

Wind Energy Case Study: Gratiot County, Michigan

INTRODUCTION

Gratiot County, Michigan has become a trailblazer in regional planning in one of the nation's strongest home-rule states. The result? Large-scale wind energy developers have been beating a steady path to their door and helping to lift the county out of one of the worst economic recessions to hit Michigan since the Great Depression. Led by Greater Gratiot Development, Inc. and the enlightened management and elected leadership of communities such as St. Louis, Alma, Pine River Township, and Breckenridge, and the County of Gratiot, the Gratiot Community has been a vanguard in preparing itself for big wind development through planning.

Four critical issues have shaped Gratiot County's future as a wind farm mecca:

- 1) Economic conditions ripe for transformation
- 2) A champion for collaboration: Donald Schurr
- 3) The "GREAT" plan for Gratiot County
- 4) A countywide ordinance and existing transmission lines welcome wind

SETTING

Gratiot County is located in Michigan at the geographic center of the Lower Peninsula. There are no major topographic features that distinguish the county from surrounding areas. The county is home to Alma College, a private liberal arts college in Alma, the County's largest incorporated municipality. Larger cities and employment centers are found in nearby counties, including Mt. Pleasant (home of Central Michigan University) to the north, Midland (home of Dow Chemical Company) to the northeast, and Lansing (the state capitol) to the south.

Gratiot County experienced steady growth in the 1990s, but growth slowed considerably between 2000 and 2010. Between 1990 and 2000, Gratiot County's population increased from 38,982 to 42,285 (8.5%)ⁱ, while Michigan's population increased 6.9%.ⁱⁱ However, Gratiot County's population increased to just 42,476 by 2010 (0.5%)ⁱⁱⁱ, while Michigan's population declined 0.6% between 2000 and 2010; the only state in the nation to experience population decline during the decade.

ECONOMIC CONDITIONS RIPE FOR TRANSFORMATION

Although over 77% of the land use in Gratiot County is cropland, pasture, or forest, the county was a hub for heavy industry until the 1970s. Brine extraction from the mineral springs in the Pine River Watershed promoted the growth of the chemical industry, highlighted by the opening of Michigan Chemical Company (later Velsicol Chemical) in 1935.^{iv} At the same time, oil extraction in the region promoted the growth of several small refineries, including Total Petroleum in Alma. However, excessive resource extraction forced Velsicol Chemical to shut down in 1978; over 400 union members lost their jobs. At the same time, Total Petroleum began significant cuts due to both resource depletion and industry mergers. The company relocated its headquarters to Denver, Colorado in 1980. By the mid-1990s, remaining office operations moved to San Antonio, Texas. The last 250

workers lost their jobs in 1999.^v Changes to the automobile industry and its supplier chain since the 1970s further reduced the employment base.

A CHAMPION FOR COLLABORATION

During the late 1970's, while Gratiot County was losing manufacturing jobs by the hundreds and unemployment skyrocketed to 21%, the municipalities within Gratiot County and Gratiot County itself incorporated Greater Gratiot Development^{vi} to promote beneficial economic development for all of Gratiot County. Greater Gratiot Development was Gratiot County's first countywide collaborative effort. Don Schurr was hired as director in 1984. Previously, he had been working in other positions addressing "collaborative behavior" as a policy approach, with a focus on organizing to create economies of scale. He has a strong desire to foster collaboration to accomplish multiple county objectives. In 1991, Greater Gratiot Development teamed with its local partners to lead a collaborative initiative among the county, its municipalities, and the private sector (including health care, banking, education, and industry) to develop a countywide strategic plan. The process was nurtured by Greater Gratiot Development and the Michigan State University Extension during the 1990s and early 2000s. There have been several iterations of the plan. This effort led to the formation of a unified countywide Chamber of Commerce and the creation of the Gratiot County Community Foundation.

The evidence of collaborative behavior's influence on county governance was illustrated by the historic interlocal and conditional transfer agreement signed by the Cities of Alma and St. Louis and Pine River Township in 2007. In a period spanning 20 years, these three neighboring communities moved from continuous public squabbles to routine collaboration. The communities had previously entered into waste water service agreements with one another since the 1970s, but more recently wished to unify the multiple previous agreements into one. However, the communities did not wish the new agreement to be limited to just waste water services; they wanted to incorporate land use planning and related issues, including density and composition of population; land area and uses; proposed and possible future residential, commercial, and industrial development and growth; the ability to provide essential government services; and the transfer of property from one community to another, including transfers on taxes and tax rates.

The resulting agreement was signed by the Cities of Alma and St. Louis and Pine River Township on February 8, 2007, setting the stage for future cooperation throughout Gratiot County. The critical and innovative component of this agreement was Article III (Land Use Planning). Article III of the agreement states that the communities recognize individual characteristics and concerns regarding property use, topography, population, and other matters related to land use planning. Nevertheless, it is in the interest of all communities to foster a degree of uniformity in the areas of zoning and land use planning. The communities agreed to create a land use planning committee staffed by a representative from each community familiar with local planning and zoning ordinances. The committee would review all of the communities' plans and regulations; identify areas of commonality and determine the extent to which uniformity can be acknowledged or established; identify those areas and characteristics peculiar to each party which require separate and specific planning; and provide notice to the other communities of any community's proposal to amend an ordinance, rule, or regulation.

“GREAT” PLAN FOR GRATIOT COUNTY

In 2008, the increasingly collaborative attitude and the worsening economic recession encouraged Greater Gratiot Development, area municipal managers, and community leaders to take advantage of a funding opportunity through the *Partnerships for Change-Sustainable Communities* program. They wanted to kick-start a countywide master planning process. *Partnerships for Change – Sustainable Communities*^{vii} is managed by the Land Information Access Association of Michigan and is sponsored by the Michigan Townships Association, Michigan Municipal League, Michigan Association of Planning, and the Michigan State University Extension. The program, begun in 2004, is designed to foster new and expanded cooperation between cities, townships and villages in developing and carrying out local land use policies that contribute to the preservation of cultural and natural resources. It is funded by several major Foundations and public sources.

Partnerships for Change – Sustainable Communities awarded one of only three grants in 2008 to the Gratiot County community based on the history of cooperation among the county’s townships, villages, and cities and also their collective desire to take these cooperative efforts a step further by coordinating local planning efforts on a county-wide basis. \$65,000 was awarded based on a proposal led by Chelsey Foster, City Manager of Ithaca and (at the time) Project Manager for Greater Gratiot Development, and Kevin Beeson, Pine River Township Supervisor. Additional funds were generated through matching grants from all participating communities.^{viii}

The outcome of the grant-funded process was the *Gratiot Regional Excellence and Transformation (GREAT) Plan*, the first countywide, locally developed, shared, adopted, and implemented plan in Michigan. The plan was jointly completed in November 2010^{ix} by all of the participating local jurisdictions and then considered by each local government for approval.^x The individual municipalities could modify the plan as desired, but thus far most approving communities have not made substantive changes. In the City of St. Louis, for example, there were few edits to the November 2010 draft; it was approved by the St. Louis Planning Commission in April 2011 and authorized by the City Council shortly thereafter. Likewise, the City of Alma did not make any substantive changes to the November 2010 version of the GREAT plan before its April 2011 adoption. Overall, officials report the planning process was very unifying (some of the officials in different communities didn’t even know each other) and unique: none knew of other countywide collaboration elsewhere in Michigan.

WIND ENERGY COMES TO GRATIOT COUNTY

The GREAT plan made Gratiot County intriguing to wind energy developers, since they would not have to confront a myriad of planning policies and zoning regulations across different political boundaries. In 2007, Wind Resource, LLC came to Gratiot County and erected solar-powered “MET” Towers (meteorological towers) to determine local wind energy potential. In addition to finding sufficient wind capacity, Wind Resource, LLC helped build political collaboration and earn community support for wind energy development. Gratiot County leaders, landowners and stakeholders were invited to multiple Open Houses convened at the Mackinaw City Wind Project, the Great Lakes region’s first privately-funded commercial wind turbines, which achieved COD Dec. 3, 2001. This visits to the highly visible Mackinaw City project allowed Gratiot stakeholders to experience for themselves how wind turbines work, sound and can be properly integrated into a community. The unique Wind Resource Option & Pooling Easement Agreement (Pooling Easement) was developed with key Gratiot landowners, an Iowa State University professor and several law firms.

The Pooling Easement invited, from the beginning of the Project, all landowners in the Project area to participate in the Project. Wind Resource also used its experience to invest in the significant, required grid studies and secure the first Midwest Independent System Operator (MISO) Interconnection Agreement to assure that the project could take advantage of the existing grid network of transmission lines in place from the days of Gratiot County's heavy industry. Wind Resource then invited Invenergy, who decided Gratiot County was a good place to develop wind energy, and developed the 212.8 MW Gratiot County Wind LLC Project, now under construction with a 2012 planned C.O.D.

At the first GREAT plan meeting, steering committee members selected Don Schurr for chairperson because he "did not have a dog in the fight." Due to expressed interest from several wind energy development companies, Don broached the topic of wind energy as a potential economic development strategy. At the very next meeting, he stated the county needed a wind energy ordinance to accommodate wind energy development; the ordinance could be developed simultaneously with the GREAT plan. Don further advocated for full and transparent participation in the development of both: Anybody who wanted to participate could do so. Dan Rossman, local Michigan State University Extension Director, organized a countywide education effort with the Gratiot County Farm Bureau that was primarily directed at land-owning farmers. The information gathering process culminated in a large meeting with expert presentations on wind energy development. Soon thereafter, the steering committee created a conceptual framework and the county planning commission (led by Gratiot County Permits Officer, Chad Doyle) decided they would be the first to approve the wind energy ordinance and make it a model for other municipalities. Each municipality would then create their own overlay district that would indicate with certainty where wind farms would be allowed. The County retained Spicer Engineering of neighboring Saginaw County to provide technical guidance.

The wind energy development ordinance was crafted over a series of many public town hall meetings led by Wind Resource and Gratiot County Wind to allow the public and company representatives to discuss wind turbine issues. These meetings culminated in a large public hearing at Breckenridge High School in March 2010. Hosted by the four townships where Gratiot County Wind intended to site the first proposed wind farm in Gratiot County and facilitated by Spicer Engineering, the Breckenridge meeting entertained 250 - 300 people to discuss passage of the countywide wind energy ordinance and any potential impacts (flicker, future development, property values, noise, wildlife, avian, etc.). For every voiced concern, there were others who had lived near wind turbines who gave testimony that perceived negative impacts were unjustified. Gratiot County Wind staff showed diagrams, models, data, and photographs of current wind farms in operation, including the construction process. The final result was a unanimous vote by representatives of the four townships to pass the Special Use Permit.^{xi} Resolutions were later passed individually by the respective township and County boards supporting the Gratiot County Wind Project.

The ordinance focuses exclusively on large-scale wind farms (not small or community wind). Construction for the Gratiot County Wind project is currently underway for 133 turbines; Gratiot County Wind already secured a power purchase agreement with DTE Energy, the largest of its kind in Michigan. Gratiot County Wind created a district overlay for the wind farm, in accordance with ordinance regulations. Over 250 families are involved in the Pooling Easement. They will receive a percentage of gross proceeds from the sale of the power proportional to the percentage of land the owner has in the pool. The first stage of the project will provide 150 skilled construction jobs, 15 full-time technician jobs, and \$1.2 million in annual revenue for the county and municipalities. Landowners will get an estimated \$65 per acre for leased space and a percentage of gross royalties. The project is expected to generate enough electricity to power an estimated 54,000 homes annually. One

local official estimates that property taxes generated by the project and royalty payments to lease owners could amount to \$100 million over the next 20 years.^{xii} Breckenridge City Manager, Jeff Ostrander, told the press that his community's schools could capture up to \$800,000 in the first year.^{xiii}

CONCLUSION

Economic conditions in Gratiot County made the public more receptive to countywide planning and wind energy than they might otherwise have been. Wind energy seems like a viable solution (at least in part) to work against the struggling automobile industry and dependence on foreign oil. Most of the county is abuzz with excitement about the revenue stream of having wind turbines on their property.

The Invenergy project is just the beginning, according to Gratiot County officials. Locally-initiated Beebe Wind, partnered with Nordex of Germany, has also proposed a project – conceivably 100 turbines for up to 300MW – and received its Special Use Permit. Tradewinds Energy has proposed a third project and has received its Special Use Permit for a 200MW wind farm. In addition, Invenergy is now looking at a second project in Gratiot County of approximately 200-300MW. The primary attractors continue to be willing community, decent wind, and good interconnection. Don Schurr makes the point that planning has been the difference: Gratiot County is not the best place in Michigan for wind (better in the Thumb and on the Lake Michigan coast), but Gratiot County communities are all on the same page and the transmission grid is already in place. Furthermore, the growth of wind energy in Gratiot County virtually guarantees continued agricultural production of the county's farmlands (goal of the GREAT plan) while diversifying farmers' income stream.

ⁱ U.S. Census Bureau. (2001). Census 2000 PHC-T-4. Ranking Tables for Counties: 1990 and 2000. Table 1. Counties in Alphabetic Sort Within State, 1990 and 2000 Population, Numeric and Percent Change: 1990 to 2000 (retrieved 3.18.2011 from <http://www.census.gov/population/www/cen2000/briefs/phc-t4/tables/tab01.pdf>).

ⁱⁱ U.S. Census Bureau. (2001). Census 2000 PHC-T-2. Ranking Tables for States: 1990 and 2000. Table 1. States Ranked by Population: 2000 (retrieved 4.21.2011 from <http://www.census.gov/population/www/cen2000/briefs/phc-t2/tables/tab01.pdf>).

ⁱⁱⁱ U.S. Census Bureau. (2011). 2010 Census Data Map (retrieved 3.18.2011 from <http://2010.census.gov/2010census/data/>).

^{iv} <http://pineriver.alma.edu/overview/historical/index.html>

^v Ibid

^{vi} <http://www.gratiot.org/1/292/index.asp>

^{vii} <http://www.partnershipsforchange.cc/>

^{viii} Washington Township is the lone hold-out community in Gratiot County that has not participated in the development of the countywide master plan; it is largely agriculture and wetland. According to Don Schurr, Washington Township officials did not want "to play in the sandbox" with the others. Don tried to explain that participating with the other 21 units of government in Gratiot County would offer Washington Township more control over their destiny than going it alone, but to no avail.

^{ix} <http://www.stlouismi.com/1/stlouis/files/greatplanplusmap.pdf>. A more recent version (April 2011) reflects slight editorial revision, but no substantive changes (<http://www.partnershipsforchange.cc/great/documents.asp>).

^x Eberbach, J. (2010). Gratiot County communities work together to form county-wide master plan. (Retrieved 5.24.2011 from <http://www.mml.org/resources/publications/mmr/issue/julyaug2010/gratiot.html>).

^{xi} <http://www.co.gratiot.mi.us/permits/Adopted-windordinance.pdf>

^{xii} Barber, Barrie. (2010). Michigan's largest wind farm welcome revenue generator in Gratiot County, leaders say. (retrieved 4.28.2011 from http://www.mlive.com/news/saginaw/index.ssf/2010/09/giant_wind_turbines_welcome_re.html).

^{xiii} <http://www.mlui.org/landwater/fullarticle.asp?fileid=17479>