Citing Controversies and Developments in the Void of Wind Energy Siting Policy: A Focus on Pennsylvania and New York

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I. INTRODUCTION

With an ever-increasing awareness of the impacts of fossil fuels and a highly-developed and energy-dependent industrial society, the United States of America as a nation has been searching for cleaner alternative sources of energy. Throughout the last several decades, technological advancements have led to the development of energy sources other than more traditional forms such as coal and oil. For example, new drilling techniques have allowed cleaner-burning natural gas to be removed from subterranean shale formations across the country. New developments in biomass technology have made it possible for corn to be converted into fuel to be used in automobiles and machinery. Solar power projects are being used more in the private sector to power and heat homes and water supplies. All of these technologies and more have allowed for the production of energy without the emissions impact from burning coal and oil. And yet, another source of renewable energy is leading the way in America.

Wind energy has been used throughout history for an array of purposes including powering sailboats and operating windmills. Today, the term "wind energy" is more commonly used to refer to the transformation of the kinetic energy present in wind to a usable source of electricity.[1] The most prevalent practice for harnessing wind energy today is by the use of wind turbines, large structures that use multiple blades that spin in

[1] AMERICAN WIND ENERGY ASSOCIATION, WIND ENERGY TEACHER'S GUIDE 3 (2003).

the wind.[2] When these blades rotate they in turn spin magnets located within the turbine's gearbox and convert the kinetic energy into electricity.[3] The electricity is then passed through transmission lines and out of the wind turbine.[4] More and more frequently, large numbers of wind turbines are grouped together to form what is referred to as a "wind farm" or wind project. By grouping the turbines together, the project can combine the turbines' relatively low individual outputs and transmit a more concentrated source of electricity away from the wind farm.

A. THE GROWTH OF WIND ENERGY

Wind energy has become the fastest growing renewable source of energy in the country, and second only to natural gas as the fastest growing source of energy overall.[5] Today's five-year average annual growth rate for wind energy equals approximately 39%, up from 32% for the years 2003 through 2008.[6] At the end of 2008, the United States wind energy capacity amounted to just over 25,000 megawatts annually.[7] As of December 31, 2009, the United States was estimated to be capable of producing almost 35,000 megawatts of electricity annually, enough to power approximately 9.7 million homes.[8] This capability places the United States as the leader in the world's production

[2] *Id.* at 4.

[3] *Id.*

[4] *Id.*

[5] Brit T. Brown & Benjamin A. Escobar, *Wind Power: Generating Electricity and Lawsuits*, 28 Energy L.J. 489 (2007).

[6] http://www.windpoweringamerica.gov/ (under the "Installed Wind Capacity" sub-heading).

[7] http://www.windpoweringamerica.gov/images/windmaps/installed_capacity_2008.jpg

[8] *See* http://www.windpoweringamerica.gov/, *supra* note 6.

capacity and accounts for 22% of the global wind energy capacity.[9] However, as of March 31, 2010, approximately 13 states did not have a single reported wind energy project.[10] Of the states with existing power capacities at that time, Texas had the highest capacity with approximately 9,403 megawatts – 5,799 megawatts more than the second highest producing state, Iowa.[11] New York's existing power capacity ranked eighth in the nation at 1,274 megawatts, and the Commonwealth of Pennsylvania ranked 15th with 748 megawatts.[12]

The reason that wind energy has experienced such tremendous growth is, arguably, the production of "clean" domestic energy that does not require other resources to operate. Wind turbines make it possible to capture existing kinetic energy and transform it into usable electricity without burning any fossil fuel, cutting down on the nation's "carbon footprint." Also, the development of wind energy would allow for the United States to produce a larger amount of energy within its own borders. Wind projects could cut the national reliance on foreign energy suppliers and allow for higher levels of energy independence. As researchers and scientists develop a greater understanding of the forces at play, and industries such as the American auto industry continue to evolve, wind energy may play a significant role in reducing the national reliance on foreign oil and gas. Further, wind turbines themselves do not need to be supplied with other resources such as water to operate. As one author noted, this allows

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[9] WORLD WIND ENERGY ASSOCIATION, WORLD WIND ENERGY REPORT 2009 8, (2010).

[10] http://www.awea.org/projects/

[11] http://www.windpoweringamerica.gov/images/windmaps/installed_capacity_current.jpg

[12] *Id.*

for the installation of wind energy projects in parts of the nation where water may be in short supply, but vast tracts of land and a steady source or wind are present.[13]

The growth of the wind energy industry within the United States has been addressed by the federal government in only limited ways. As far back as the 1980s, the federal government found that it was in the best interests of the national public to actively research wind energy to discover the best method for hastening its use throughout the country.[14] However, in the 30 years since this finding, the United States government has failed to enact or advocate any federal siting policy that addresses the placement and installation of wind projects.[15] In a recent ABA newsletter,[16] one author advocates a federal policy that would mirror the Telecommunications Act of 1996, a federal statute that "leaves primary siting authority in the hands of local governments, but places explicit federal constraints on the siting process."[17] The author opines that a federal policy should not only prohibit local governments from prohibiting wind energy facilities, but also require such governments' decision on wind siting to be issued in a reasonable

[13] Ernest E. Young, *Legal Bases for Opposing Wind Farms*, EMERGING ISSUES, October 20, 2009, at 1, *available at* 2009 EMERGING ISSUES 4496 (LEXISNEXIS).

[14] *See* 42 U.S.C. § 9201.

[15] Although the United States has not issued a national siting policy, several states have enacted their own policies. *See* Kristin Choo, *The War of Winds*, ABA JOURNAL, Feb. 1, 2010, *available at* http://www.abajournal.com/magazine/article/the_war_of_winds/. ("Several states, including Ohio, Washington and Wisconsin, have passed laws restricting local control over wind turbine projects").

[16] Ashira P. Ostrow, *Proposing a Federal Wind Siting Policy*, ABA ENERGY COMM. NEWSLETTER, Mar. 2010, at 1, 1-2.

[17] *Id*. at 2 (citing 47 U.S.C. § 332(c)(7)(B)(iv)).

amount of time and in writing.[18] Although the author's article does present a useful analogy going forward, the fact remains that no federal policy is currently in effect.

Without an authoritative federal siting policy, the task of regulating the placement and installation of wind energy projects and facilities would normally be left to the individual states. However, neither Pennsylvania nor New York has yet to enact a statewide wind energy siting policy. Therefore, the task of regulating the placement and installation of wind energy projects has shifted to individual municipalities and townships located within the states. Generally, a local government cannot absolutely ban a specific industry.[19] Moreover, and on a larger scale, the development of alternative and renewable sources of energy benefit the national community as well as the communities in which the source is produced. But leaving the regulation of the wind energy industry to local governments has created two main problems. First, it often requires wind energy developers to become familiar with and meet different zoning requirements for a single project that spans multiple municipalities or townships.[20] Second, it has allowed local residents to become involved with the local zoning process and possibly inhibit the permitting of projects that are beneficial to the entire nation.[21]

Although wind power has been proven to be a viable alternative source of energy and shows a great potential for growth, the construction of wind projects has faced a

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[18] Ostrow, *supra* note 16, at 2.

[19] *See* Choo, *supra* note 15, at 2 ("There's a zoning doctrine that basically prohibits what we call 'exclusionary zoning' in which a local government simply discriminates against a certain type of land use." There must be a rational reason for restricting or otherwise prohibiting an industry, generally based on the protection of the public's health, safety or general welfare.).

[20] Ostrow, *supra* note 16, at 1-2

[21] *Id.*

relatively unexpected amount of opposition. While most people across the nation recognize the need to develop alternative sources of energy, a number of landowners and residents seem to be opposed to the placement of projects in their locale. Often referred to as the not-in-my-backyard principle, or NIMBY for short, the landowners and residents seem to support projects anywhere else in the country so long as they are not adversely affected by it. The U.S. Chamber of Commerce has attempted to identify projects across the nation that have been stalled or otherwise prolonged by landowner lawsuits.[22] Within Pennsylvania and New York, objecting landowners have achieved only mediocre results in completely opposing wind energy projects, although their legal efforts have resulted in substantial delays.

This comment will analyze several recent cases[23] and other developments that have arisen around the expansion of wind energy within Pennsylvania and New York. Section II will discuss the different methods used by local governments to enact zoning ordinances that address wind energy projects. Further, the section will address the burden of proof that a complainant must overcome to successfully challenge a zoning ordinance. Section III will discuss the level of deference that courts have granted to local governments' legislative actions and administrative decisions. Section IV will analyze recent legal decisions that addressed nuisance claims against wind projects based on aesthetical impacts. Section V contains a summary of two recent, non-legal

[22] http://pnp.uschamber.com/ ("*Project No Project* is an interactive venture that seeks to tell the story of NIMBY and its damaging impact on jobs, infrastructure and economic prosperity."); s*ee also* http://pnp.uschamber.com/renewable/ (specifically reporting on renewable resource projects).

[23] As a large part of this comment's focus is on legal developments that have arisen out of case law, the author will provide extensive factual backgrounds in an effort to explain the circumstances under which the courts based their decisions.

developments of note. Last, Section VI will contain the author's brief, concluding remarks.

II. Zoning Ordinances: The Process of Enactment and Attempts at Invalidation

Local governments within Pennsylvania and New York have appeared to be up to the challenge of regulating the placement and operation of wind energy projects. One decision of the Commonwealth Court of Pennsylvania effectively illustrates the evolution of zoning ordinances at the local level and the difficulty facing parties seeking to invalidate an ordinance. A decision arising out of a United States District Court is also effective in describing how local governments within New York have sought to regulate wind energy projects and the equally high standard required to invalidate local authorities' decision.

A. Pennsylvania

On December 4, 2009, the Commonwealth Court of Pennsylvania issued its decision in *Plaxton v. Lycoming County Zoning Hearing Board*.[24] At issue in the case was a Laurel Hill Wind Energy request for a permit to construct and operate a project within Lycoming County's Resource Protection Zoning District.[25] In January 2005, the county's zoning ordinance did not specifically address individual wind turbines or larger wind projects, but allowed a special exception from the ordinance for "public service uses."[26] Laurel Hill sought to construct a 70.5 megawatt project consisting of 47 wind

[24] Plaxton v. Lycoming County Zoning Hearing Bd., 986 A.2d 199 (Pa. Commw. Ct. 2009).

[25] *Id*. at 202.

[26] *Id*.

turbines (though the number of turbines was later reduced to 35), an overhead transmission line, a switchyard and a substation.[27] Believing that its project would qualify under the ordinance's provisions, Laurel Hill Wind Energy submitted an application for a special exception from the Lycoming County Zoning Ordinance.[28]

Prior to the hearings on Laurel Hill's special exception request, the County Zoning Administrator made the determination that the company's project was in fact a "public service use."[29] Upon learning of this determination, the Plaxtons, landowners whose property would be adjacent to a portion of the project, objected to the determination and appealed the Zoning Administrator's decision to the Lycoming County Zoning Hearing Board (hereinafter, ZHB and "Board").[30] After a hearing on the topic, the ZHB determined that the Zoning Administrator correctly classified the Laurel Hill project as a public service use.[31] Thereafter, the Board held several hearings on the special exception request.[32] The ZHB determined that the Laurel Hill project was not only inconsistent with the purpose of the Resource Protection District,[33] but that Laurel

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[27] *Id*. Overall, the facilities would cover approximately 706 acres along the Laurel Hill Ridge and include land located within two municipalities. *Id*.

[28] *Id*.

[29] *Id*.

[30] *Id*.

[31] *Id*. The Plaxtons did in fact appeal the ZHB's determination. *Id*. However, the Court of Common Pleas of Lycoming County upheld the determination, and the Plaxtons eventually discontinued a subsequent appeal. *Id*.

[32] *Id*.

[33] The Lycoming County Zoning Ordinance currently provides that the purpose of a Resource Protection District is the protection of resources such as timber, wildlife habitats, special plant communities and other "natural areas." The relatively low amount of development allowed within these districts is required to be located in a way that minimizes the amount of environmental disruption. LYCOMING COUNTY ZONING

Hill Wind Energy failed to show how it would mitigate some of the adverse impacts created by the project.[34] Therefore, the ZHB determined that a special exception from the zoning ordinance then in effect was inappropriate and denied Laurel Hill Energy's permit request.[35] The company appealed the ZHB's decision and went before the Court of Common Pleas of Lycoming County.[36] The Court of Common Pleas affirmed the decision of the ZHB in May 2007, and Laurel Hill Energy eventually discontinued an appeal of the decision.[37]

In November 2007, the Lycoming County Commissioners enacted amendments to the county's zoning ordinance that allowed wind energy projects to be constructed within the County's Resource Protection Districts.[38] The commissioners stated that purpose of the amendments was to "provide for the construction and operation of wind energy facilities, subject to reasonable conditions…that will protect the public health, safety and welfare."[39] In response to the 2007 amendments, Laurel Hill Energy filed an application for a zoning permit in February 2008 and was approved in May 2008.[40]

ORDINANCE § 3230C.1, *available at* http://www.lyco.org/dotnetnuke/Home/Zoning/tabid/148/Default.aspx (follow "County Zoning Ordinance" hyperlink).

[34] *Plaxton*, 986 A.2d at 202.

[35] *Id*.

[36] *Id*.

[37] *Id*. at 202-03.

[38] *Id*. at 203.

[39] *Id*. at 207. The amendments also stated that the purpose of the ordinance was to allow wind to be harvested like any other natural resource, providing the public with another source of electricity. *Id.* at 207-08.

[40] *Id*. at 203.

Approximately one month after the permit was granted, the Plaxtons filed a complaint challenging the authority of the Lycoming County Commissioners to enact the zoning ordinance amendments.[41] The complaint alleged, inter alia, that the amendments erroneously allowed for a development that was judicially determined to be detrimental to the health and safety of the community.[42] A hearing was held by the Lycoming County ZHB in which it found that the Plaxtons failed to satisfy its burden of showing the zoning amendments were improperly enacted.[43] The Court of Common Pleas of Lycoming County affirmed the decision of the ZHB, and, subsequently, the case was appealed to the Commonwealth Court of Pennsylvania.[44]

The Commonwealth Court of Pennsylvania's opinion in *Plaxton* included a comprehensive summary of a local authority's right to enact and amend zoning ordinances and the requisite level of proof required to successfully overturn such ordinances. In *Plaxton*, the objectors to the Laurel Hill Wind Energy project alleged that a zoning ordinance permitting a project that was judicially determined to be contrary to the public health and safety is invalid as not promoting the public welfare.[45] The Court disagreed, finding that Section 601 of Pennsylvania's Municipalities Planning Code provides that the "governing body of each municipality…may enact, amend and repeal zoning ordinances to implement comprehensive plans and to accomplish any of the

[41] *Id*.

[42] *Id*. at 204.

[43] *Id*.

[44] *Id*.

[45] *Id*.

purposes[46] of the [code]."[47] Further, the Court cited precedent that the "consideration and adoption of zoning amendments is a purely legislative act within the complete discretion of the local governing body,"[48] and that "[c]ourts have no power to interfere with a strictly legislative process."[49] Therefore, the Court found that the Lycoming County Commissioners had the authority to amend the county's zoning ordinance as changing conditions or circumstances required.[50]

The objectors' also alleged that the 2007 amendments enacted by the commissioners were invalid as the amendments were enacted subsequent to a judicial finding that a wind project would be against the public welfare.[51] Responding to this allegation, the Commonwealth Court stated that "[a] zoning ordinance is valid when it promotes public health, safety or welfare, and its regulations are substantially related to the purpose the ordinance purports to serve."[52] As an initial matter, a zoning ordinance is presumed to be valid.[53] Challenges to the validity of a zoning ordinance generally arise

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[46] *See* 53 P.S. § 10604. There are a number of "purposes" for which zoning ordinances may be enacted, including: to promote the public health, safety and general welfare; to promote coordinated and practical community developments; preserve the natural, scenic and historic values in the environment; and to accommodate reasonable overall community growth, including the development of nonresidential uses.

[47] *Plaxton*, 986 A.2d at 209 (citing 53 P.S. § 10601 *et seq.).*

[48] *Plaxton* , 986 A.2d at 209-10 (citing Springwood Dev. Partners, L.P. v. Bd. of Supervisors of N. Cornwall Twp., 985 A.2d 298 (Pa. Commw. Ct. 2009)).

[49] *Plaxton*, 986 A.2d at 210 (citing *Springwood*, 985 A.2d at 298).

[50] *Plaxton*, 986 A.2d at 210 (citing Cleaver v. Bd. of Adjustment of Tredyffrin Twp., 200 A.2d 408, 413 (Pa. 1964)).

[51] *Plaxton*, 986 A.2d at 204.

[52] *Plaxton*, 986 A.2d at 205 (citing Boundary Drive Assocs. V. Shrewsbury Twp. Bd. of Supervisors, 491 A.2d 86 (Pa. 1985)).

[53] *Plaxton*, 986 A.2d at 205 (citing Woll v. Monaghan Township, 948 A.2d 933 (Pa. Commw. Ct. 2008)).

under substantive due process grounds, questioning whether an ordinance is "substantially related to a legitimate interest."[54] Under a substantive due process claim, the party challenging the zoning ordinance must prove that it is "arbitrary and unreasonable and have no substantial relationship to promoting the public health, safety and welfare."[55] The Commonwealth Court further explained that an ordinance can be declared void only when it violates the law "clearly, palpably, plainly and in such a manner as to leave no doubt or hesitation."[56] Where the validity of the zoning ordinance is debatable, the legislative judgment of the governing body must control.[57] The Commonwealth Court found that the purpose of the zoning ordinance amendments was to permit the development of wind energy and that the amendments were designed to advance this purpose.[58] Finding that the Plaxtons failed to show a lack of any rational relationship between the amendments enacted and a legitimate government purpose, the Court affirmed the ZHB's determination granting a project permit to Laurel Hill Energy.[59]

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[54] *Plaxton*, 986 A.2d at 205 (citing *Springwood*, 985 A.2d at 298)

[55] *Plaxton*, 986 A.2d at 205 (citing Open Pantry Food Marts, Inc. v. Twp. of Hempfield, 391 A.2d 20 (Pa. Commw. Ct. 1978)).

[56] *Plaxton*, 986 A.2d at 205 (citing Adams Outdoor Adver., LP v. Zoning Hearing Bd. of Springfield Twp., 909 A.2d 469 (Pa. Commw. Ct. 2007)).

[57] *Plaxton*, 986 A.2d at 205 (citing *Woll*, 948 A.2d at 938); *see also* Trigona v. Lender, 926 A.2d 1226, 1244 (Pa. Commw. Ct. 2007) ("Where the validity of an ordinance is debatable, the ordinance will be upheld as valid, and if there is room for difference of opinion as to whether the ordinance is designed to serve a proper public purpose, the court should not substitute its judgment for that of the governing body.").

[58] *Plaxton*, 986 A.2d at 208.

[59] *Id*. at 207-208.

B. NEW YORK

Parties that seek to challenge the actions of local governments within New York face an equally difficult burden of proof to overcome. On July 11, 2006, the United States District Court for the Western District of New York issued its decision in the case of *Ecogen, LLC v. Town of Italy*.[60] In 2001, Ecogen identified a ridge on which it would be feasible to build 23 wind turbines within the town of Italy, and another 30 turbines within the neighboring town of Prattsburgh.[61] Before the project could begin, Ecogen determined that a substation would have to be built within the town of Italy.[62] Ecogen stated that the substation would be roughly 150 square feet in size, set back 200 to 300 feet from the nearest town road and be approximately one mile from the Italy-Prattsburgh town line.[63] The District Court's opinion found that although the town of Prattsburgh welcomed the project, the town of Italy did not.[64]

The Town of Italy Board passed a law in June 2004 establishing a moratorium on the permitting and construction of wind turbines, relay stations and support facilities within the town.[65] The stated purpose of the moratorium was to prohibit the construction of the structures for a "reasonable time" pending the adoption of more comprehensive

[60] Ecogen, LLC v. Town of Italy, 438 F. Supp. 2d 149 (W.D.N.Y. 2006).

[61] *Id*. at 152.

[62] *Id*.

[63] *Id*.

[64] *Id*.

[65] *Id*.

zoning regulations to address wind projects.[66] Moreover, the Town of Italy Board stated that it sought to protect the property values within the town, and more specifically, protect the town's scenic and aesthetic attributes as they relate to tourism purposes.[67] Therefore, the town enacted the moratorium for a period of six months from its enactment date of June 15, 2004.[68] During that time, the permitting and construction of any wind turbine or associated structure within the town's limits was prohibited.[69] The only exception to the moratorium required an applicant to prove that deferring its application would cause an extraordinary hardship.[70]

Although the moratorium was only to extend for six months, at the time of the decision in July 2006 it was still in effect.[71] For the two years in which the moratorium had been in existence, Ecogen had been unable to erect any wind turbine within its proposed project.[72] The turbines that were scheduled to be installed within Prattsburgh

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[66] *Id*. at 152-53.

[67] *Id*. at 153. It was the Board's stated opinion that the installation of wind turbines and their accompanying structures could have an adverse impact on the town's scenic and aesthetic attributes. *Id*.

[68] *Id*.

[69] *Id*.

[70] *Id*. The Town of Italy Board was authorized to issue exceptions to the moratorium if an applicant could show that deferring a permit application or facility construction for the duration would cause some extraordinary hardship on the applicant or affected landowner. *Id*. A hearing on the merits of the exception would not only be scrutinized by the Town Board, but would also allow local residents to voice their opinions and concerns relating to the proposed project. *Id*.

[71] *Id*.

[72] *Id*. Although Ecogen did have a right to apply for an "Alleviation of Extraordinary Hardship" during this time, Ecogen never did so. *Id*. Instead, the company sent multiple letters to town officials objecting to the Town Board's decision to include the proposed substation within the moratorium. *Id*.

required the substation to be installed in order for construction to begin.[73] In its suit against the Town of Italy, Ecogen sought relief from the moratorium in the form of a court order enjoining the Town of Italy from enforcing or continuing the moratorium.[74] The Town of Italy claimed that Ecogen was not entitled to such relief and moved to dismiss the complaint.[75] Before the United States District Court, Ecogen challenged the Town of Italy's authority to enact a moratorium on the permitting and construction of wind energy projects.[76] The plaintiff contended that such a moratorium denies it the use of property without due process of law, and the Town of Italy responded that it possessed the authority to enact a moratorium under its police and zoning power.[77]

The Court began its analysis by opining that in order to prevail on its substantive due process claim, Ecogen would have to establish that the moratorium, to the extent that it prohibits the substation's construction, "bears no rational relationship to any legitimate governmental purpose."[78] The Court itself stated that such a challenge is difficult to mount as a zoning ordinance is presumed to be valid and will not be held unconstitutional so long as the wisdom behind enactment is "at lease fairly debatable" and rationally

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[73] *Id*.

[74] *Id*. at 152.

[75] *Id*.

[76] *Id*. at 156.

[77] *Id*. In its opinion, the District Court did acknowledge an issue of ripeness in the case before it. *Id*. at 154. The Court noted that as zoning regulations fell within the powers of administrative agencies, a court should not interfere with an administrative proceeding until the agency has issued its own decision. *Id*. As applied to the *Ecogen* proceedings this would require the Town of Italy Board to issue an opinion on Ecogen's permit application. *Id*. at 155. However, the Court proceeded with the case under an alternative theory and considered the case as a facial challenge to the moratorium, dispensing with the final-judgment requirement. *Id.*

[78] *Id*. at 156,

related to a permissible state objective.[79] The court's inquiry was focused on the existence of any conceivable rational basis, even if the basis was never considered by the Town of Italy Board.[80] Therefore, a plaintiff would have to "negative every conceivable basis which might support" a zoning ordinance or moratorium.[81]

In applying the standard it laid out to the case before it, the District Court found that the plaintiff failed to show that the moratorium was invalid.[82] Ecogen did not dispute that the Town of Italy Board had an interest in preserving the aesthetic character of the town.[83] The focus was then shifted to whether limiting the construction of wind turbines or a related facility was rationally related to the town's interest in preserving its aesthetic character.[84] After considering all the factors, the court found a rational relationship between limiting the construction of wind energy facilities and preserving the town's aesthetic character and Ecogen's substantive due process claim failed.[85]

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[79] *Id*. at 157. In a footnote of the opinion, the Court acknowledges that the moratorium is not a "zoning ordinance," but is still presumed to be valid as an exercise of the town's police power. *Id*. at note 5.

[80] *Id*. at 157. The fact that the Town of Italy Board's subjective motivation does not come into play raises an interesting issue. As will be discussed later in the paper, complainants seeking a remedy under a claim of nuisance based on aesthetic principles have not fared well within courts across the country. However, it would seem that, based on the case precedent cited by the District Court, a township may consider aesthetic principles in enacting or amending zoning ordinances, and prohibit the placement of wind projects within certain areas due aesthetic impacts.

[81] *Id*. at 158. (citing Heller v. Doe, 509 U.S. 312, 320 (1993)).

[82] *Ecogen*, 438 F. Supp. 2d at 158. "I am not able to say that [the moratorium] is so arbitrary or irrational as to violate plaintiff's substantive due process rights." *Id*.

[83] *Id*.

[84] *Id*. at 158-59.

[85] *Id*. at 159.

C. Necessary Showing for a Successful Attempt to Invalidate Zoning Ordinances or Other Legislative Actions

Considered together, these cases and the precedents they cite indicate that future complainants seeking to overturn local government enactments face an almost insurmountable burden of proof. As an initial matter within Pennsylvania, the Municipalities Planning Code grants a local government the authority to enact or amend its zoning ordinances for a large number of broad purposes.[86] The amending or wholesale enactment of a zoning ordinance to allow for the development of wind energy within certain zoning districts can arguably fall under more than one of the listed purposes.[87] Once a zoning ordinance is enacted under the powers granted by the Municipalities Planning Code it would be especially difficult to overturn. Potential claimants would be required to show that the ordinance is arbitrary and unreasonable, and not related to any legitimate government interest.[88] Assuming that a municipality has an interest in protecting its residents' health *and* providing for the growth of the community, a claimant would be required to show that allowing for the safe construction of wind projects would somehow not serve either of these purposes.

The District Court's opinion in *Ecogen*, and the case precedent it relies upon for its decision, shows that claimants within New York may face a more difficult time overturning a township's zoning ordinance. A township's zoning ordinance is not only

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[86] *See* 53 P.S. § 10601; *see also* 53 P.S. § 10604 (providing a number of accepted purposes for which a zoning ordinance can be enacted).

[87] *See* 53 P.S. § 10604. Zoning ordinances that allow for wind projects to be constructed within specific zones could be viewed as promoting the public health and safety by limiting the placement of projects to nonresidential areas, as well as accommodating opportunities for development of nonresidential uses.

[88] *See Plaxton*, 986 A.2d at 205.

presumed to be valid, but would be upheld so long as the court found any legitimate basis for enacting it.[89] On one hand, it seems that a township's interest in preserving its aesthetic value is sufficient enough,[90] not to mention its interest in protecting its residents' health and safety. On the other hand, it would seem undeniable that a township has an interest in raising revenue, something that could be accomplished by allowing developers to construct wind projects within its limits. Therefore, it would seem that a township would have a wide range of discretion in crafting a zoning ordinance that would be upheld against claims by both developers and residents.

III. Level of Deference Granted to Local Governments' Legislative Actions and Administrative Decisions

Another key legal development that has arisen in cases from both Pennsylvania and New York is a high level of deference being granted to the decisions of local government authorities by the judiciary. Several cases have arisen in which courts have affirmed local government decisions when prior precedent would seem to indicate an alternative finding. In large part, this hesitancy is based on the perception that local authorities are in a better position to interpret and apply zoning ordinances. And further, that lacking a strong showing to the opposite, a court should not substitute its judgment for that of the local authority.

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[89] *See Ecogen*, 438 F. Supp. 2d at 157 ("Generally a municipal zoning ordinance is presumed [to] be valid, and will not be held unconstitutional if its wisdom is at least fairly debatable and it bears a rational relationship to a permissible state purpose." *Id*.).

[90] *See Ecogen*, 438 F. Supp. 2d at 153 (the stated purpose of the ordinance that was upheld by the district court was the preservation of the aesthetic attributes of the town of Italy).

On December 16, 2009, the Commonwealth Court of Pennsylvania affirmed a Court of Common Pleas of Pike County determination that a local zoning board had properly granted a zoning permit for the construction of a private wind turbine in *Tink-Wig Mountain Lake Forest Property Owners Association v. Lackawaxen Township Zoning Hearing Board*.[91] In *Tink-Wig*, two landowners applied to the Lackawaxen Township for a zoning permit to erect a fifty-five foot tall wind turbine to generate electricity for their property.[92] The township's zoning officer issued the permit as an accessory use under the town's zoning ordinance.[93] Approximately one month later, Tink-Wig Mountain Lake Forest Property Owners Association (hereinafter, the Association), an organization that owns the common areas and roads within the community in which the landowners resided, appealed the permit.[94] At a hearing before the Township Zoning Hearing Board, the Association claimed that safety concerns relating to wind turbines and the failure of the zoning ordinance to "cover everything that's involved with wind turbines" should have prevented the township's zoning officer from issuing the permit.[95] The zoning hearing board determined that the township had acted properly in issuing the permit.[96] The Association appealed the board's decision.[97]

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[91] Tink-Wig Mountain Lake Forest Prop. Owners Ass'n v. Lackawaxen Twp. Zoning Hearing Bd., 986 A.2d 935 (Pa. Commw. Ct. 2009).

[92] *Id*. at 937

[93] *Id*.

[94] *Id*.

[95] *Id*. at 938

[96] *Id*.

[97] *Id*. at 939

On appeal before the Court of Common Pleas of Pike County, the Association alleged that the Lackawaxen Township Zoning Hearing Board erred in granting a permit for the installation of a private wind turbine under the township's zoning ordinance.[98] The court ultimately denied the Association's appeal, noting that both the township's zoning officer and hearing board had concluded that the proposed turbine was acceptable under the zoning ordinance.[99] Specifically, the court found that the Township's Zoning Hearing Board was "best suited" to interpret the township's ordinance and how it was to be applied, and that the court was bound to give "deference" to the board's interpretation of its own zoning ordinance.[100] Further, the Court of Common Pleas noted that the board was permitted to "interpret its ordinance as it best saw fit," and would not be required to review and uphold case precedent in determining whether to grant a permit.[101]

On appeal before the Commonwealth Court of Pennsylvania the Association argued that the Court of Common Pleas erred in upholding the township's zoning hearing board permit grant.[102] In its opinion, the Commonwealth Court also found that a local zoning authority is "entitled to considerable deference in interpreting its own ordinance and such interpretation is accorded great weight."[103] Therefore, the Court could only conclude that the zoning hearing board abused its discretion if its findings of fact are not

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[98] *Id*.

[99] *Id*.

[100] *Id*.

[101] *Id*.

[102] *Id*. at 939-40.

[103] *Id*. at 941 (citing Caln Nether Co., L.P. v. Bd. of Supervisors of Thornbury Twp., 840 A.2d 484 (Pa. Commw. Ct. 2004) *petition for allowance of appeal denied*, 856 A.2d 835 (2004)).

supported by substantial evidence.[104] The Commonwealth Court found that the Court of Common Pleas deferred to the local zoning hearing board as it was required to do, and, finding no abuse of discretion on behalf of the zoning hearing board, the Commonwealth Court affirmed the permit for a private wind turbine.[105]

The Commonwealth Court of Pennsylvania's decision in *Plaxton v. Lycoming County Zoning Hearing Board* also summarizes the amount of deference granted by judicial bodies to the decisions of municipal zoning authorities throughout the permitting process. The Court's opinion in *Plaxton* cites two separate instances in which a judicial court affirmed the decision of the local zoning authority, even though the decisions seem to be contradictory.[106] Prior to the 2007 amendments enacted by the Lycoming County Commissioners, the Court of Common Pleas of Lycoming County affirmed the ZHB's decision to deny Laurel Hill Wind Energy's requested permit as the Board found the project to be against the public interest.[107] However, the Court of Common Pleas of Lycoming County subsequently affirmed a permit for the same project under the 2007 zoning amendments, amendments that were deemed to be protective of the public interest.[108] The opinion does not cite any change in the Laurel Hill Wind Energy project

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[104] *Tink-Wig*, 986 A.2d at 940 (citing Ruf v. Buckingham Twp., 765 A.2d 1166 (Pa. Commw. Ct. 2001)). "Substantial evidence" is such relevant evidence as a reasonable mind could accept as adequate to support a conclusion. *Ruf*, 765 A.2d at 1166.

[105] *Tink-Wig*, 986 A.2d at 943.

[106] *Plaxton*, 986 A.2d at 202.

[107] *Id*

[108] *Id*. at 204-13; *see also* "The purpose of [the section allowing wind energy facilities] is to provide for the construction and operation of wind energy facilities, subject to reasonable conditions and information to be provided by an applicant that will protect the public health, safety and welfare." *Id*. at 207.

applied for in the initial proceedings and that following the 2007 amendments. The only change in circumstances seems to be the finding by the Lycoming County Commissioners that a wind project, with certain requirements, is consistent with and protective of the public health and safety.

A municipality or county does possess the authority to enact or amend a zoning ordinance;[109] however, principles of case precedent often guide and may even bind a court's hands. In the case of *Plaxton*, the Court of Common Pleas of Lycoming County had previously found that the Laurel Hill project posed a threat to the community's health and safety.[110] Principles of case precedent would seem to indicate that a subsequent permit application for the same project, without any changes, would also be denied as against the public interest. However, granting deference to the Lycoming County Commissioners' determination that the Laurel Hill project would adequately protect or otherwise promote the public health, the court dispensed with such a finding and instead issued an opinion affirming the permit grant.[111]

Another instance of judiciary deference to a local government authority is illustrated by a section of the United States District Court's opinion in *Ecogen* that was not discussed above.[112] In addition to challenging the Town of Italy Board's authority to enact a moratorium, Ecogen also claimed that the duration of the moratorium as

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[109] *See* 53 P.S. § 10601.

[110] *See Plaxton*, 986 A.2d at 203 (upholding a Lycoming County Zoning Hearing Board determination that the Laurel Hill project would pose a threat to the public health, safety and welfare).

[111] *See Plaxton*, 986 A.2d at 204 (upholding a Lycoming County Zoning Hearing Board determination that the Laurel Hill project would not pose a threat to the public health, safety or welfare).

[112] See *Ecogen*, 438 F. Supp. 2d 149.

unconstitutional.[113] The District Court recognized that, in order to be constitutional, a moratorium must "be of a reasonable duration, and that at some point, a so-called 'moratorium' can amount to an unconstitutional taking or violation of a property owner's due process rights."[114] To determine whether a moratorium is unreasonably long, the District Court provided that there is no bright-line rule.[115] Instead, the focus is placed on the length of time a municipality requires to study the circumstances and develop a zoning ordinance or other appropriate response.[116] The Town of Italy claimed that the moratorium was necessary to maintain the status quo while they developed a zoning plan to address wind energy projects and that the moratorium should be lifted in October 2006, after the Court's decision was issued.[117] Although the Court found it suspicious that the town should need more time when the moratorium had already been in place for over two years, it refused to grant the plaintiff's request for an injunction against enforcement of the moratorium.[118] Instead, the Court deferred to the Town of Italy Board's opinion that it must maintain the status quo for an additional three months to enact a comprehensive zoning ordinance. Therefore, the District Court granted the town

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[113] *Id*. at 161.

[114] *Id*. (citing Bronco's Entm't. v. Charter Twp. Of Van Buren, 421 F.3d 440, 453 (6th Cir. 2005) (upholding moratorium on submission of rezoning petitions in part because moratorium "was of a reasonably short duration"). Further, a moratorium cannot be used as a "de facto" means of attaining a legislative goal. *Ecogen*, 438 F. Supp. 2d at 161.

[115] *Ecogen*, 438 F. Supp. 2d at 162 (citing Tahoe-Sierra Pres. Council, Inc. v. Tahoe Reg'l Planning Agency, 535 U.S. 302, 342 (2002); *see also Tioga-Sierra*, 535 U.S. at 341 ([i]t may well be true that any moratorium that lasts for more than one year should be viewed with special skepticism)).

[116] *Ecogen*, 438 F. Supp. 2d at 161.

[117] *Id*. at 162.

[118] *Id*.

of Italy an additional ninety days, and only if it failed to enact a zoning plan within that time, or failed to grant a hardship exception within ninety days of Ecogen filing the requisite application, could Ecogen return and seek an injunction from the Court.[119]

IV. AESTHETIC NUISANCE CLAIMS

Aesthetic considerations have arisen throughout a number of different stages of wind energy development. Not only have local governments considered aesthetic impacts when seeking to enact proper zoning ordinances,[120] some parties have also brought claims based on aesthetic principles within their complaints. Wind turbines that are being installed today can reach hub heights[121] of approximately 265 feet, with blades that are up to 170 feet long extending from there.[122] To some, the sheer size of wind turbines is awe-inspiring and something of a modern marvel. To others, wind turbines are alien and even offensive. Against this background, the first jury trial in the United States addressing a nuisance claim based on aesthetic impact was recently decided in Texas.

On August 21, 2008, the Court of Appeals of Texas, Eleventh District, Eastland, issued its opinion in *Rankin v. FPL Energy, LLC*.[123] In *Rankin*, the plaintiffs sought

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[119] *Id*.

[120] *See Ecogen*, 438 F. Supp. 2d at 153 (a special concern in enacting a moratorium on the permitting and construction of wind turbines was the town's aesthetic attributes).

[121] The height of the hub, the portion of the turbine to which the blades are attached. It is not necessarily the height of the tower itself.

[122] http://www.energy.siemens.com/hq/en/power-generation/renewables/wind-power/wind-turbines/swt-3-6-107.htm. (follow tab labeled "Technical Specification").

[123] Rankin v. FPL Energy, LLC, 266 S.W.3d 506 (Tex. App. 2008).

injunctive relief based on a private nuisance claim related to the construction and operation of the Horse Hollow Wind Farm.[124] Texas law defined a nuisance as a "condition that substantially interferes with the use and enjoyment of land by causing unreasonable discomfort or annoyance to persons of ordinary sensibilities."[125] The court opined that in practice, successful claims based on nuisance generally involve an invasion or the plaintiff's property, including invasions by light, sound, odor, or some other foreign substance.[126] However, the court specifically stated that no Texas court had ever found a nuisance based solely on aesthetic impacts.[127] The court continued, finding that "matters that annoy by being disagreeable, unsightly, and undesirable are not nuisances simply because they may to some extent affect the value of property.[128]

The court's analysis began by providing that if the evidence illustrated that a wind farm was a nuisance, it was because of the plaintiffs' "emotional response to the loss of their view due to the presence of numerous wind turbines substantially interfere[ing] with the use and enjoyment of their property."[129] Under case precedent, the court found that a nuisance could occur by the encroachment of a physically damaging substance, by the

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[124] *Id*. at 508. *See* Choo, *supra* note 15, for a description of the project. ("With 421 turbines spread out over 47,000 acres, Horse Hollow, owned by FPL Energy, is the world's second-largest wind farm.")

[125] *Rankin*, 266 S.W.3d at 509 (citing Schneider Nat'l Carriers, Inc. v. Bates, 147 S.W.3d 264, 269 (Tex. 2005)).

[126] *Rankin*, 266 S.W.3d at 509.

[127] *Id*. *See also* Shamburger v. Scheurrer, 198 S.W. 1069, 1071 (Tex. Civ. App.--Fort Worth 1917, *no writ*) ("the law will not declare a thing a nuisance because . . . it is unpleasant to the eye").

[128] *Rankin*, 266 S.W.3d at 510. Further, if the injury or inconvenience is merely theoretical, or if it be slight or trivial, or fanciful, or one of mere delicacy or fastidiousness, there is no nuisance in a legal sense. *Id.*

[129] *Id*. at 511.

encroachment of a sensory damaging substance, or by emotionally harming a person by deprivation of his or her property.[130] However, granting a plaintiff the right to bring a nuisance claim because a neighbor's lawful land use or activity interferes with their view, they would have the right to effectively zone surrounding property.[131] Because a nuisance action could not be based on aesthetical impact, the court upheld the trial court's grant of partial summary judgment and jury instruction to exclude the wind farm's aesthetical impact from its consideration of the underlying case.[132]

While some other courts have also considered aesthetical impacts as the basis for nuisance claims,[133] no court within Pennsylvania or New York has directly addressed the issue. Instead, aesthetical concerns have only amounted to incidental claims within larger suits. For example, in *Tioga Preservation Group v. Tioga County Planning Commission,*[134] the Commonwealth Court of Pennsylvania affirmed a screening requirement waiver granted to AES Armenia Mountain Wind.[135] Under the facts of the case, the Tioga County Subdivision and Land Use Ordinance required "natural screening or fencing" to be installed around industrial developments that abut residential areas.[136]

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[130] *Id*. at 512.

[131] *Id*. Alternatively, allowing a plaintiff to include aesthetics as a condition in connection with other forms of interference is distinct, but of no matter within the *Rankin*. *Id*.

[132] *Id*. at 513.

[133] *See, e.g.*, Burch v. Nedpower Mount Storm, LLC, 647 S.E.2d 879 (W.Va. 2007) (finding that although aesthetical impact rarely justifies a nuisance finding, it can be considered if it is also accompanies by other forms of interference with the use and enjoyment of one's property).

[134] Tioga Pres. Group v. Tioga County Planning Comm'n, 970 A.2d 1200 (Pa. Commw. Ct. 2009).

[135] *Id*. at 1202.

[136] *Id*.

AES applied for a waiver of this requirement as the height of the turbine would make it impracticable to completely screen it from view.[137] Instead, AES claimed that by leaving as much natural vegetation as was possible around the turbine, combined with the proposed setbacks, the turbines would be shielded from view.[138] The Commonwealth Court provided that ordinance waivers are proper where literal enforcement would exact "undue hardship" and would offer little or no additional benefit.[139] Finding that the setbacks and natural vegetation would sufficiently shield the turbines from view of nearby residences, the Court found it unreasonable to require AES to install 200-foot-high fencing around the turbines and affirmed the waiver granted.[140]

A second case tangentially dealing with aesthetical impacts is the case of *Finger Lakes Preservation Association v. Town Board*.[141] One of the claims raised by the Preservation Association against the Town Board[142] alleged that the Town violated state law by failing to adequately mitigate adverse impacts when it enacted Wind Energy Incentive Zones.[143] The court found that the Town Board's reason for enacting the incentive zones was an attempt to mitigate adverse impacts caused by noise, shadow

[137] *Id*. Tioga Preservation claimed that the Tioga County Planning Commission abused its discretion in granting AES's requested waiver. *Id*.

[138] *Id*. AES agreed to comply with the ordinance insofar as it would include screen plantings around the low-lying structures and fence in the substations. *Id*.

[139] *Id*. at 1205.

[140] *Id*. The Court found that it would be unreasonable to require AES to construct such a fence when it would provide little or no additional benefit to the surrounding community and residents. *Id.*

[141] Finger Lakes Pres. Ass'n v. Town Bd., 887 N.Y.S.2d 499 (N.Y. App. Div. 2009).

[142] As an additional note, this is the Town of Italy Board, the same involved in the *Ecogen* case.

[143] *Finger Lakes Preservation*, 887 N.Y.S.2d at 504.

flicker and aesthetic degradation by seeking benefits from the wind developers in exchange for siting projects within the Town of Italy.[144] In its opinion, the court found the enactment of such incentive zones to be valid and a sufficient mitigating measure under the applicable state law.[145] The court found that the town properly considered the areas of relevant concern, including adverse aesthetical impacts, and enacted a mitigation measure that it deemed best suited to address the concerns.[146] Finding that the town's incentive zoning law had a rational basis to a legitimate government purpose, the court refused to invalidate it.[147]

The above-mentioned cases indicate that the future of successful claims against wind energy development based solely on aesthetical nuisance is relatively bleak. Further, landowners that lease property to wind developers would seem to be precluded, except in extreme circumstances, from bringing such claims against those that it has contracted with for the construction of wind turbines and related structures. However, cases such as *Burch v. Nedpower Mount Storm, LLC*[148] also indicate that aesthetical impacts may serve as a single part of a larger nuisance claim that some courts may find persuasive. Therefore, it would seem that a nuisance claim based on aesthetical impacts would only be valid if included in a larger claim containing other nuisance grounds.

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[144] *Id*.

[145] *Id.* at 505.

[146] *Id*.

[147] *Id*.

[148] *Burch*, 647 S.E.2d at 879 (finding that although aesthetical impact rarely justifies a nuisance finding, it can be considered if it is also accompanies by other forms of interference with the use and enjoyment of one's property).

V. RECENT NON-LEGAL DEVELOPMENTS RELATING TO THE EXPANSION OF WIND ENERGY

In May 2006, several governmental groups within Pennsylvania[149] issued a model local ordinance for wind energy projects.[150] Now commonly referred to as the Model Wind Ordinance for Local Governments, the groups' goal was to create a template for the regulation of wind projects that local governments could look to in enacting their own zoning ordinances.[151] Although the Model Wind Ordinance has no legal authority, it has acquired some credibility and been enacted, in large parts, by some government authorities. For example, the Lycoming County Zoning Ordinance now contains a subsection specifically addressing wind energy that parallels the Model Ordinance.[152]

The stated purpose of the Model Wind Ordinance is to provide for the construction of wind energy facilities within the adoptive municipality, subject to "reasonable conditions that will protect the public health, safety and welfare."[153] The model recommends that a municipality's ordinance should apply to all facilities constructed after its effective date, with the exception of stand-alone turbines that are

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[149] http://www.newrules.org/energy/news/pennsylvania-crafts-model-wind-energy-siting-ordinance-local-governments. The groups involved in the collaborative effort included the Pennsylvania State Association of Township Supervisors, County Commissioners Association of Pennsylvania, Pennsylvania League of Cities and Municipalities, and PennFuture.

[150] *See* http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=PA11R&re=1&ee=1; *see also* MODEL ORDINANCE FOR WIND ENERGY FACILITIES IN PENNSYLVANIA (2006), *available at* http://www.pawindenergynow.org/pa/Model_Wind_Ordinance_Final_3_21_06.pdf.

[151] *See* http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=PA11R&re=1&ee=1.

[152] *See* LYCOMING COUNTY ZONING ORDINANCE § 3230C.1, *available at* http://www.lyco.org/dotnetnuke/Home/Zoning/tabid/148/Default.aspx (follow "County Zoning Ordinance" hyperlink).

[153] MODEL ORDINANCE FOR WIND ENERGY FACILITIES IN PENNSYLVANIA, ¶ 2 (2006), *available at* http://www.pawindenergynow.org/pa/Model_Wind_Ordinance_Final_3_21_06.pdf.

primarily constructed for residential or farm use.[154] Additionally, it is recommended that any change or modification to a wind energy facility "materially alters" the size, type or number of turbines or facilities should require a permit.[155] However, under the model ordinance, turbines or facilities that had already been in existence prior to enacting the ordinance, or any like-kind modification to such turbines or facilities would not require a permit.[156]

The Model Wind Ordinance proposes several requirements for permit applications.[157] Among other things, the model suggests that a permit application provide an overview of the project, including the project's location, generating capacity and the approximate number of turbines to be erected.[158] To be included with the number of turbines, the applicant would have to specify the type, range of heights, individual generating capacity, turbine manufacturer and support structures.[159] A site plan would also have to be submitted, illustrating property lines, setback distances, location of substations and other required buildings, and the location of any transmission lines.[160] Upon submission of the application materials, the municipality would have 30 days to

[154] *Id*. at ¶ 4.A. The construction of turbines on farmland may raise a number of other issues divergent from the topic of this paper. Pennsylvania has a program in place that grants preferential tax treatment for enrolled farmland. The inclusion of a wind turbine on enrolled land may jeopardize the preferential tax treatment and require farmers to not only pay an increased tax rate on all enrolled land, but may also result in rollback taxes being assessed.

[155] *Id*. at ¶ 6.A.

[156] *Id*. at ¶ 4.B.; *see also Id.* ¶ 6.C.

[157] *Id*. at ¶¶ 7.B.1.-6.

[158] *Id*. at ¶7.B.1.

[159] *Id*.

[160] *Id*. at ¶ 7.B.4.

assess the completeness of the application and notify the applicant accordingly.[161] Within 60 days of this notification the municipality will schedule a public hearing at which the developer would have an opportunity to present its project, and the public would be given an opportunity to voice its comments or concerns.[162] Within 120 days of the completeness determination, or 45 days of any hearing, the municipality must issue its decision to grant or deny the applicant's permit request.[163]

The Model Wind Ordinance for Local Governments also recommends certain setback requirements. Setback requirements define certain minimum distances between wind turbines and other non-project structures.[164] The Model Wind Ordinance recommends that wind turbines are set back at least 1.1 times the height of the turbine from any Occupied Building.[165] This setback requirement is also the recommended distance from any wind turbine to any property line or public road.[166] If there are Occupied Buildings adjacent to the wind turbine that are owned or occupied by non-leasing landowners, the Ordinance proposes a setback distance of 5 times the Hub

[161] *Id*. at ¶ 7.C.

[162] *Id*. at ¶7.D.

[163] *Id*. at ¶ 7.E.

[164] http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=PA11R&re=1&ee=1.

[165] MODEL ORDINANCE FOR WIND ENERGY FACILITIES IN PENNSYLVANIA ,¶ 9.A.1. The set back distance is measured from the center of the wind turbine to the nearest point of the occupied structure. *Id.* "Occupied Building" is defined as "a residence, school, hospital, church, public library or other building used for public gathering that is occupied or in use when the permit application is submitted." *Id*. at ¶ 3.E.

[166] Id. at ¶¶ 9.A.3.-4.

Height.[167] The listed minimum setback requirements may be waived by signed consent of the affected party, or by the municipality upon proof of good cause.[168]

Also included within the Model Wind Ordinance are provisions that address visual impacts, noise and shadow flicker. The Ordinance would require permitted turbines to meet certain visual requirements, including being a "non-obtrusive color" such as white, off-white or gray.[169] In addition, the turbines cannot be artificially lighted[170] and cannot display excessive advertising.[171] The Ordinance prohibits audible sound emitted from a wind turbine or facility to exceed 55 decibels as measured at the exterior of an Occupied Building of a non-leasing landowner.[172] Further, the operator of the wind energy project or turbine shall make "reasonable efforts" to minimize shadow flicker on any Occupied Building of a non-leasing landowner.[173] Both requirements can be effectively waived by signed consent of the non-leasing landowner.[174]

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[167] Id. at ¶ 9.A.2. "Hub Height" is defined as the distance measured from the surface of the tower foundation to the height of the wind turbine hub, the portion of the turbine to which the blades are attached. *Id*. at ¶ 3.D.

[168] Id. at ¶ 10.

[169] Id. at ¶ 8.E.1.

[170] Id. at ¶ 8.E.2. This provision is limited in that turbines cannot be artificially lighted except to the extent required by the Federal Aviation Administration and other applicable regulations. *Id*.

[171] Id. at ¶ 8.E.3. Advertisements placed on the turbine may identify the manufacturer as well as the facility owner and operator. *Id.*

[172] Id. at ¶ 13.A. The Model Wind Ordinance provides that the method for measuring audible emissions is the standard prescribed in the *Procedures for the Measurement and Reporting of Acoustic Emissions from Wind Turbine Generation Systems Volume 1: First Tier*. *Id.*

[173] Id. at ¶ 13.B. The Model Wind Ordinance does not provide a description of "reasonable efforts" that must be undertaken to limit shadow flicker.

[174] Id. at ¶ 14.A.

The last major development surrounding the growth of wind energy within the United States is the emerging theory of "Wind Turbine Syndrome." In late 2009, Dr. Nina Pierpont, a pediatrician in New York, published a book entitled *Wind Turbine Syndrome: A Report on a Natural Experiment*, reporting her findings of a recently undertaken study.[175] Wind turbine syndrome is a phrase used to describe symptoms that have been developed by people living within one mile of industrial -sized wind turbines.[176] According to Dr. Pierpont, wind turbine syndrome often affects people with a susceptibility to low frequency vibration.[177] The noise that seems to affect people the most is at a frequency low enough that it is felt more than heard.[178] People suffering from wind turbine syndrome can feel high levels of vibrations and pulsation from a nearby wind farm, even when they cannot actually see or hear it.[179] Dr. Pierpont believes that constant exposure to these vibrations and pulsations often results in chronic sleep disturbance, which in turn leads to a greater number of secondary symptoms.[180] Based on

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[175] *See* Choo, *supra* note 15.

[176] *Id*.; *see also* http://www.kselected.com/?p=7395 (symptoms developed among the case subjects include: sleep disturbance and deprivation, headache, tinnitus, ear pressure, dizziness, vertigo, nausea, visual blurring, tachycardia, irritability, problems with concentration and memory, and panic episodes associated with sensations of movement or quivering inside the body that arise while awake or asleep).

[177] Nina Pierpont, *Wind Turbine Syndrome: Testimony Before the New York State Legislature Energy Committee*, March 7, 2006, *available at* http://www.savewesternny.org/docs/pierpont_testimony.html.

[178] *Id*. at 2. Sensitivity to low frequency vibration in the body or ears is highly variable in people, and hence poorly understood and the subject of much debate. *Id*. at 3. *See also* ENVIRONMENTAL PROTECTION AGENCY, INFORMATION ON LEVELS OF ENVIRONMENTAL NOISE REQUISITE TO PROTECT PUBLIC HEALTH AND WELFARE WITH AN ADEQUATE MARGIN OF SAFETY (1974) (discussing the effects of noise pollution on surrounding persons and recommending minimum distances from noise sources that would protect individuals).

[179] *Id*.

[180] *Id*.

her studies, Dr. Pierpont has recommended that township zoning ordinances require greater setback requirements than those proposed by the Model Wind Ordinance for Local Governments, including a setback of 1.5 miles between wind turbines and homes, schools, hospitals or similar institutions.[181] However, wind energy advocates have largely dismissed Dr. Pierpont's claim that wind turbine syndrome is a true health problem. In December 2009, the American Wind Energy Association issued a report concluding that although the noise emitted by wind turbines may annoy certain people, it does not pose any realistic health risk.[182] Other critics have called attention to the limited number of people, fewer than 40, that were included in the study.[183]

VI. CONCLUSION

In conclusion, although the future development of wind energy within the United States appears to be relatively bright, it seems that litigation surrounding that development will also continue. If websites such as "Project No Project" are any indication, a large number of lawsuits and decisions are still pending.[184] The United States government has not issued a federal siting policy addressing wind energy projects and placement, whether by choice or inaction. Likewise, Pennsylvania and New York have not regulated wind energy at the state level. Municipalities and townships

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[181] *Id*.

[182] *See* Choo, *supra* note 15.

[183] *Id*. Dr. Pierpont counters that although the number of participants was limited, it was a large enough sample size for statistical significance. http://www.kselected.com/?page_id=7128, ¶ 7.

[184] *See* http://pnp.uschamber.com/renewable/ (reporting various projects across the nation that are being delayed for one reason or another).

throughout both states seem to be willing to attempt to regulate and site wind energy developments at the local level; however, the actions that are taken seem to be controversial, objectionable or otherwise inadequate to one party or another. If any overarching trend can be taken from the cases discussed throughout this comment, it is that although local governments possess a large amount of authority to regulate the wind industry in the best way that they see fit, a number of parties, on both sides of development, seem to be ready to scrutinize and challenge their attempts.