NOTES

ARE TRADITIONAL PROPERTY RIGHTS RECEIVING WITH RENEWABLE ENERGY ON THE HORIZON?

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I. INTRODUCTION

In recent years, the escalating price of imported oil has led to an intensified search for alternative domestic energy sources. Moreover, higher awareness of and concern over the environmental and public health consequences of the use of fossil fuels as an energy source has generated an increased interest in finding reliable sources of renewable energy. This Note will focus on how the development of two renewable energy sources—wind, primarily, and solar—impedes upon and is hindered by traditional property rights.

To implement the use of wind and solar energy, developers must build structures to collect and generate the energy source. Often these wind farms and solar collectors impose upon neighboring land or on perceived rights associated with that land. For example, there

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may be safety concerns and noise complaints, and the structure may obstruct the view of the neighboring landowner. This infringes on a landowner’s right to enjoyment of his property and potentially decreases the market value of his property. As there is significant and long-standing resistance to the infringement of an individual’s property rights, wind farm and solar developers have historically faced an uphill battle.

Furthermore, wind farms and solar collectors require unobstructed access to wind and sunlight. Therefore, the siting of these structures is problematic. While there are many regulatory and common law methods by which a developer may obtain access to the energy source in question, there are also many regulatory and common law responses aimed toward protecting the neighboring property owners’ rights. The protection of these property rights has traditionally taken priority, but the growing demands which accompany the current economic, energy, and environmental crisis


9. Aside from the creation of special statutory protections, residents may simply seek zoning protection against the siting of power generation facilities in certain areas of a municipality. See, e.g., THOMAS JAY HALL & JOHN C. PHILLIPS, NEW JERSEY LAND USE § 2.15 (2d ed. 2009) (explaining the municipal power to create zoning ordinances in New Jersey).
have the potential to change long-standing property law.

This Note will identify competing interests in the development of renewable energy sources and potential regulatory and common law constraints on that development, through the lens of basic property rights. First, this Note examines the United States' historic struggle between protecting property rights and emphasizing public welfare. Second, this Note discusses the common law, constitutional, and legislative mechanisms available to protect the developer's interest in securing access to wind and sunlight. Third, this Note addresses the potential harmful effects that renewable energy source development, particularly wind, may have on neighboring landowners. Finally, this Note examines the common law and statutory responses to the development of alternative sources of energy as a way to meet the demands of the public and the individual property owners whose interests may be negatively affected by such development.

II. PROPERTY RIGHTS VS. SOCIAL WELFARE: A BRIEF HISTORY

Historically, the law deemed any physical intrusion into another's property as a trespass, which the courts would subsequently terminate.10 "The theory was simply that the legal interest known as property must be vigorously protected or the concept of private property would be valueless."11 Scholars have articulated this concept as follows:

Probably the most important factor which describes the nature of the interest protected under the law of trespass is nothing more than a feeling which a possessor has with respect to land which he holds. It is a sense of ownership; a feeling that what one owns or possesses should not be interfered with, and that it is entitled to protection through law.12

Nonetheless, society has long sought to achieve a balance between social welfare and individual autonomy.13 For the individual, this search entails finding a balance between his responsibilities to the community, and his individual rights and personal freedom. For the government, it entails striking a balance between acting as the protector of private ownership rights and as a regulator of public interest.14

The Industrial Revolution brought with it tremendous economic

11. Id.
12. Id. at 69 (quoting Martin v. Reynolds Metals Co., 342 P.2d 790, 796-97 (Or. 1959)).
14. Id. at 1176-77.
and industrial growth.\textsuperscript{15} “Property rights’ were of paramount value
during this time,” revealing a preference for autonomy over other
social values such as community and responsibility.\textsuperscript{16} Judges
embraced this concept “with unquestioning faith in the virtue of
‘progress,’ zealously protecting individual property and autonomy
through substantive due process analysis.”\textsuperscript{17} During the New Deal
era of the 1930s, however, as the abuses of industrialization became
more widespread, Congress began enacting legislation to restore the
nation’s “economic and social wellbeing.”\textsuperscript{18} This trend continued
during the 1960s with President Lyndon B. Johnson’s “Great Society
program.\textsuperscript{19} Nevertheless, during the 1980s the country once again
saw a rise of the “pursuit of wealth and security,” in which corporate
executives “were tempted by opportunities to promote their
individual well-being at the expense of the community welfare.”\textsuperscript{20} It
was during this time that Richard Epstein put forth his property
rights philosophy, which marked “an historical shift from the
philosophy of communitarianism to that of individualism.”\textsuperscript{21} The
Supreme Court adopted this view in \textit{Lucas v. South Carolina Coastal
Council},\textsuperscript{22} in which the Court “limited the permissible scope of
uncompensated governmental regulation in certain cases to a
seemingly narrow ‘new nuisance’ defense.”\textsuperscript{23}

Between \textit{Lucas} and 2005, “the U.S. Supreme Court decided six
additional regulatory takings cases” which “[a]rguably . . . indicate a
renewed concern for the public interest served by land use and other
environmental regulations, thereby beginning to restore the balance
between individual rights and community welfare.”\textsuperscript{24} Recently, other

\textsuperscript{15} Id. at 1177-78.
\textsuperscript{16} Id. at 1178.
\textsuperscript{17} Id.; see \textit{Lochner} v. New York, 198 U.S. 45, 57 (1905) (reversing the conviction of a
bakery owner for violating a labor safety law setting maximum hours for bakers,
thereby protecting the rights of industrial employers and limiting legislative
protection of the health and welfare of laborers which might hinder economic
productivity).
\textsuperscript{18} Klein, \textit{supra} note 13, at 1180; see, e.g., \textit{Social Security Act} of 1935, 42 U.S.C.
\textsuperscript{19} Klein, \textit{supra} note 13, at 1180-81; see, e.g., \textit{Civil Rights Act} of 1964, 42 U.S.C. \textsection\textsection 2000e-17 (2006); \textit{Voting Rights Act} of 1965, 42 U.S.C. \textsection\textsection 1971-1974e (2006); \textit{Health Insurance for Aged and Disabled}, 42 U.S.C. \textsection\textsection 1395-1395ggg (2006); \textit{Grants for States
for Medical Assistance Programs}, 42 U.S.C. \textsection\textsection 1396-1396v (2006).
\textsuperscript{20} Klein, \textit{supra} note 13, at 1185.
\textsuperscript{21} Id. Epstein advanced the theory that “individuals should not be forced to bear
community burdens.” \textit{Id.} at 1186 (citing \textit{Richard A. Epstein, Takings: Private
Property and the Power of Eminent Domain} 265 (1985)).
\textsuperscript{22} 505 U.S. 1003 (1992).
\textsuperscript{23} Klein, \textit{supra} note 13, at 1186 (citing \textit{Lucas}, 505 U.S. at 1027-32).
\textsuperscript{24} \textit{Id.} at 1186-87; see \textit{generally} San Remo Hotel, L.P. v. San Francisco, 545 U.S.
323 (2005); \textit{Lingle v. Chevron U.S.A. Inc.}, 544 U.S. 528 (2005); Tahoe-Sierra Pres.
branches of the federal government have begun moving in the same direction. For example, President Obama’s Economic Recovery Plan proposed to double the United States’ supply of renewable energy within three years through the use of a market-based cap-and-trade program. In the context of property law, this movement is necessary to protect wind and solar developers’ access to wind and sunlight. As one scholar observed, “[I]f we do not establish a legal right of access to sunlight, we cannot expect potential solar energy users to invest in energy systems which depend upon the whim of surrounding property owners for fuel.”

III. METHODS FOR SECURING ACCESS TO SUNLIGHT AND WIND

Traditionally, no common law or public land use regulation directly addressed the methods of securing access to the sun or wind as energy sources. In recent decades, increased interest in solar energy led to the adoption of various legal devices addressing the protection of solar access. These devices function as potential models and precedent for the protection of wind access. Yet courts have refrained from identifying a specific right to wind access, and wind developers are therefore at additional risk. Consequently, wind developers often must purchase adjacent land sufficient to ensure that their wind supply is unobstructed.


25. See, e.g., discussion infra Parts II.C.3, II.D.2.

26. See President Barack Obama, Address to Joint Session of Congress (Feb. 24, 2009). In support of this effort, the President’s proposed budget “will invest $15 billion a year to develop technologies like wind power and solar power.” Id.

27. One scholar has observed that “the absolutist language of [property] rights . . . has the potential to stifle the discussion of important social and environmental policies.” Klein, supra note 13, at 1159.


30. Id.

31. Susan Perera, Following Minnesota’s Renewable Energy Example: Will Federal Legislation Fly High or Flap in the Wind?, 9 MINN. J.L. SCI. & TECH. 949, 957 (2008); York & Settle, supra note 29, at 389. It should be noted, however, that solar technology is significantly different than wind technology, and therefore the protection provided for access to the resources warrant separate treatment. York & Settle, supra note 29, at 389 n.9. For instance, solar collectors point in a specific direction, thereby limiting the area of protection required, whereas wind farms generally must be protected from obstruction of wind access in all directions. Id.

32. Perera, supra note 31, at 957.

33. Id.
Nevertheless, "[w]ind is the fastest growing source of electricity in the world."³⁴ While wind power has had slow growth in the United States, the recent rising costs of fossil fuels, combined with increasingly efficient wind technology, have amplified Americans' interest in wind power.³⁵ "Modern wind technology is 'increasingly more efficient, quiet, reliable, and inexpensive with each passing year.'"³⁶

One of the greatest impediments for wind farm developers is "uncertainty about unobstructed access to the wind."³⁷ Access to an adequate wind flow is critical to wind energy development, and the possibility of even partial obstruction of wind will threaten the feasibility of wind energy development.³⁸ Since wind farms are relatively new to the United States and there is little legal protection for access to wind, such access, and thus wind power feasibility, is uncertain.³⁹

This section will examine several approaches for protecting that access. First, this section will discuss common law access to sunlight and wind and the codification of the common law as it applies to wind and solar energy. While this is the most commonly used approach, it is relatively ineffective since it provides protection of access through private agreements between developers and landowners on a lot-by-lot basis.⁴⁰ Second, this section will discuss the legislative mechanisms available to protect and encourage developers' access to wind and sunlight.

A. Securing Access Through Common Law Doctrines

The issue of access to sunlight traces back to the English doctrine of ancient lights.⁴¹ This doctrine, which has been generally repudiated in the United States⁴² due to the public policy interest in industrial growth,⁴³ "typically arose when [a landowner] complained

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34. Id. at 950.
35. Id. at 950-51. Between 2000 and 2005, projects for wind farms were either planned or were under construction in many states. Fred Bosseman et al., Energy Economics and the Environment 1023 (2d ed. 2006).
41. See York & Settle, supra note 29, at 389-90.
42. Id. at 390; Fontainebleau Hotel Corp. v. Forty-Five Twenty-Five, Inc., 114 So.2d 357, 359 (Fla. Dist. Ct. App. 1959).
43. See, e.g., Pierre v. Fernald, 26 Me. 436, 441 (1847) (holding that the ancient
because a neighbor had erected a [building or] structure” that blocked the “sunlight from entering into his windows.”44 The doctrine recognized that a landowner was entitled to sufficient sunlight to read or work for a requisite period of time.45 However, the purpose of this doctrine was to eliminate the need for artificial light during daylight hours.46 It was not intended to address the use of sunlight as an energy-producing fuel.47 While the doctrine does indicate common law recognition of the value of sunlight as a means for energy conservation, which is consistent with the current interest in pursuing the use of renewable sources of energy, it offers scant precedent for a right to unobstructed access to wind or sunlight.48

Developers can use private nuisance law to try to preclude adjacent property owners from infringing upon the developers’ enjoyment of wind and sunlight access.49 Private nuisance is a common law doctrine used to resolve disputes regarding land use.50 A court may award “damages and, in some cases, injunctive relief” to a developing landowner if the court finds that his use and enjoyment of the land has been “substantially and unreasonably interfere[d]” with by an adjacent landowner’s activities.51 Generally, “only abnormally abnoxious [sic] land uses which substantially interfere with normal

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44. Gergacz, supra note 28, at 4.
46. Id.
47. Gergacz, supra note 28, at 4.
51. Id. There must be substantial harm or threat of harm to plaintiff’s enjoyment of land. It is still uncertain what constitutes “substantial.” It is more clear what courts have found to be unsubstantial. For instance, interferences whose only impact is to diminish the landowner’s property value or to offend aesthetic tastes have been found not sufficiently substantial to constitute a private nuisance. See 1-9 DISPUTES BETWEEN ADJOINING LANDOWNERS-EASEMENTS § 9.03(2)(b) (2006) (citing Cahill v. Heckel, 209 A.2d 651, 652 (1965) [hereinafter DISPUTES] (“[I]n New Jersey it has been said that unsightliness is no basis for a finding of nuisance.”)). Activities that are mere annoyances are not sufficient to establish a private nuisance deserving of damages or equitable relief. Id. The judgment is based on whether the activity would offend a person of “ordinary sensibilities,” not a person who is “extra-sensitive.” Id.
ones are actionable.52 A wind farm may be characterized as abnormally sensitive, and most of the structures which obstruct wind may be considered normal.53 Thus, private nuisance is not likely to provide much protection for a wind developer's access to wind.54

Courts may determine that the range of land uses accorded legal protection varies among different geographical areas.55 In doing so, courts may choose to apply private nuisance law to protect wind access only in those areas optimally suited for wind energy generation, and may therefore provide incentive for clustering wind farm development in those areas.56 Nonetheless, such protection runs the risk of considerable inconsistency in its application, and is

52. York & Settle, supra note 29, at 391. Nonetheless, "even those land uses which are intentional, negligent or abnormally dangerous are not necessarily actionable nuisances: those uses must also be found to be unreasonable under the circumstances." DISPUTES, supra note 51, § 9.03(2)(a)(i). The issue of reasonableness is an uncertain one. For instance, New Jersey courts have held that certain land uses which are permitted under zoning laws are not protected from nuisance actions by neighboring landowners. See Kozesnik v. Montgomery Twp., 131 A.2d 1, 13 (N.J. 1957) ("It is true that where a nuisance results, it is no defense that the zoning ordinance authorized the operation . . . .''); Rose v. Chaikin, 453 A.2d 1378, 1382 (N.J. Super. Ct. Ch. Div. 1982) (citing Monzolino v. Grossman, 168 A. 673, 675 (Ct. Err. & App. N.J. 1933)) ("Whether a given use complies with controlling governmental regulations, while not dispositive on the question of private nuisance, . . . does impact on its reasonableness.'"); Hyde v. Somerset Air Serv., Inc., 61 A.2d 645, 647 (N.J. Super. Ch. Div. 1948) ('[T]he legislature or governmental agencies cannot constitutionally confer upon individuals or private corporations, acting primarily for their own profit . . . any right to deprive persons of the lawful enjoyment of their property.'). Furthermore, land use activities which are not nuisances originally may become nuisances if the nature of the surrounding area changes. DISPUTES, supra note 51, § 9.03(2)(a)(ii) (citing Bove v. Donner-Hanna Coke Corp., 258 N.Y.S. 229 (N.Y. App. Div. 1932)); see Burch v. Nedpower Mount Storm, LLC, 647 S.E.2d 879, 893-94 (W. Va. 2007) (finding that although a wind farm was not a nuisance per se, this does not mean that the use could not turn into a nuisance, and therefore the allegations were legally sufficient to state a claim to prospectively enjoin a nuisance).

53. York & Settle, supra note 29, at 391. However, structures erected for the sole purpose of depriving a neighbor of wind or sunlight access, referred to as "spite fences," would be actionable. Id. at 391 n.19 (citing Hornsby v. Smith, 13 S.E.2d 20, 25 (Ga. 1941) ("The air and light no matter from which direction they come are God-given, and are essential to the life, comfort, and happiness of everyone.'"); Barger v. Barringer, 66 S.E. 439, 440 (N.C. 1909) ("Light and air are as much a necessity as water, and all are the common heritage of mankind.'"); Burke v. Smith, 37 N.W. 838, 842 (Mich. 1888) ("The right to breathe the air, and to enjoy the sunshine, is a natural one.'). To be treated as nuisances as a matter of law these structures must be shown to be of no beneficial use to their owners and to have been constructed for the sole purpose of annoying a neighbor. DISPUTES, supra note 51, § 9.03(1)(2)(ii). Some states, such as New York, have created statutes to that effect. See, e.g., N.Y. REAL PROP. LAW § 829.


55. Id. at 391-92.

56. Id. at 392.
therefore inadequate. It is also improbable; relatively few courts have administered private nuisance law with an eye toward community planning goals. Even in areas where wind energy generation may be considered normal, it is unlikely that a court would find “normal vegetation and structures on adjacent land private nuisances.” It is also improbable; relatively few courts have administered private nuisance law with an eye toward community planning goals. Even in areas where wind energy generation may be considered normal, it is unlikely that a court would find “normal vegetation and structures on adjacent land private nuisances.”

B. Securing Access Through Acquisition of Property Interests: Common Law and Eminent Domain

While purchasing adjacent land would be the best way for a developer to protect access to wind and sunlight, this approach is also the most costly. Therefore, a developer can rely on acquisition of “less-than-fee” property interests in surrounding land to provide wind and sunlight protection more cost-effectively.


“[T]he most likely less-than-fee property interests” that a developer may acquire to protect wind and sunlight access are easements and restrictive covenants. An easement is a “common law device creating a third party’s right[]” to make a limited use of another’s property, including the area above or below the land. The land benefiting from the easement, the “dominant estate,” has beneficial rights over the land burdened by the easement, the “servient estate.” An easement is more than a covenant or promise; it is a nonpossessory interest in the land.

Two types of easements which may protect wind flow are airspace easements and negative easements. Airspace easements do not control wind that passes through the space, but they establish an affirmative right to the space over the land. By controlling the space over the land, an airspace easement may preclude a structure from projecting into this space, thereby effectively controlling

57. Id.
58. Id.
59. Id.
60. Id. at 393.
61. Id.; Perera, supra note 31, at 957-58.
62. York & Settle, supra note 29, at 393; see Perera, supra note 31, at 958.
63. Gergacz, supra note 28.
64. Id. at 5.
65. York & Settle, supra note 29, at 393-94.
66. Id. at 394; see Perera, supra note 31, at 958.
obstruction of wind flow.\(^7\)

Although a negative easement also benefits the dominant tenant, it does not permit a dominant tenant to use the servient estate.\(^8\) Rather, it gives the dominant tenant the right to inhibit the servient tenant from using his land in a way that would otherwise be permissible if that use restricts the benefit of the easement.\(^7\)

Solar easements are negative easements because they "prohibit[] the servient tenant from obstructing the sunlight flowing through . . . his property" in a way that would restrict the dominant estate's exposure to the direct rays of the sun.\(^1\) Similarly, a wind developer can obtain a negative easement to restrict a servient tenant from erecting structures over a certain height and in certain locations which would prevent wind from reaching the dominant estate.\(^2\) Both airspace and negative easements may be perpetual if drafted to bind and benefit future owners of the dominant and servient estates.\(^3\)

Easements may be created a variety of ways. An express easement is created by a written instrument, and they have been consistently upheld by the courts.\(^4\) Since the scope of the easement depends on the language used in the writing, the drafters should "clearly and completely describe the airspace which is to remain unobstructed."\(^5\) If there is no written instrument, a prescriptive easement may be created where the dominant tenant enjoys long-continued use of the easement with the knowledge of the servient tenant, and the use is adverse to the servient tenant's interests.\(^6\) For example, a solar energy user could argue that he has a prescriptive easement over his neighbor's land when he has enjoyed long-continued use of the sunlight running over it.\(^7\) This argument, based upon the English doctrine of ancient lights, has nevertheless been rejected as it cannot be reconciled with rapidly growing communities, and "merely enjoying sunlight [flowing] across a neighbor's property" does not constitute adverse use of the property.\(^8\)

Unlike express and prescriptive easements, implied easements of

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\(^7\) Gergacz, \textit{supra} note 28, at 5.

\(^8\) See \textit{id.}; Perera, \textit{supra} note 31, at 958; York & Settle, \textit{supra} note 29, at 394.

\(^1\) See Gergacz, \textit{supra} note 28, at 5.


\(^3\) Perera, \textit{supra} note 31, at 958; York & Settle, \textit{supra} note 29, at 394-95.

\(^4\) See Gergacz, \textit{supra} note 28, at 5.

\(^5\) See \textit{id.} at 6.

\(^6\) \textit{Id.} Thus, if a would-be prescription easement user has permission of the owner, he cannot obtain a prescriptive easement.

\(^7\) \textit{Id.}

\(^8\) \textit{Id.} at 7.
sunlight access "ha[ve] not been uniformly applied by courts."79 A court may find that an implied easement was created where, although the parties failed to include the easement expressly in the conveyance instruments, the facts, conditions, and circumstances of the land and conveyance point to the conclusion that an easement was intended by the parties.80 Some states reject the notion that an implied easement creates access to sunlight.81 In doing so, these courts stress the same reasons as those for rejecting the creation of prescriptive easements of sunlight access, namely that such an easement is not suitable to growing and changing American communities.82 Other states, however, have rejected sweeping public policy interpretations and have upheld the creation of implied easements on a case-by-case basis, focusing on the necessity of the easement to the dominant tenant.83 This inconsistency creates further risk for the developer.

Another mechanism available to protect a developer's access to wind or sunlight is a restrictive covenant. Unlike easements, restrictive covenants are not considered conveyances of interest in land.84 Rather, they are private agreements that function as contractual obligations restricting an owner's use or occupancy of the land for the benefit of other land.85 Covenants are an unreliable means of protection against succeeding owners of the servient land, because they may be terminated for a variety of reasons.86 Neighborhood conditions may change in such a way as to render the covenant impracticable,87 the government may condemn the servient estate,88 or legislative action may terminate the covenant.89

79. Id.
80. Id. (citing BLACK'S LAW DICTIONARY 600 (rev. 4th ed. 1968)).
81. Id.
82. Id. (citing Baird v. Hanna, 159 N.E. 793, 794 (Ill. 1928); Blumberg v. Weiss, 17 A.2d 823, 826 (N.J. 1941)).
83. Id. (citing Nomar v. Ballard, 60 S.E.2d 710, 719 (W. Va. 1950); Lane v. Flautt, 6 A.2d 228, 230-31 (Md. 1939)).
84. York & Settle, supra note 29, at 395 (citing 2 AMERICAN LAW OF PROPERTY § 9.8, at 362-63 (A. Casner ed., 1952) ("[A] covenant running with the land is looked upon by a court of law as a contractual obligation only and not as a property interest in the covenantor's land.")).
85. Id.
86. Id. at 395-96.
87. See id. at 395 (citing Trustees of Columbia C. v. Thacher, 87 N.Y. 311, 317 (1881)).
88. Id. (citing Ark. State Highway Comm'n v. McNeill, 381 S.W.2d 425, 426-27 (Ark. 1964); Robert R. Wright, Recent Developments in Eminent Domain in Arkansas, 19 Ark. L. Rev. 121, 136-40 (1965)).
89. York & Settle, supra note 29, at 395-96 (citing CAL. CIV. CODE § 714 (West 1982)). For example, "[i]n 2007, New Jersey enacted legislation preventing homeowners associations from prohibiting the installation of solar collectors on certain
Therefore, drafters should be very careful if relying on a covenant to protect wind and sunlight access.90

2. Common Law Codification: Statutory Protection

The above common law devices are state-regulated.91 Several states have passed statutes codifying the common law doctrine of solar easements,92 thereby legislatively protecting a solar developer's legal right to unobstructed access to sunlight.93 However, these common law statutes require a servient landowner to consent to the easement.94 Thus, this approach does not protect access for the solar developer who cannot reach an agreement with his neighbor through whose space the sunlight passes.95 As such, it may be an inadequate way to encourage solar energy development or to sufficiently protect sunlight access.96

90. York & Settle, supra note 29, at 396.
91. Gergacz, supra note 28, at 8; York & Settle, supra note 29, at 395 (citing COLO. REV. STAT. § 38-32.5-101 (1982); N.M. STAT. ANN. § 47-3-4 (1978); OR. REV. STAT. § 105.880 (1981) (making it impermissible to "include in [a conveyance] instrument . . . a provision prohibiting the use of solar energy systems by any person on that property"); WASH. REV. CODE ANN. § 64.04.140 (West Supp. 1982) ("[S]olar easements appropriate to assuring continued access to direct sunlight for solar energy systems may be created and privately negotiated."); see CAL. PUB. RES. CODE §§ 25982-83 (West Supp. 2009) (declaring certain obstructions of solar collectors are private nuisances). For instance, New Mexico's solar rights act "creates a legal right to unobstructed sunlight based . . . upon the first beneficial use of the sunlight for solar power." Gergacz, supra note 28, at 13 (quoting N.M. STAT. ANN. §§ 47-3-1 to 47-3-5 (1978)). In other words, the first beneficial user of the solar right for solar power has priority over subsequent users. Id. at 14. Once an individual builds a solar energy system, he has a permanent right to unobstructed and continuous access to sunlight for that collector. Id. The New Mexico statute recognizes "the right to use the natural resource of solar energy." Id. at 15 (quoting N.M. STAT. ANN. § 47-3-4 (1978)). "This is a radical break from traditional American property law. Only a few states have ever recognized that a legal right to unobstructed sunlight could be acquired by mere use." Id.
93. Gergacz, supra note 28, at 8.
94. See id. at 12-13.
95. See id.
Common law statutes may be broadened to include protection of wind access easements. However, because solar easements only require access to a small area of direct sunlight, it is uncertain whether these statutes will function to protect wind developers, who seek to access wind from multiple directions and over large areas. Some states have addressed the issue of wind easements.

3. Constitutional: Eminent Domain

In many cases a wind or solar developer may not be able to acquire fee or less-than-fee interests in adjacent land, where servient landowners refuse to sell or are unwilling to sell at an affordable price. In these instances, a developer seeking to secure wind or sunlight access may need to depend on the power of eminent domain. This power allows a government agency to purchase or condemn a property. Condemnation or purchase of private property for a private use or purpose is forbidden; eminent domain only extends to condemnation for a public use or purpose. The meaning of the term "public use" depends on what the legislature declares to be the public interest.

A government agency may condemn or purchase property in an optimal wind farm or solar energy development location, thereby acquiring a fee or less-than-fee property interest which it can sell to the developer. However, this acquisition of property interests has
been held not sufficiently “public”\(^\text{105}\) or “necessary”\(^\text{106}\) to qualify as permissible under the standards of eminent domain.\(^\text{107}\) But where the developer is a government agency, the power extends to both the site and to the necessary protective property interests in neighboring land.\(^\text{108}\)

Government acquisition of property interests to protect wind and sunlight access may be more politically acceptable and less susceptible to constitutional challenges than police power regulation.\(^\text{109}\) For instance, where a legislative act creates a right of a developer to use airspace above adjacent land belonging to a neighboring landowner,\(^\text{110}\) the act arguably violates the Fifth Amendment of the Constitution of the United States.\(^\text{111}\) Nonetheless, regulation of land use is a viable mechanism through which a developer may acquire access.

C. Securing Access Through Regulation

Regulation of the use of land adjacent to the wind farm or solar collector has advantages over other means of wind and sunlight access protection. First, it is more cost effective than acquiring fee or less-than-fee property interests in adjacent land, and it eliminates the expensive and time-consuming process of negotiating such acquisitions.\(^\text{112}\) Second, it eliminates the uncertainty of common law

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\(^{105}\) Id. at 396 n.45 (comparing In re Seattle, 638 P.2d 549, 556 (Wash. 1981) (finding a government entity is not permitted to utilize eminent domain to condemn land for a project “where the purpose of a proposed acquisition is to acquire property and devote only a portion of it to truly public uses, the remainder to be rented or sold for private use”) and Hougue v. Port of Seattle, 341 P.2d 171, 191 (Wash. 1959) (finding government entity may not invoke eminent domain to condemn land for industrial use and park improvements, even where the legislature determined the intended use was “public”) with Puerto Rico v. Rosso, 226 F. Supp. 688, 689-90 (D.P.R. 1964) (upholding the condemnation of land)).

\(^{106}\) Id. at 396 n.46 (citing In re Puget Power, 625 P.2d 723, 724-25 (Wash. Ct. App. 1981) (explaining that, while a “private corporation must establish ‘necessity’ by [a] preponderance of evidence, a legislative determination of ‘necessity’ for [the] exercise of eminent domain will be deemed conclusive, unless” such determination is arbitrary)).

\(^{107}\) Id. at 396.

\(^{108}\) Id. Even some private developers may be authorized to exercise the power, making available to them the acquisition of the development site as well as adjacent property interests to protect access. Id. at 396-97.

\(^{109}\) Id. at 397.

\(^{110}\) Gergacz, supra note 28, at 13-15 (citing N.M. STAT. ANN. §§ 47-3-1 to 47-3-5 (1978) (creating “a legal right to unobstructed sunlight based not upon agreements between [the] landowners, but upon the first beneficial use of the sunlight for solar power”); see also supra note 82.

\(^{111}\) See U.S. CONST. amend. V.

\(^{112}\) York & Settle, supra note 29, at 397.
doctrines, because it is specifically designed to protect access to wind and sunlight.\textsuperscript{113} "As long as the regulation does not prevent some reasonable use of regulated land," the regulation should be deemed constitutional.\textsuperscript{114} Where the regulation of the land use severely reduces the value of the property, however, the regulation may be seen as unfair and may be less politically palatable than private acquisition of property interests.\textsuperscript{115} Moreover, where the regulation precludes an adjacent landowner's reasonable use of the land, the regulation may be unconstitutional.\textsuperscript{116}

Under the Fifth Amendment of the United States Constitution, "No person shall be . . . deprived of . . . property, without due process of law; nor shall private property be taken for public use without just compensation."\textsuperscript{117} Under the police power, "the government has the right to regulate land use," without compensation to the landowner regardless of resulting economic loss suffered by the landowner.\textsuperscript{118} However, the question becomes how much regulation is permitted before a "taking" occurs, thereby requiring just compensation.\textsuperscript{119} If

\begin{itemize}
  \item \textsuperscript{113} Id.
  \item \textsuperscript{114} Id.
  \item \textsuperscript{115} Id.
  \item \textsuperscript{116} See id.
  \item \textsuperscript{117} U.S. CONST. amend. V.
  \item \textsuperscript{118} Gergacz, supra note 28, at 15. It has been suggested that the limit should be determined in consideration of the extent of diminution of the burdened property's value. Id. at 16. Generally, courts apply a case-by-case analysis, "balancing the public need for the regulation with the harm caused to the affected landowner." Id. at 17; see Dep't of Ecology v. Pacesetter Constr. Co., 571 P.2d 196, 209-10 (Wash. 1977) (adopting a balancing test to determine whether a taking has occurred); Maple Leaf Investors, Inc. v. Dep't of Ecology, 565 P.2d 1162, 1164 (Wash. 1977) ("The question essentially is one of social policy which requires the balancing of the public interest in regulating the use of private property against the interests of private landowners not to be encumbered by restrictions on the use of their property.").
  \item \textsuperscript{119} Gergacz, supra note 28, at 15. Some courts hold that the test for determining whether the land has been regulated to the point that it has been "taken" involves looking to see if the regulation has as its goal the protection of the public from harm. If this is the case, the regulation is a valid exercise of police power. See Hadacheck v. Sebastian, 239 U.S. 394, 411-12 (1915) (holding a city ordinance prohibiting the operation of a heretofore lawful enterprise does not amount to an implicit taking of the business's property because vested private interests must yield to progress, even where a newly prohibited business is not a nuisance \textit{per se}). Other courts look to see if the regulation deprives the affected land of any practical economic value. To satisfy this test, the land must have practically no economic value left to it. Sometimes even severe loss is not enough to constitute a taking. See Penn Cent. Transp. Co. v. New York, 438 U.S. 104, 124-25 (1978) (holding that the landowner must be left with some reasonable economic value); Euclid v. Ambler Realty Co., 272 U.S. 365, 195-96 (1926) (refusing to scrutinize the provisions of an ordinance, "sentence by sentence," where "injunction is sought . . . upon the broad ground that the mere existence and threatened enforcement of the ordinance . . . constitute a present and irreparable injury," in order to find the sum of the provision unconstitutional based on the
the government invades property substantially enough, it must pay for the taking. 120 Physical invasion includes noise and vibration, both of which are concerns of the wind developer.

1. Zoning

Local land use regulation such as zoning may be used to promote renewable energy development. 121 Only the state has the power to zone. 122 This power has been delegated to cities and counties by enabling statutes. 123 All local zoning activity must abide by the enabling statutes. 124 States can regulate solar energy systems and wind farms through the creation of zoning rules. 125 These rules would take into consideration height and noise restrictions, as well as setback and minimum lot size requirements. 126 Ordinance provisions relating to wind and solar energy development may be designed to protect the developer’s interest in access to wind or sunlight, the adjacent landowners’ property interests, or both. 127 Many states have already enacted zoning statutes to protect renewable energy developers’ access to wind and sunlight. 128

Wind access may also be protected through subdivision regulation, which ensures public supervision of newly created lots. 129 For instance, a subdivision regulation may regulate the alignment of potential unconstitutionality of its parts).

120. See First English Evangelical Lutheran Church of Glendale v. County of Los Angeles, 482 U.S. 304, 319-20 (1987) (holding that a landowner may obtain damages for governmental taking of its property before it is finally determined that the regulation constitutes a taking under the Fifth and Fourteenth Amendments). The Fifth Amendment “does not prohibit the taking of private property.” See id. at 314. “The clause is designed not to limit the governmental interference with property rights per se,” but if government action constitutes a taking, the government has a constitutional obligation to pay just compensation. Id. at 315.

121. Perera, supra note 31, at 960; York & Settle, supra note 29, at 397.

122. See Cope v. Inhabitants of Brunswick, 464 A.2d 223, 227 (Me. 1983) (citing Stucki v. Plavin, 291 A.2d 508, 511 (Me. 1972)) (holding that local zoning boards and municipalities themselves have no inherent authority to regulate the use of private property; this authority may only be conferred by the state).

123. See id.

124. See Commons v. Westwood Zoning Board of Adjustments, 410 A.2d 1138, 1142 (N.J. 1980) (illustrating the need for local zoning authorities to comply with the state enabling act’s concern for public health, safety, and morals).

125. See Perera, supra note 31, at 960; York & Settle, supra note 29, at 397.


128. See Perera, supra note 31, at 960. For example, Washington permits city planning to encourage solar energy development by protecting access to sunlight. Id. (citing WASH. REV. CODE § 36.70.350(2) (1981)).

129. York & Settle, supra note 29, at 398 (citing WASH. REV. CODE § 58.17.110 (1981)).
streets to minimize wind access obstruction.130 Similarly, incentive zoning may be useful in encouraging wind farm development.131 Special regulations, rather than land use controls, may be effective in protecting and reconciling the conflicting interests involved in wind energy development.132 A permit system may protect developers from activity on neighboring land that may obstruct wind access;133 however, this system would be challenging to develop.134

As with eminent domain, if zoning regulations amount to a taking, just compensation must be given by the state.135 Furthermore, if zoning will be changed, due process requires that the landowners in the area be given a hearing. Moreover, zoning restrictions also must be for a legitimate governmental objective.136 Finally, the Equal Protection Clause requires that all landowners who are similarly situated be treated equally, unless there is a legitimate reason for not doing so.137 Thus, zoning ordinances present numerous opportunities for abuse and for objection by affected landowners, creating potential for considerable litigation.

2. New Jersey Regulations

States use a variety of land use techniques to secure access to renewable energy resources.138 For example, New Jersey has adopted numerous regulations to encourage energy efficiency and the development and use of renewable sources of energy.

First, in 2006, New Jersey revised its Renewables Portfolio Standard (RPS).139 An RPS “identifies what percentage of energy a

130. Id.
131. Id. at 399.
132. Id.
133. Id. The Wisconsin Wind Access Statute precludes officials from restricting permits to wind projects unless the restriction is required to protect public safety and health, does not significantly affect the efficiency or cost of the system, or provides for alternative methods at comparable cost and efficiency. Perera, supra note 31, at 960; see Wis. Stat. § 66.0401 (1993). Unlike most zoning permits, the statute places the burden of proof on the municipality to prove that the system is a public safety or health risk. Perera, supra note 31, at 960.
134. York & Settle, supra note 29, at 399.
135. See Preseault v. United States, 100 F.3d 1525, 1529, 1552 (Fed. Cir. 1996) (finding that the conversion of an unused railroad to a recreational biking and hiking trail, “under the authority of the Rails-to-Trails Act and by order of the Interstate Commerce Commission,” constituted a taking for which just compensation must be paid).
137. See id. at 395 (declaring zoning laws presumptively valid under both the Due Process and Equal Protection Clauses).
139. DSIRE, New Jersey Incentives/Policies for Renewables & Efficiency Renewables Portfolio Standard, http://www.dsireusa.org/index.cfm?EE=0&RE=1
utility must generate from renewable sources.” 140 New Jersey's new standard is “one of the most aggressive in the United States.” 141 It “requires each supplier/provider serving retail customers in the state to include in the electricity it sells 22.5% of the qualifying renewables by 2021.” 142 The New Jersey Board of Public Utilities’ (BPU) extensive 2006 revisions “significantly increas[e] the required percentages of ‘Class I’ renewable energy, 143 as well as the required separate percentage of solar electricity. By reporting year 2021, 2.12% solar electricity is required.” 144

New Jersey has also enacted regulations to protect access to sunlight. For instance, in 2007 the state “enacted legislation preventing homeowners associations from prohibiting the installation of solar collectors on certain types of residential properties.” 145 In addition, “New Jersey law provides for the creation of solar easements to ensure that proper sunlight is available to those who operate solar-energy systems.” 146

Finally, New Jersey has enacted “electric-utility restructuring legislation.” 147 This legislation created a “societal benefits charge” (SBC), which “funds New Jersey's Clean Energy Program (NJCEP), a statewide initiative administered by the [BPU] to “support investments in energy efficiency and ‘Class I’ renewable energy.” 148 Additional restructuring legislation mandates “each electricity

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140. Perera, supra note 31, at 953. To fulfill this requirement, “utilities can either build renewable sources of energy . . . or buy credits from other renewable sources such as privately owned wind farms. This method of buying and selling credits allows for different types of renewable sources to compete in the energy market.” Id. at 953-54. Wind energy is often used to fulfill the requirement because it “is more cost-friendly than other renewable sources.” Id. at 954.

141. DSIRE, Renewable Portfolio Standard, supra note 139.

142. Id.


144. DSIRE, Renewable Portfolio Standard, supra note 139; see N.J. ADMIN. CODE § 14:8-2.3(a) (2009).


146. DSIRE, Solar Easements, supra note 93; see N.J. STAT ANN. § 46:3-24-26 (West 2009).

147. DSIRE, Societal Benefits Charge, supra note 143.

148. Id.; see N.J. STAT. ANN. §§ 48:3-60 (West 1999).
supplier or basic generation service provider serving retail customers” disclose its “fuel mixes and emissions information . . . as part of advertising materials, billing materials, and customer contracts.” 149 This legislation also “require[s] electric distribution companies to offer net metering to residential and small commercial customers with . . . wind-energy systems.” 150

3. Federal Regulations

To date, no federal legislation including an RPS has become law. 151 The federal government has, however, adopted regulations to encourage energy efficiency. For instance, the Energy Policy Act of 2005 152 (EPAct 2005) and the Energy Independence and Security Act of 2007 153 “extended and expanded several previous goals and standards to reduce energy use in existing and new federal buildings.” 154 Notably, section 203 of the EPAct 2005 requires that, of the total amount of energy consumed by the federal government, at least 3 percent in 2007 through 2009, at least 5 percent in 2010 through 2012, and at least 7.5 percent in 2013 and each year thereafter, must be renewable energy. 155 Furthermore, in January 2007, President George W. Bush signed Executive Order 13423, 156 “establish[ing] a schedule by which all federal agencies should reduce their total energy intensity by 30 [percent] by the end of 2015.” 157 It

151. Perera, supra note 31, at 954.
requires “at least half of the required renewable energy consumed by an agency in a fiscal year to come from new renewable sources.”158 To that end, “[t]he Federal Energy Management Program (FEMP) has issued guidelines to help federal agencies meet energy management and renewable energy requirements for complying with EPAct 2005 and Executive Order 13423.”159

D. Securing Access Through Financial Incentives

In addition to regulatory legislation, states and the federal government provide financial incentives to developers of renewable sources of energy through tax exemptions and loan and rebate programs.

1. New Jersey’s Tax, Loan, and Rebate Incentives

In October 2008, New Jersey enacted legislation providing property tax exemptions for “renewable energy systems used to meet on-site electricity, heating, cooling, or general energy needs.”160 Eligible renewable energy systems, determined by “environmental standards as defined by the New Jersey Department of Environmental Protection [to] minimize environmental and community impacts,” include solar and wind systems.161 In addition, “New Jersey offers a full exemption from the state’s sales tax (currently 7%) for all solar energy equipment.”162 This includes “[a]ll major types [of] solar equipment, including equipment for passive solar design.”163

In addition to tax exemptions, New Jersey offers rebates and loans to support local developers of renewable energy sources. The BPU “offers a Home Performance with Energy Star Program for homeowners that want to improve the energy efficiency of their

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158. Id.
159. DSIRE, Green Power, supra note 155.
161. DSIRE, Property Tax, supra note 160.
homes... The homeowner has the option of receiving a cash rebate and/or a low-interest loan for the installation of appropriate improvements identified in the home assessment. Also, in an effort "[t]o promote both the sale of energy efficient [central electric air conditioners and heat pumps] and proper installation techniques, the N.J. Clean Energy Program offers rebates for properly sized and installed high efficiency systems." Furthermore, "[i]n March 2001, the [BPU] approved funding for renewable-energy programs, including a customer-sited renewables rebate program for homes, businesses, institutions and non-profits." Eligible technologies include solar-electric and wind energy systems. The former are eligible for incentives based on the capacity of the system and the applicable sector. The latter receive rebates based on expected performance rather than capacity.

Finally, "to meet their solar RPS requirements," electric suppliers in New Jersey can purchase Solar Renewable Energy Certificates (SRECs). These certificates "represent the renewable attributes of solar generation, bundled in minimum denominations of

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167. DSIRE, Energy Rebates, supra note 166. “Under the 2009 program residential systems up to 10 kW and non-residential systems up to 50 kW are eligible for incentives.” Id. The levels for 2009 applications are $1.55 per watt for standard residential systems with a 10 kW maximum capacity, $1.75 per watt for residential systems with energy audit with a 10 kW maximum capacity, and $1.00 per watt for non-residential systems with a 50kW maximum capacity. Id. Additionally, a bonus rebate of $0.25 per watt is available for New Jersey sourced systems and equipment. Id.

168. Id. “[T]he incentive is ... capped at 120% of the estimated system specific performance at a reference speed of 11.4 mph.” Id.

one megawatt-hour (MWh) of production.”¹⁷⁰ In June 2004, New Jersey launched an “on-line marketplace for trading SRECs.”¹⁷¹ This endeavor is “the first such operation in the world.”¹⁷²

In addition to state incentives, Public Service Enterprise Group (PSE&G), New Jersey’s largest utility, has initiated a Solar Loan Program which “will allow solar systems to be installed on customers’ premises ‘behind the meter’ using PSE&G as an essential source of capital.”¹⁷³ In an effort to spur additional investment in New Jersey’s solar industry, “[t]he program will provide loans covering 40-60% of the cost of [solar] systems with the remainder to be financed separately by the customer.”¹⁷⁴

2. Federal Incentives

The federal government has also created some tax incentives for renewable energy. “Under the federal Modified Accelerated Cost-Recovery System (MACRS), businesses may recover investments in certain property through depreciation deductions.”¹⁷⁵ “The MACRS establishes a set of class lives for various types of property,” classifying renewable energy sources as five-year property.¹⁷⁶ “The

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170. DSIRE, NJ Board, supra note 169; see N.J. ADMIN. CODE § 14:8-2.9(c) (2009).
171. DSIRE, NJ Board, supra note 169.
172. Id.
federal Economic Stimulus Act of 2008\textsuperscript{177} ... included a 50\% bonus
depreciation\textsuperscript{178} provision for eligible renewable-energy systems
acquired and placed in service in 2008."\textsuperscript{179} The American Recovery
and Reinvestment Act of 2009\textsuperscript{180} extended this provision under the
same terms.\textsuperscript{181}

Furthermore, the Emergency Economic Stabilization Act of
2008,\textsuperscript{182} commonly referred to as the "financial industry bailout
package,"\textsuperscript{183} expanded "the federal business energy investment tax
credit available under 26 U.S.C. § 48"\textsuperscript{184} by providing for an eight-
year extension of the existing investment tax credit (ITC) for solar
energy and a one-year "extension of the producer tax credit (PTC) for
wind energy,"\textsuperscript{185} and "establish[ing] new credits for small wind-
energy systems."\textsuperscript{186} The ITC extension allows "solar manufacturers ... for the first time ... to confidently invest in job
creating operations in the U.S."\textsuperscript{187} However, while "the PTC does
provide an incentive for commercial investors, ... it leaves out
private investors, such as farmers, who could provide a large sector of
the nation's renewable energy."\textsuperscript{188} Furthermore, "the short-term PTC
that Congress has allowed to expire multiple times does not show
long-term congressional support of renewables and the ... one-year
renewal does not provide the long-term incentive needed by
developers."\textsuperscript{189}

\textsuperscript{179} DSIRE, Modified Accelerated, supra note 175 (internal citations omitted).
\textsuperscript{181} DSIRE, Modified Accelerated, supra note 175.
\textsuperscript{183} United States Senate, Active Legislation, 110th Congress (2007-2008),
http://www.senate.gov/pagelayout立法ive/
b_three_sections_with_teasers/active_leg_110.htm (last visited Mar. 6, 2010).
\textsuperscript{185} Recent News: Americans for Clean Energy Applauds Renewal of Solar and
Wind Energy Tax Credits, Oct. 6, 2008, http://www.americansforcleanenergy.org/ (last
visited Mar. 5, 2010) [hereinafter Recent News].
\textsuperscript{186} DSIRE, Federal Incentives/Polices for Renewables & Efficiency, Business
Energy Investment Tax Credit (ITC), http://www. dsireusa.org/index.cfm?EE=0&RE=1
(follow Federal Incentives hyperlink; then follow "Business Energy Investment Tax
Credit (ITC)" hyperlink) (last visited Mar. 5, 2010).
\textsuperscript{187} Recent News, supra note 185.
\textsuperscript{188} Perera, supra note 31, at 966.
\textsuperscript{189} Id. "Congress has frequently let the PTC expire only to be renewed again; this
has occurred three times in seven years and has created a boom-bust cycle in the
development of wind farms and other qualifying renewable energy sources. This cycle
The above legislation reflects the modern trend which is shifting toward an ideology aimed at encouraging and protecting efficient energy use and the production of renewable energy. To that end, the legislation illustrates that the failure of common law doctrines to provide consistent and predictable outcomes has made it necessary for state and federal governments to intervene.

IV. POTENTIAL ADVERSE EFFECTS OF THE DEVELOPMENT OF ALTERNATIVE SOURCES OF ENERGY ON PRIVATE PROPERTY OWNERSHIP

The advantages of development of renewable energy sources are numerous, and such development is generally favored by the public. However, some portions of society may be negatively affected by such development in a variety of ways.

A. Safety

Many people may question the safety of wind energy systems. Indeed, there are many documented cases of mechanical failures. But concerns extend beyond mechanical failure. Wind turbines may be sited at high elevations or areas subject to freezing temperatures, thereby presenting hazardous engineering and safety conditions when snow and ice accumulate on the moving parts of the turbine. Moreover, misgivings have been expressed over the possibility that snow and ice build-up on wind turbine blades may be cast into nearby neighborhoods.

has set back the industry [because of] development drops in the period leading up to PTC expiration, and considerably lags after renewal of the bill before returning to full force." Id.

190. See, e.g., Obama, supra note 26 (containing an affirmation of the nation's commitment to renewable energy).

191. See York & Settle, supra note 29, at 400 (asserting that the general public favors wind energy).

192. See id. at 400-04 (discussing the complaints that have been and could be made about the development of wind energy).

193. Id. at 400-03. In 1945, the first commercial power wind energy system in the United States, located in Vermont, threw an 8-ton blade 750 feet. Id. at 400. However, this failure was the result of a known and neglected defect in the blade skins, which required reinforcement. Id. at 400 n.73. Years later, the United States Government's first large wind machine "developed severe forced oscillations and unexpected impulse loads on the propeller during its first year of operation." Id. at 400-01. This unexpected stress led to fear of a blade throw accident as a result of metal fatigue. Id. at 401. In 1981, a wind turbine in Washington malfunctioned, and again that summer a wind turbine in California fell to the ground after a bolt tore free and a blade swung out and snapped a guy wire. Id.

194. Id. at 401-02.

195. See id. at 401 (discussing this concern at a proposed site in Lincoln Ridge, Vermont).
B. Noise and Vibrations

While not the problem once feared, prospective neighbors of proposed wind farm sites have expressed concern about noise from a wind energy system. Much of this concern is based upon one well-publicized occurrence of noise impact, in which a wind turbine in North Carolina emitted an ultrasonic vibration that "purportedly made people ill and caused windows to rattle, crockery to shake, and cows to stop giving milk."198

C. Aesthetic Impairment: Obstruction of Visual Resources

A frequent public complaint by prospective neighbors of proposed wind farm sites "is the impairment of visual resources."199 For instance, the plan to erect 612 wind turbines, each standing at 410 feet tall, in Cape Cod and Narragansett Bay has made many prospective neighbors uneasy.200 The "Cape Wind Project" proposes to construct the first offshore wind farm in the United States.201 The plan involves 130 wind turbines, with a generative capacity of 420 megawatts, located five miles offshore.202 The proposed project, which would generate enough electricity to meet 75 percent of the demand on Cape Cod and nearby islands, has raised intense controversy and concern.203 Some federal agencies, as well as a coalition of environmental groups, have supported the project, while some politicians and federal agencies have argued against it.204 A local group called the Alliance to Protect Nantucket Sound formed in opposition to the project, raising millions of dollars and pursuing various means to block the project.205

Several other offshore wind farms are planned throughout the United States.206 For instance, the Long Island Power Authority has
plans to build a 100 megawatt facility near Jones Beach, about three miles offshore. However, two wind project proposals for offshore development in New Jersey were opposed in 2004 by acting Governor Richard Codey, who imposed a moratorium on offshore windfarms and the state funding of such developments. Nonetheless, in October 2008, New Jersey regulators awarded Garden State Offshore Energy the rights to build a huge offshore wind farm in the southern part of the state. This decision “c[ame] on the heels” of Delaware and Rhode Island’s approval of offshore wind energy projects, and is anticipated to induce New York regulators to approve “projects off the south shore of Long Island and New York City.” The 96 turbines, which are expected to produce as much as 346 megawatts of electricity, will be 16 to 20 miles off the coast, both to obtain more reliable wind access and to reduce opposition from environmentalists and residents who wish to maintain their clear view.

Thus, there is some indication that the public is becoming increasingly “willing to sacrifice [] some aesthetics values” for the benefits that accompany the development of renewable energy production. Perhaps property owners will progressively find the reduction of dependence on nonrenewable energy sources such as foreign oil, which has negatively impacted the United States both environmentally and economically, a more appealing prospect than a pleasurable view.

D. Other Potential Issues

Wind farms may have an impact on a local natural environment. For instance, wind farms have the potential to kill birds when the

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offshore wind projects, including the Cape Wind project. Senator Warner later withdrew this proposal when it was met with opposition. Id. (citing Beth Daley, Tough Language Dropped in Cape Wind Farm Plan, BOSTON GLOBE, Oct. 8, 2004).

207. Id.

208. Id. Representative Frank Pallone stated that he intended to introduce to Congress legislation which would extend the moratorium throughout the mid-Atlantic region. Id.


210. Id.

211. Id. The decision by New Jersey’s BPU came one week after the Long Island Power Authority and Con Edison announced that they would study the economic feasibility of building wind farms off the coast of Queens. A majority of wind turbines are already in operation on land and in upstate New York. Id.

212. Id.

213. See York & Settle, supra note 29, at 403.
turbines are located in the birds' migratory route. Therefore, wind farms should not be sited in the breeding territories or along the migratory routes of endangered bird or bat species.

Furthermore, the operation of large wind turbines may interfere with "television reception within a range of 100 feet to one mile of the [wind farm]." Wind farms may also interfere with microwave or radar beams, depending on where the wind farm is located in relation to the beams.

V. LEGAL RESPONSES TO POTENTIAL ADVERSE CONSEQUENCES OF RENEWABLE ENERGY SOURCES DEVELOPMENT

So far, this Note has focused primarily on the mechanisms available to protect developers' access to wind and sunlight. There are, however, many methods by which siting may be constrained to protect neighborhoods or individual landowners' interests. This section will explore three of those mechanisms: common law, land use regulations, and governmental land ownership.

A. Common Law

Land use controls may occur through privately created rights in the land of another, such as in the express language of the conveyance instrument. For instance, where a conveyance of land is made subject to defeasance if the use of that land does not meet a particular specified condition, and development of a renewable energy source system does not meet that condition, the developer may lose rights to use the land. However, privately negotiated easements and covenants are far more likely restraints on developers. Covenants may bar renewable energy systems or may create committees that must approve such systems before they may be developed. Nonetheless, easements and covenants which frustrate the development of renewable energy systems "may be subject to legislative modification or judicial interpretation."

Private nuisance law may also be used to restrict the use of land.

214. Id.
215. Id.
216. Id. at 403-04.
217. Id. at 404.
218. See id.
219. Id. at 404-05.
220. See id. at 405.
221. Id. (citing CAL. CIV. CODE § 714(a) (West 1982) (requiring covenants to yield where they preclude solar access)); Kraye v. Old Orchard Ass'n, No. C 209 453 (Cal. Super. Ct. Feb. 28, 1979) (granting declaratory relief on public policy grounds against a homeowners' association decision to preclude the development of visible solar collectors); see supra notes 79, 82 and accompanying text.
for renewable energy system development. Aesthetic impairment is typically not enough to invoke private nuisance law. However, other potential adverse consequences of development, such as those discussed in Part IV, may be found to unreasonably interfere with an adjacent landowner’s enjoyment and use of his land.

The remedies available to a private nuisance claim are injunction and damages. A court may refuse to grant an injunction and may instead award damages. Courts weigh the value of the offending conduct (here, developing wind or solar energy systems); if it is of social value and may be suitably conducted at the particular location, and it is impractical to prevent the interference, the court may award damages instead of abating the nuisance. Thus, just as

222. Private nuisance law may be invoked when a developer unreasonably interferes with a person’s right to quiet enjoyment of his land. Interference must come from an invasion of the land. Invasion can be of particles, noise, vibration, etc. See RESTATEMENT (SECOND) OF TORTS § 821D (1977) (defining private nuisance as “a nontrespassory invasion of another’s interest in the private use and enjoyment of land”).

223. York & Settle, supra note 29, at 405; see supra note 51 and accompanying text. The extent of harm is evaluated by looking at the extent and character of the harm, the burden it will cause the person creating the harm to correct it, the social value of the land invaded and the sustainability of the invaded land to the locality.

224. York & Settle, supra note 29, at 405; see Burch v. NedPower Mount Storm, LLC, 647 S.E.2d 879, 889 (W. Va. 2007) (holding that, although the State Public Service Commission approved a wind power electric generating facility with about 200 wind turbines in close proximity to residential property, such approval did not disregard or abrogate the common law doctrine of nuisance). Nevertheless, some courts have found that if a defendant’s land use is particularly useful or valuable, it may be protected from complaints by persons of ordinary sensitivities. DISPUTES, supra note 31, § 9.03(2)(b); see, e.g., H. Wayne Palmer & Assocs. v. Heldor Indus., Inc., 839 F. Supp. 770, 777 (D. Kan. 1993) (storing of chemicals on defendants’ property was not unreasonable conduct for nuisance purposes simply because a single, isolated fire on plaintiff’s premises damaged plaintiff’s property); Boomer v. Atlantic Cement Co., 257 N.E.2d 870, 873-75 (N.Y. Ct. App. 1970) (permitting defendant cement plant to continue operating because its operations were reasonable given the state of the art in pollution control, and because plant closure would severely impact the area’s economy); see also 4 RESTATEMENT (SECOND) OF TORTS 2D §§ 827(c), 828 cmt. e (1977).


226. Id.

227. See Estancias Dallas Corp. v. Schultz, 500 S.W.2d 5271, 219, 222 (Tex. Civ. App. 1973) (when balancing equities in a nuisance action, the “rule of necessity” is to be narrowly construed; if the court finds the injury to the plaintiff slight and the benefit to the public from the nuisance significant, the court will not award an injunction, but will allow the plaintiff to bring an action at law for damages); Spur Indus., Inc v. Del E. Webb Dev. Co., 494 P.2d 700, 706-07 (Ariz. 1972) (when the operation of a lawful business becomes a nuisance by reason of the encroachment of a nearby residential area, the business operation may be enjoined, but only where the nuisance is injurious to the public health; the business must be indemnified, however, since the plaintiff “came to the nuisance”); Boomer, 257 N.E.2d at 873-74 (where damages are substantial, injunction will lie to abate a nuisance; but if the grant of an injunction
they are often insufficient to protect the developer seeking access, common law principles have significant deficiencies for adjacent landowners seeking an injunction to stop the project.228

B. Land Use Regulation

1. Local

"[Z]oning restrictions are the principal barrier to development of [wind farms] in urban and suburban areas."229 Generally, wind farms are not specifically addressed in zoning ordinances because wind energy was not foreseen by the drafters.230 In areas where such zoning exists, the height of wind turbines may be regulated through the requirement of a permit, a zone amendment, or a variance.231 Since wind energy generation is becoming more popular, local governments are beginning to adopt zoning provisions which specifically address protection of both wind access for the developer as well as the safety and other interests of neighboring landowners.232 Renewable energy developments must also meet the rigid requirements of the applicable local building codes.233

2. State

State regulatory systems could potentially apply to wind farm developments.234 A State Environmental Policy Act (SEPA) may require a wind developer to prepare an environmental impact statement because whether there is a reasonable probability that the wind farm will have "more than a moderate effect on the quality of the environment" depends on the specific characteristics of the development.235 If a developer proposes development in an environmentally sensitive area, such as shorelines or wetlands, the developer will face more specific state regulation.236

would require the court to close down a business that is important to commerce and that cannot at present be operated in a different manner, an injunction will not be granted.

228. Boomer, 257 N.E.2d at 874.
230. Id.
231. Id.
232. Id. For example, the County Planning Department in Spokane County in Washington developed a zoning policy which utilizes a blade throw curve. This curve attempts to forecast the distance that a rotor blade would fly if a wind turbine were to suffer a mechanical failure. Id. at 406-07.
233. Id. at 407.
234. Id.
235. Id.
236. Id. at 407-08.
3. Federal

There are several federal regulations with which wind and solar developers must also comply. If the development involves federal land, sponsorship, or approvals, then the development must comply with the requirements set forth in the National Environmental Policy Act (NEPA)\textsuperscript{237} and its regulations.\textsuperscript{238} Developers must also follow all requirements "addressing tall towers,"\textsuperscript{239} such as the Federal Aviation Administration (FAA) guidelines.\textsuperscript{240} Furthermore, developers must abide by the standards of the Federal Communications Commission (FCC).\textsuperscript{241} These regulations are relevant because, due to their interference with television and microwave operation, some wind farm operators have been required by the FCC "to shut down during broadcast hours or to otherwise eliminate the interference."\textsuperscript{242}

C. Government as Landowner

If the land on which a wind or solar development will be built is owned by the federal government, then, as a result of the Supremacy Clause,\textsuperscript{243} state and local regulation may potentially be inapplicable to constrain the developer’s access to wind or sunlight.\textsuperscript{244} Typically, however, the developer will coordinate with state and local officials in order to ensure the maintenance of good working relations.\textsuperscript{245}

Federal land is a valuable resource for wind and solar developers.\textsuperscript{246} Several federal provisions are relevant to the development of renewable energy systems on federal land.\textsuperscript{247} For instance, the Federal Land Policy and Management Act of 1976\textsuperscript{248} regulates federal land use.\textsuperscript{249} However, standards generally do not

\textsuperscript{238} 40 C.F.R. §§ 1500-1508 (2006).
\textsuperscript{239} York & Settle, supra note 29, at 408.
\textsuperscript{240} 14 C.F.R. § 77.1 et seq. (2009). For instance, the FAA must be notified if certain height conditions are met, or if the development is sited in certain locations, such as within a certain distance of an airport. York & Settle, supra note 29, at 408-09; 14 C.F.R. § 77.13 (2009).
\textsuperscript{241} 47 C.F.R. § 15.1 et seq. (2009).
\textsuperscript{242} York & Settle, supra note 29, at 409.
\textsuperscript{243} U.S. Const. art VI, cl. 2.
\textsuperscript{244} York & Settle, supra note 29, at 410. Similarly, developments on state land may be immune from local regulation. Id.
\textsuperscript{245} Id.
\textsuperscript{246} Id.
\textsuperscript{247} Id.
\textsuperscript{249} York & Settle, supra note 29, at 410. The Federal Land Policy and Management Act of 1976 regulates the sale and lease of federal land, as well as the
provide specifically for wind farm development. Accordingly, variances for wind energy development “must be secured from existing land use plan on a case-by-case basis.”250 State and locally-owned land is also a valuable resource for developers.251

VI. CONCLUSION

The economic and environmental benefit for the development of renewable resources to reduce our nation’s dependency on finite and imported energy sources is unquestionable.252 Nonetheless, a broad variety of interests affect wind and solar energy system development:253 while the developer requires unobstructed access to wind or sunlight, the adjacent landowners seek protection of private property ownership rights.

Even though private controls such as easements, covenants, and nuisance law are available to a developer, the costs of negotiation and the uncertainty of the outcome may undermine the effectiveness of these methods.254 Moreover, existing common law is insufficient to protect either the developer or the adjacent landowners. In fact, the lack of a bright-line rule and its resulting potential for future litigation, could itself be enough to deter a potential wind or solar developer from pursuing development.255 Therefore, access to protection may depend upon regulation. Legislation must be created to make this currently uncertain area of law more clear-cut and consistent in order to foster and facilitate wind and solar energy development.

Courts are in a position to identify all of the impacts of a nuisance or regulatory takings suit and to employ an approach which incorporates the balancing of public and private interests.256 Successful litigation may induce Congress to adopt more comprehensive legislative solutions. President Obama’s proposed market-based cap-and-trade program is a step in the right direction toward raising awareness of the urgency of developing renewable energy systems and encouraging the development of the wind and solar industries. However, confining the issue within the framework of a market-based rhetoric raises significant concerns.257

While many states are making significant headway, including

grant of right-of-way for public objectives, such as energy generation. Id.

250. Id.
251. Id.
252. See, e.g., Perera, supra note 31, at 949.
253. See id. at 950-57.
255. See Klein, supra note 13, at 1158-60.
256. See id. at 1155-58.
257. See Cutting & Cahoon, supra note 11, at 85-87.
changes in easements and zoning, a key to renewable energy growth is employing a federal policy, such as a national RPS.\textsuperscript{258} Such a policy would create long-term mandated growth by all states and would therefore create a market for renewable energy technologies.\textsuperscript{259} Furthermore, the federal government should continue to use property tax incentives and loans to encourage developers to enter the market. However, the current national PTC, which is short-term and supports only commercial growth, should be reworked to provide incentives for individuals who wish to enter the market.

With the emerging sense of “environmental patriotism,” and in the midst of an economic crisis, “innovators are beginning to see greater profit in fighting global warming than in fighting the government’s regulation of greenhouse gases.”\textsuperscript{260} Indeed, we may be on the brink of what one scholar referred to as a “‘third industrial revolution’ . . . fueled by the development of technological solutions to increasingly prominent environmental challenges such as providing sustainable energy and addressing global warming.”\textsuperscript{261} Just as property law has changed shape in the past to reflect national values, it must now adjust to provide protection to renewable energy developers’ access to wind and sunlight in order to make room for the necessary evolution of our energy needs.

\textsuperscript{258} Perera, supra note 31, at 950, 967, 969-76.
\textsuperscript{259} Id. at 969-76.
\textsuperscript{260} Klein, supra note 13, at 1234-35.
\textsuperscript{261} Id. at 1234.