of these many factors increases their risk.

Once a developer identifies a potential wind farm site, he or she works with private land owners to secure land through lease agreements or, in some cases, ownership and/or easements. Because developers compete for the best sites, this phase often involves "behind the scenes" site exploration and negotiation with property owners, sometimes leading a community to feel deceived once the developer emerges with a proposal.

When a wind farm is proposed, local officials have the important but challenging role of balancing the rights of private land owners with broader community goals. Industrial wind siting decisions commonly require additional hearings, negotiation between the developer and the municipality, site visits to other wind farms, and new zoning or wind ordinances. The not-always-transparent process of site exploration that developers use can sometimes create

an atmosphere of distrust in the community. This sequence, as outlined, often means that local input comes late in the process. If a community assesses their potential as a site for wind development and creates wind development guidelines, they can have a more active role earlier in the process.

## How to manage wind development

Local officials can take several basic steps to engage the community, gather information, and strategically plan for the possibility of local wind development.

*Working with community members early and often* – Discussing how (and if) wind fits in with a community's future before a wind developer appears allows residents time to ask questions and voice concerns without pressure. Assessing a community's potential for wind development can help determine the urgency of this work (see the wind maps in the reference section).

*Involving a neutral third party* – Forming a team that includes a knowledgeable, neutral third party can help engage residents in conversations about wind development, developing wind ordinances, and how to negotiate effectively. While an attorney can be a key player, engineers, foresters, and mediators are also important members of such a team. In some communities these teams may be comprised of local residents who are willing to provide their services pro-bono.

*Gather information about the developer* – Wind developers take many different approaches to negotiation, working with communities, and dealing with environmental and conservation issues, making it essential to gather information about a developer's previous projects. This might include looking at financial statements, talking with local officials where the developer has worked, searching for newspaper articles about the company, and comparing the developer's approach with that of other developers.

*Developing zoning and wind ordinances* – Many prime wind farm sites lie in towns without zoning or comprehensive plans. While this gives landowners flexibility on how they use their land, it leaves towns without the ability to regulate wind turbine siting or other industrial development. Developing a comprehensive plan, a zoning code, and/or a wind ordinance can define things like setbacks and bonding for decommissioning. Introducing such measures may be challenging in places without zoning, but will ultimately help deal with development on this scale.

## Is it worth it in the end?

The volatility in gas and oil prices, continuing subsidies for wind power development, and advances in turbine efficiency will likely increase wind's importance to upstate New York. This challenges local officials to balance growth and economic development with their community's concerns and long term goals. While wind power appears to have *some* economic development potential – the construction jobs, the few permanent positions, and the increased income for land owners and municipalities, the question of industrial wind farms as long-term and sustained economic development has not been settled in upstate New York. It is suggested that communities take a proactive approach that considers future goals, and whether wind, as a specific economic development strategy, supports that vision.

\*the authors are both Graduate Students in the Department of City & Regional Planning.

<sup>1</sup>Additional resources are posted with this publication on the Cardi website at: <http://www.cardi.cornell.edu>

