Wind Energy Agreements in Oklahoma: Dealing with Energy's New Frontier

By Shannon L. Ferrell

Consider this scenario: it is shortly after the turn of the century, and Oklahoma is buzzing about a new industry in the state that will take what were previously thought to be marginal lands and extract a resource that will be used to power the entire nation. However, the industry is new to many Oklahomans, and there remain many issues, technological and legal, that are still to be resolved. Optimism at the fortunes to be made overnight is tempered by uncertainty as to how the industry will eventually impact the state.

Now – was it the turn to the 20th century or the 21st? The answer could easily be "both," as the explosive growth of Oklahoma's oil and gas industry in the early 1900s echoes in the tremendous growth of its wind power industry in this opening decade of the 2000s. This analogy poses both opportunities and pitfalls for the practitioners in evaluating clients' opportunities to participate in wind power development. While lessons from the oil and gas industry may illuminate the legal issues clients face in understanding wind energy agreements, the practitioner must understand that these agreements (and this industry) also carry unique challenges that require an understanding of how wind energy development works.

One must understand that standing on the precipice of this new industry carries significant apprehension to the client who stares at a 30 to 50-page document filled with terms unfamiliar to them. As a result, the legal practitioner has an important role to play in guiding the landowners through a full and reasoned consideration of the opportunity for wind energy development on his or her property. To serve that role, though, the practitioner will need an understanding of the wind power industry itself, as well as its legal environment.[1] To that end, this article will provide the practitioner with a "primer" on Oklahoma's wind power industry, examine some of the economics at the heart of wind power projects, discuss some of the most critical points to consider in evaluating wind energy agreements, and provide a list of references that can help the practitioner find more information to guide them along the way.

'WHERE THE WIND COMES SWEEPING DOWN THE PLAIN' — AN OVERVIEW OF THE WIND POWER INDUSTRY IN OKLAHOMA

For better or worse, wind is part of Oklahoma's geographic and cultural identity, as famously observed by its state song. Wind quickly

became a resource to settlers moving into the newly-opened territory, though, as the use of windmills for pumping water from the its deep aquifers made productive land out of plains that might not see settlement otherwise.[2] It may surprise many people that the first use of windmills to generate electricity occurred at almost the same time, with limited commercial sales of windmills designed for residential electric generation in the 1890s.[3] But what caused the sudden growth of wind-powered electrical production in recent years, and why has Oklahoma become such a "hot spot" for the industry? Answering these questions requires a very brief (and relatively painless) lesson in the physics of windmills, or "wind turbines" as they are most often called.

The essence of the wind power industry derives from one equation:[4]

$$P = \frac{1}{2}\rho v^3 \Pi r^2$$

To put this equation into English, "P" is the power available from the wind, and is primarily a function of two variables.[5] The first, "v," represents the velocity of the wind. While one intuitively expects a faster wind to carry more power than a slower one, the magnitude of that difference may come as a surprise. Since "v" has an exponent of 3, the power carried by the wind increases as a cube of its speed. In other words, if the wind speed increases from 10 miles per hour to 20 miles per hour – a doubling in speed (2 x) – then the resulting increase in power is cubed (2 x 2 x 2), or eight times the power of the original wind. This means that wind speed has a tremendous impact on the amount of power one can generate from the wind, which is why locating a site with an optimal range of wind is crucial in the economic viability of a project. Factors such as regional geography impact average wind speeds, but highly localized factors such as the topography of the turbine site and its elevation above the ground's surface can have significant effects as well.[6] As a result, siting decisions are of paramount importance to the profitability of a wind power project, and drive many wind energy agreement terms.

The second variable in the equation, "r," represents the radius of a circle. If one looks at the blades of a wind turbine as forming a circle (called the turbine's "rotor disc"), then the length of a blade is the radius of that circle. Since the familiar formula for the area of a circle, Πr^2, demonstrates that the area of a circle varies as the square of its radius, one can see that doubling the length of a blade (2 x) gives us 2 x 2, or four times more area in the rotor disc. Since a bigger rotor disc represents the ability to capture more wind, turbine manufacturers have constantly sought means of making turbines bigger and bigger. Advances in composite materials and computer control technology in the mid to late 1990s made these large turbines possible, and enabled the industry to become cost-competitive with other electrical generation sources.[7]

These two factors not only drive individual turbine performance; they have also led to the rapid growth of the state's wind industry. Oklahoma has a tremendous wind energy resource, ranked eighth among all states.[8] Western Oklahoma holds most of the state's potential, with its richest concentration in the panhandle as illustrated below. While the "v" in the equation certainly favors development in Oklahoma, the "r" favors the state as well. One can observe that most of Oklahoma's wind resource can be found in counties with low population densities. In fact, of the 20 counties in the state that lost population between 1990 and 2000, all but three have at least some Class 3 wind resource or better.[10] This means that

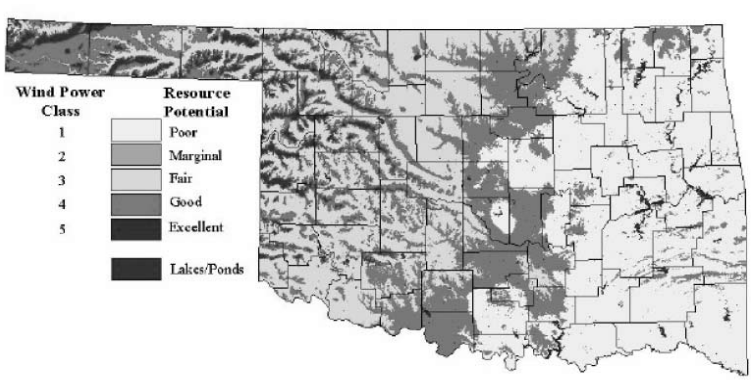
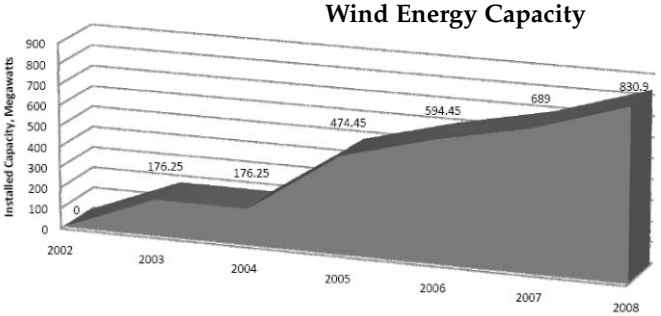


Figure 1 – Wind Power Potential of Oklahoma[9]

larger turbines, as part of large turbine arrays, can be placed in many of Oklahoma's high-resource areas without the problems caused by placing turbines in more population-dense areas (although such placements are not entirely without consequence, as discussed in more detail below).

Additionally, the "r" factor holds particular importance to integrating wind energy with Oklahoma's unique electrical generation portfolio. As a state with abundant and (for the most part) inexpensive natural gas resources, Oklahoma relies more on natural gas for its electrical generation needs than most states. When natural gas prices started an upswing in the mid 1990s, Oklahoma's utilities bore a heavy increase in fuel prices. At about the same time, the technological advances leading to bigger, more efficient wind turbines (increasing the "r") rendered turbines that in some cases became cost-competitive with natural-gas generated electricity.[11] As a result, Oklahoma's utilities looked to the wind, and the state's utility-scale wind power capacity took off from a standing start in 2002 to reach 10th among all states by the end of 2007 and is anticipated to reach over 830 megawatts of capacity by the start of 2009.[12]

Figure 2 — Oklahoma's Installed Wind Energy Capacity



This pronounced growth of wind power in the state is all the more remarkable when one considers that all the states with more wind power than Oklahoma impose a requirement that utilities purchase a specified amount of energy from renewable sources (commonly called a Renewable Portfolio Standard or RPS), while Oklahoma does not.[13]

WIND PROJECT ECONOMICS

The economics of wind power project development and finance is an expansive topic, and this article will speak only in broadest detail about the primary factors influencing project profitability. In short, wind energy projects face a dichotomy: while projects' ongoing "fuel" costs consist only of payments to landowners for access to the wind resource, they face tremendous initial capital costs. A general industry "rule of thumb" estimates the cost of installing one megawatt of turbine capacity at approximately $2 million of capital.[14] Given a common project size of around 100 megawatts of capacity, one can see that a wind power project carries formidable "up front" costs. This magnifies the importance of the project's revenue streams and costs in paying back debt and equity investments.

The market for electrical power obviously influences project profitability. While market prices for fuel drove much of Oklahoma's development, its wind industry was without the benefit of a state RPS which would serve to increase demand for wind-generated power. However, individual projects may be able to mimic the effect of an RPS via the Public Utilities Regulatory Policy Act (PURPA).[15] Under PURPA, some renewable energy facilities were able to meet the requirements to be "qualifying facilities" and as such, the facilities' power had to be purchased by FERC-regulated utilities at the "avoided cost" of such electricity (*i.e.* the estimated cost of producing the purchased amount of power if the utility had produced the power itself).[16] However, the Energy Policy Act of 2005 significantly modified PURPA. Section 1253 of that act terminated the mandatory power purchase and sale requirements of PURPA.[17] Nevertheless, a power project can still take advantage of mandatory power purchase and sale requirements if it can show that it does not have access to open power markets.[18]

Available incentives provide another revenue component for projects. These may include state and local tax credits for renewable energy production. One of the most important federal incentives for renewable energy development has been the "Production Tax Credit" or "PTC." This credit applies to the generation of electricity from wind, solar, biomass, geothermal, irrigation-hydroelectric, or municipal solid waste resources. Currently, the federal PTC stands at $0.021 per kilowatt-hour of power generated and sold to an unrelated party.[19] Oklahoma has also established a number of incentives to take advantage of the state's abundant opportunities

in renewable energy. First, Oklahoma has a tax credit somewhat similar to the PTC. The Oklahoma Zero-Emission Facility tax credit provides a credit of $0.0050 per kilowatt-hour of power generated by wind, solar, hydroelectric, or geothermal facilities with a production capacity of one megawatt or greater.[20] Importantly, these tax credits are transferable.[212] Yet another form of incentive may be renewable energy credits, also known as RECs or "green tags." In some states with RPS, a utility may purchase a REC from a wind power project to offset its own generation of power through nonrenewable sources, and these credits may represent a significant source of revenue.

Photo by Simon Hare

> **"The commercial relationship between the project developer and landowner is where most practitioners enter the fray, and constitute the balance of this article's discussion."**

While market and regulatory forces hold great sway over the economics of the wind power industry, the financial viability of individual projects also depends on factors that rest within the control of the project developer and the project landowners: the location of the project and the commercial terms negotiated between developer and landowner.

Location clearly plays a role in project profitability due to the "v" factor previously discussed; placing a turbine where it can have the best possible wind resource can have a tremendous impact on the power generated by the turbine and thus, its profitability. However, the proximity of the project to large utility transmission lines that can handle the power generated by the project carries much weight as well. These are large lines that form the "backbone" of the electrical system – capable of carrying three-phase power at 69 kilovolts or more – and not the small "distribution lines" that are much more common.[22] Since it can be quite expensive to build high-voltage lines to connect a wind power project to the electrical grid, project developers must balance the location of prime wind resource against its distance from existing utility lines. One can think of this problem as a see-saw: tilting one way, a developer may be willing to locate a project further away from transmission lines if it means reaching a superlative wind resource – tilting the other way, the developer may be willing to locate within a less-exceptional resource area if it is in tight proximity to transmission capacity. Perhaps ironically, Oklahoma's greatest wind resource areas are located in areas with the lowest density of transmission lines, as heretofore transmission lines appeared where electrical demands were greatest, not where potential generation resources could be found. Thus, the vast majority of Oklahoma's electrical transmission infrastructure is clustered around its population centers. Policy makers have taken notice of the potential that increased transmission capacity has to unlock Oklahoma's wind resource.[23] Additionally, the Oklahoma Legislature recently passed House Bill 2813, which would pave the way for increased transmission capacity built by state utilities.[24] Regional electrical transmission organizations have also instituted plans to add transmission lines in those areas with high wind resource to enhance grid reliability while tapping into this new resource.[25]

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EVALUATING WIND ENERGY AGREEMENTS

The Nature of the Wind Energy Agreement

For the purposes of this article's discussion, the term "wind energy agreement" will refer to the document or documents that collectively establish and govern the relationship between the landowner and the party constructing and operating the wind power project.

When a practitioner sits down to evaluate a wind energy agreement for a client, intuition often leads them to use the same tools they would use in reviewing an oil and gas lease. After all, the analogy is facially compelling: a company wants to enter a landowner's property, construct facilities, extract an energy resource, and send that resource to market. However, when one compares a typical Producers 88 oil and gas lease side-by-side (literally) with a wind lease, the differences can be quite apparent. While an oil and gas lease may often be a two-page, "fill-in-the-blank" document, the wind energy agreement frequently exceeds 30 or 40 pages. The difference? First, the oil and gas lease comes with a century of case law, statutes, regulations, and industry custom imputed to it, while the wind energy agreement is often cut from whole cloth (as a caveat, though, the author has seen some elements of old cellular tower agreements and substation easements cut-and-pasted into some of the more poorly drafted ones). Second, while the primary duty for a mineral interest owner is often "just stay out of the way," the relationship between wind power developer and landowner is much more complex and must be (or at least, should be) spelled out in detail within the agreement. Finally, the typical financing arrangements for an oil and gas well differ starkly from those for a wind power project, and a great deal of the language and terms contained in the wind energy agreement may be dictated by lenders or investors rather than the developer itself, complicating the negotiation process.

In evaluating the agreement, the practitioner must understand that they may be looking at one document that may purport to be an option, easement and lease simultaneously. As each of these tools can have markedly different impacts on the client's property interests, the practitioner must make careful note of the potential interactions among them all.

Many wind energy agreements commence with an option contract between the developer and the landowner in which the landowner grants an exclusive right to the developer to investigate the suitability of the project for development, and if the developer should so choose, to enter into a full development contract and commence project construction and operation. During this option period, the developer will likely deploy meteorological data equipment to verify the wind resource, conduct environmental and wildlife impact studies, and analyze construction suitability. Option periods often vary widely, in some cases as short as one or two years, and extending to 10 years in other cases. Some states have limited option periods by statute[26] but as of this writing, no such limitations are found in Oklahoma law.

Another feature often included in wind energy agreements is a confidentiality agreement covering the site data developed during the option and, in many cases, most of the terms of the overall agreement. Many landowners are unfamiliar with confidentiality agreements, and thus practitioners should be careful to apprise clients of the strictures such agreements impose.

Some developers take an approach of negotiating the agreement in its entirety before execution of the option, while other developers provide only the option agreement with a term sheet for the subsequent, full agreement with the details to be negotiated if and when the option is triggered. Both approaches carry advantages and disadvantages; it is the opinion of the author that landowners may be better served completing negotiation of the agreement at the time of the option signing, so as to resolve the complexities of the relationship up front.

Should the option period investigations indicate that a project is indeed viable, the developer will then trigger the option and enact the full agreement. In many wind energy agreements, the assurances needed by the developer to enable project construction and operation may take the form of a system of easements and/or a general lease of the effected property.[27] A brief synopsis of some of the typical terms (be they presented as easements, covenants, or contractual lease terms) follows:

Table 1
Common Landowner Terms

Term	Description
Access	Developer has right to access the property and construct roads for evaluation of site and construction, operation, and maintenance of equipment.
Construction	Developer may use portion of surface for access to construction equipment and "lay-down" areas.
Transmission	Allows for construction of underground and above-ground transmission lines, construction and operation of substations.
Non-obstruction	Landowner will not construct any improvements that could interfere with airflow patterns on property, nor permit obstructions to occur.
Overhang	Landowner acknowledges that turbine rotor discs may overhang property lines or improvements on the property.
Noise	Landowner acknowledges that certain noise levels may be caused by the project (may sometimes provide for a decibel limit and a specified radius from turbines).

Most of the wind energy agreement will likely revolve around securing these terms, establishing the compensation package for the landowner, and defining the other parameters of the parties' legal relationship. While hundreds of pages could be written about the issues to be considered in evaluating a wind energy agreement, this article will focus on what are arguably the five most important questions for the practitioner to analyze as they evaluate his or her client's proposed agreement. These questions are:

1. How will current uses of the property be affected by the project?
2. How long will the agreement last?
3. What are the landowner's obligations under the agreement?
4. How will the landowner be compensated?
5. What happens when the project ends?

Each question will be addressed in turn.

Question 1: How will current uses of the property be affected by the project?

Assuming that the developer proceeds to build and operate the project, the landowner will be "sharing" the surface of his or her property with the project. While this should result in a new revenue stream for the landowner, in all likelihood the landowner will want to continue his or her existing uses of the property to the maximum extent possible, thereby making the wind power project revenues "supplemental" rather than "replacement" funds.

Generally, a wind power project will only physically occupy three acres of land per megawatt of turbine capacity.[28] For most Oklahoma projects, this will equate to roughly five to seven acres of property per turbine with turbines spaced approximately 800 feet apart in an east-west direction and turbine lines spaced approximately a mile apart in a north-south direction to minimize turbine interference.[29] While this often leaves much of the property available for crop, livestock, or recreational uses, inconveniences can be caused by changed fencing configurations, the fragmentation of crop areas, blockages to irrigation systems, and changes to drainage patterns. Landowners should raise these concerns during the initial contract negotiations and determine if reasonable accommodations can be reached either to minimize these disruptions or for additional compensation to mitigate them. This may be in the form of liquidated damages language that provides agreed-to compensation for each event (for example, a specified dollar amount for each fence breach, each linear foot of terrace repair needed, etc.). Some states have also proposed guidelines for maintaining the agricultural viability of property under wind power development, addressing issues such as drainage pattern preservation, minimizing soil disturbance, preserving vegetative cover, and the like.[30]

Another frequent use of land that may be impacted by wind power development is recreational leasing, frequently in the form of hunting agreements. In many wind energy agreements, hunting may be completely prohibited on the affected property during the construction phase to minimize risk to construction crews. However, wind energy agreements may also contain broad indemnification language that makes the landowner responsible for injuries of project personnel or damage to project equipment caused by hunting lessees or other assignees of the landowner (for a discussion of these indemnity issues, see the subsection "What are the landowner's obligations under the agreement" later). Landowners should discuss compensation for loss of lease revenues to the extent such losses are caused by the project.

Aesthetic uses of the property, as well as of surrounding property, may also be a concern. These may include noises from the turbines as well as visual impacts. Noise impacts may be easier to quantify in the terms of the agreement, and often come in the form of a noise easement whereby the landowner stipulates that the turbines may cause certain noise levels (often defined in decibels or "dB") within a certain range of the turbines. Visual impacts are far more difficult to address. In the most recent case regarding aesthetic impacts, *Rankin v. FPL Energy LLC,* Texas' Eleventh Court of Appeals refused to grant injunctive relief against the operation of a wind power project on the basis that aesthetics were not a sufficient basis upon which to bring a claim for nuisance.[31] Several other cases have also cited the subjectivity of aesthetics claims in suits involving wind power projects.[32] Nevertheless, both developer and landowner should consider possible opposition to projects by neighbors.

The landowner's participation in governmental programs can also have an impact on the use of the property for wind energy development. Several USDA programs such as the Conservation Reserve Program (CRP), Environmental Quality Incentives Program (EQIP), the Grassland Reserve Program (GRP) and other common programs for Oklahoma landowners require participants to have multi year contracts and plans for the use and maintenance of the land under contract. Constructing wind power equipment on such lands in contravention of those contracts or plans could trigger the forfeiture of future payments, the return of past payments or even penalties.[33] If the project lands are any under USDA program contracts, the appropriate agencies should be contacted to discuss integration of the project under the contract plans prior to execution of the wind energy agreement.[34] Any loss of revenues from such programs caused by the wind power project should be compensated by the developer.

Finally, landowners should explicitly reserve the right to use the property for agricultural, recreational and other uses. From the landowner's perspective, such a reservation should be as expansive as possible while still allowing the developer the rights reasonably necessary to construct, operate and maintain the project. Similarly, landowners should also be careful not to grant away access to other resources on the property without fair compensation. Many wind energy agreements may contain provisions granting the developer free access to water, rock, and other materials without any additional payment to the landowner.[35]

> "...landowners should also be careful not to grant away access to other resources on the property without fair compensation."

Question 2: How long will the agreement last?

With some of the early leases circulated in Oklahoma, the sum of the primary lease terms plus the automatic renewals could be up to 150 years. This fact alone frequently shocked landowners to the point of rejecting any further consideration of the lease. For some historic perspective, if a lease on the first oil well drilled in the United States (the Titusville Well, completed in 1859 – almost two years before the start of the Civil War) was under a 150 year lease, that lease would still be in effect as this article goes to press. Long lease terms reflect the classic struggle, seen for many years in the oil and gas industry as well: a resource

developer wants to secure access to the resource at a fixed price for as long as possible, while the landowner would like to continually offer access to the resource back to the market if a better price may be secured. While some leases with these "sesquicentennial" terms may still be offered, the general trend seems to be toward shorter periods, often ranging between 20 and 40 years.[36] From the developer's perspective, a lease period must be of sufficient length to recapture the project's costs and return an acceptable profit to project investors. Many wind turbines today have an expected lifespan of approximately 20 years, and thus developers may be reluctant to agree to a term less than that period.

Photo by Simon Hare

The effect of these circumstances may lead to long-term leases with renewals that are solely in the discretion of the project developer. However, while it may be difficult to get initial terms in smaller increments, there may be opportunity for negotiating the terms of lease renewals. Thus, the first step for the practitioner is to fully dissect the agreement's durational terms. Some agreements are quite forthright in defining a duration, but others may be laced with a number of contingencies.

Next, if the project developer is unwilling to negotiate the overall length of the agreement, it may be possible to negotiate a "reopener" term that allows for negotiation of some commercial terms at renewal periods. It is important that such reopeners be coupled with the compensation terms of the agreement to minimize downside risk with a price floor for the landowner if electrical markets should trend downward at the time of lease renewal. The landowner may also wish to reopen the entire agreement if the project is to be "repowered" (that is, existing project turbines are removed and replaced with new larger or more efficient turbines).[37]

Finally, many landowners and practitioners alike may overlook the fact that entering into a wind energy agreement may impact their estate plans. The length of these agreements makes it quite possible that successors to the land in question will take the property subject to the agreement. Thus, landowners may need to involve those successors in discussions about the agreement as part of their succession planning efforts.

Question 3: What are the landowner's obligations under the agreement?

As mentioned above, wind energy agreements differ significantly from oil and gas agreements in that there may be many more ongoing affirmative obligations faced by the landowner under a wind energy agreement. First among these obligations is likely the non-obstruction term of the agreement that requires the landowner to avoid (and in some agreements, actively defend against) the creation of any condition that could interfere with the flow of wind over the surface of the property. While this may not seem like a significant constraint, studies have shown that even relatively low structures such as houses and barns can cause turbulence downwind of the structure for distances of 15 to 20 times the structure's height.[38] Depending on the size of the parcel in question, this principle, or an express set-back provision in the agreement, may effectively preclude the construction of any new improvements on the land unless an agreement is in place that allows for discussion of potential improvements with project engineers. If the landowner has any plans for improvements, such plans should be raised to the attention of the developer as the agreement is considered. Landowners also need to examine the agreement to see if it requires them to affirmatively eliminate other obstructions, such as trees and if it prohibits the leasing of the land for any other uses such as cellular towers.

Another significant burden for landowners may lurk within the indemnification provisions of the wind energy agreement. The concept of indemnification itself may be foreign to them. Exacerbating this is the fact that the indemnification provisions of many wind energy agreements are the agreements' most adhesive elements.[39] Indeed, some agreements will effectively hold the landowner liable for any damages or injuries that are not the result of negligence or willful misconduct by the developer. Landowners may also be required to take on greatly increased insurance limits to satisfy these indemnification obligations.

These terms are to be expected given that the agreements are almost universally drafted by the developers, but landowners should seek a balanced and fair indemnity relationship. For example, if the project site is under a hunting lease, the landowner and developer may consider a standard indemnification agreement to be executed by the hunting lessee that provides the lessee will be responsible for any damages or injuries caused by its presence on the property. Landowners should also consider negotiating indemnity language that explicitly exonerates the landowner from liability for the actions of trespassers and any other parties that are not under the direct control of the landowner. Finally, increases in insurance requirements for the landowner should be a consideration in compensation negotiations.[40] Concordantly, landowners should insist on being named insureds under the project developers' insurance policies, with proof of payment of premiums made available to the landowner.[41]

Another potential hazard for landowners may come from the legal interests created in the property by the wind energy agreement. If the land is subject to an agreement with a secured creditor, it is quite likely that creation of an interest in the property without the consent of the secured party could constitute an event of default in that separate agreement. As a result, creditors' consent may be needed prior to execution of a wind energy agreement.[42] Conversely, many wind energy agreements often require the landowner to secure subordination agreements from creditors and may restrict or prohibit the creation of any new encumbrances on the property. Landowners' equity in real property may be a significant source of capital, especially in agriculture, and such provisions could pose challenges for accessing that equity. At a minimum, landowners should involve their lenders in the wind energy agreement discussion and work out an arrangement that will allow the landowner to meet their lending and liquidity needs, prior to executing the wind energy agreement.[43]

Finally, a natural concern for developer and landowner alike is the potential conflict between development of the surface for wind energy projects and the development of the property's oil and gas resources. It is one of the more well-established points of Oklahoma law that the mineral estate is dominant over the surface estate.[44] However, it would also appear that a shift toward a greater accommodation of surface interests has been underway. Early cases held that an oil and gas lease necessarily implied that a lessor or claimants under him would not improve land *at all*, thereby interfering with lessee's rights to the surface.[45] However, those rights have been increasingly constrained by the concept of reasonableness. For many years, Oklahoma's common law provided that those with interests in the surface were entitled to damages for use of the surface that exceeded the "reasonable and necessary" use of the surface by the mineral interest owner.[46] This "reasonable and necessary" concept has been applied by Oklahoma courts seeking to set the boundaries of previously undefined easements for use of the surface of land.[47]

Thus, one must wonder what would happen in the event that a wind turbine and an oil well needed to occupy exactly the same location. The preceding discussions have established that optimal wind turbine placement is critical to project profitability. It is also conceivable that geologic conditions could dictate that a mineral interest owner place a well at the same location in order to access the oil and gas resource. Holding to a strict "dominance" concept would mean that the wind turbine loses in this scenario, but one must ask whether asking a surface estate owner (or in this case, his or her lessee) to move or at least deactivate a multimillion dollar turbine would constitute an "unreasonable" interference with surface use.

Some wind energy agreements purport to override any previously-granted rights to develop the mineral estate underlying the surface property, but these provisions should be struck as a nullity under Oklahoma law. On the other hand, some newer wind energy agreements ask that the developer be forwarded notice of any indication that the mineral inter-

est owner intends to undertake development of mineral estate so that the parties can arrive at a mutually-agreed upon plan to develop all of the parcel's resources. It seems that in all but the most extreme cases, this strategy can allow for the development of the property to the satisfaction of all parties.

Question 4: How will the landowner be compensated?

At the core of every wind energy agreement is the issue of compensation, and there are almost as many different ways to calculate landowner payments as there are landowners. However, there are a number of measures that are commonly used across agreements.

When evaluating the payment terms of a lease, one should consider whether the payments vary by the "phase" of the project. Generally, wind power projects are divided into an "option" or "pre-construction" phase (during which the project's viability is evaluated), a "construction phase" (occurring after the option has been exercised but before commercial production of energy has commenced), an "operation phase" (during which the project is generating and selling power), and possibly a "decommissioning" phase (when the project has wound up and is dismantled). The landowner should be aware of how the project's phases will affect payments, and what milestones trigger each phase.

One common factor used as a compensation basis is the acreage involved. While this is often the denominator for rural land leases, it bears mention that the acreage held by a landowner may hold little proportion to the other important metrics of the wind power project, such as the number of turbines in place on the property or the turbines' generating capacity. Terrain and project geometry may mean that a smaller landowner may have more turbines than his or her larger counterparts.

Another frequent factor in calculating landowner payments is the number of turbines in place on the property. In the past, landowners often received a flat amount per turbine, but the recent trend seems to be toward a per-turbine payment that is based on the nameplate capacity of the turbine.[48] Shifts in the dynamics of the turbine market and in the turbine technology itself have sometimes led to projects that may have multiple turbine designs, capacities, and even manufacturers represented, and this can lead to differing generating capacities. A capacity-based turbine payment enables the landowner to capture the "upside" potential of new equipment installations.

Lastly, many agreements now provide for a "royalty"[49] payment to the landowner based on the production of the turbines on his or her property. This element of the landowner payment is often the most complex to understand, calculate and verify. While the concept of a payment based on the electrical production of the project seems fairly simple, there are a number of variables that may be in play. First, the landowner must understand the basis of the payment, which may be the megawatt or kilowatt-hours of power produced, "gross proceeds" from sales of electricity, "net revenues" from the power sold, *etc.* It is critical that the definition of these terms within the agreement be analyzed thoroughly. If a royalty is based on "gross proceeds," do those proceeds include revenues from the sale of transferable tax credits or renewable energy credits (RECs)? If the payment is based on "net revenues," what costs are deductible by the developer – and if the project sells its power on the spot market rather than under a long-term power purchase agreement (PPA), will the landowner be at the mercy of market fluctuations? Market-based measures may give landowners the opportunity to participate in favorable price swings, but should be tempered with minimum-payment provisions to secure against downside risk.[50]

Given that a wind power project incurs the vast majority of its costs in its first few years of development and operation, many leases are now including a royalty "escalator" clause that increases the royalty percentage at specified intervals. The escalator clause can prove to be a mutually-beneficial provision for both developer and landowner, allowing for more rapid cost-recovery by the developer while allowing the landowner to increase his or her participation in project profits during later years. Such escalators need to include either an explicit function for increases (specifying the intervals at which royalties will increase and in what proportion) or be indexed to an objectively-determinable, publicly available number (*ex.* the U.S. Bureau of Labor Statistics Consumer Price Index, U.S. Energy Information Agency wholesale electrical price, *etc.*).

While royalty payments often represent the best returns for landowners, they are accompanied by the need for landowners to audit payments. As many practitioners in Oklahoma and other oil and gas producing states are well aware, numerous class action suits have been waged by royalty owners alleging mismeasurement of resources, miscalculation of royalties due, "market" prices skewed by affiliate transactions, and the like. It should be remembered that this litigation came about even under statutory requirements for reporting of specified information to allow calculation of royalty accuracy by the royalty owner.[51] No such statutory "audit right" exists for landowners in wind power projects, though, and landowners must make sure that such rights are made part of the agreement.

> "...the ability of the landowner to terminate the agreement will be extremely limited, and will likely be based on the nonpayment of amounts due the landowner within a certain timeframe."

In evaluating the wind energy agreement, the practitioner must also consider the contingency in which the client may execute the agreement and the project is built, but the project configuration does not allow for placement of a turbine on the landowner's property. In such a situation, one should consider some form of minimum payment to the landowner that is burdened by the agreement but has not received the element – a turbine – that triggers most payment obligations. One means of achieving this is a "pooled", "community" or "project" payment. These payments are made to landowners, based not on the performance of turbines located on their property, but rather the production of the project as a whole. These payments may serve a number of functions including compensating landowners whose property is part of the project but did not receive a turbine, as well as "leveling" the performance among turbines (where geographic conditions may make some turbines markedly more or less efficient than neighboring turbines).

Lastly, negotiating a "most favored nation" clause may be possible in some projects. As the name implies, such a clause enables the landowner to capture the most favorable easement or lease terms granted to any other landowner within the same project. This can help the landowner overcome potential oversights in the negotiating process or a lack of information regarding comparable terms. The problem with such a clause, of course, lies in its verifiability, which is complicated by the confidentially agreements typically tied to the project. An alternative for landowners is collective negotiation of a lease with their neighbors. This can increase the landowners' bargaining power and allows them to spread legal costs amongst themselves. Some developers even favor these arrangements, as they allow the developer to secure large areas of land through the negotiation of one agreement, rather than "piecing" a project together through individual negotiations and risking a checkerboard pattern in the land under lease.

Question 5: What happens when the project ends?

When asked by the author about project termination clauses, one developer stated "Hey, if we develop your project, we've likely sunk hundreds of millions of dollars into it, so we're not going to terminate your agreement on a whim." While this is a valid argument, landowners must understand the conditions that provide either party the ability to terminate the agreement. Often, agreements will provide a host of potential causes that can enable the developer to terminate the agreement. In such case, landowners should require, at a minimum, the immediate payment of all sums then due to the landowner. Some practitioners have also suggested requiring a "termination fee" that is a function of a historic course-of-payments for the landowner (*ex.* a termination fee equal to the past three years of payments to the landowner).[52]

In virtually every case, the ability of the landowner to terminate the agreement will be extremely limited, and will likely be based on the nonpayment of amounts due the landowner within a certain timeframe. Further, the landowner will likely be required to provide written notice of a potential termination event to the developer and provide a specified cure

period. Thus, landowners should be advised to keep sound records of payments and project milestones, and to provide prompt notice of any potential defaults so as to preserve their rights if termination is warranted.[53]

Photo by Simon Hare

All parties to a wind power agreement must contemplate the fact that the project may eventually end, whether by completion of the operational life of all the equipment, introduction of some new energy technology, or the dissolution of the developer. A frequent fear of landowners is that the developer will default or dissolve, and the landowner will be left with huge inoperable machines on his or her property. Those fears are not born from idle imagination, but stem directly from the host of abandoned oil and gas wells that once littered the Oklahoma landscape after the first half of the 20th century. To that end, many landowners have requested that wind energy agreements contain some form of "decommissioning" language that, at the end of the project, requires the developer to remove all equipment, restore the land to its original grade, vegetation, and soil condition, and to remove sub-surface materials to a specified depth. Further, landowners are also seeking a "performance bond" from the developer, the funds from which are to be used to ensure performance of the decommissioning obligations.

Decommissioning language is not found in all agreements, and frequently must be requested by the landowner. Further, the posting of a bond or other security in an amount sufficient to cover the complete costs of a decommissioning project could become cost-prohibitive for some developers. A compromise offered by some companies is a "salvage value" decommissioning clause whereby the salvage value of the equipment in a project is evaluated at a specified period (for example, every five years) relative to the estimated cost of decommissioning activities. If the salvage value of the equipment falls below the estimated decommissioning costs, bonds are posted in an amount sufficient to cover the difference.

An Additional Thought on Representing Clients in Wind Energy Agreement Negotiation

At the risk of stating the obvious, reviewing a highly technical 40 page lease presenting a host of novel issues will take more of the practitioner's time than reviewing a two-page oil and gas lease with familiar provisions. Clients who realize this may be reluctant to engage an attorney for fear of the cost and attorneys may be hesitant to take clients due to the time-intensive nature of the enterprise. Collective action may serve both groups well. Most Oklahoma wind power projects will involve tens of thousands of acres, which in turn will mean numerous landowners will be involved. Such landowners may enhance their bargaining power by forming a negotiation group that enables them to share in the expense of legal services while providing the developer the ability to negotiate one agreement binding the entire group, rather than numerous individual agreements. Also, landowners should ask developers if they will provide for reimbursement of legal fees incurred in reviewing the agreement; many developers will provide such fees up to a capped amount.

CONCLUSION AND REFERENCES FOR FURTHER INFORMATION

This paper has discussed the basics of Oklahoma's rapidly-expanding wind energy industry, its economics, and issues practitioners should carefully examine in evaluating wind energy agreements. The novelty of this area poses both a challenge and opportunity for the practitioner who is willing to play the role of physicist, engineer, scholar, and pioneer as they draw upon the lessons of Oklahoma's energy heritage to help wind energy propel the state into prominence for the 21st century.

To learn more about the basics of the wind energy industry, Oklahoma's wind resources, and negotiating wind energy agreements, the following resources are commended to the reader:

Oklahoma Wind Power Initiative Home Page: www.seic.okstate.edu/owpi/

The Law of Wind: A Guide to Business and Legal Issues
Prepared by Stoel Rives LLP
www.stoel.com/webfiles/Law OfWind.pdf

Farmers' Guide to Wind Energy: Legal Issues in Farming the Wind
Prepared by Farmers Legal Action Group Inc.
www.flaginc.org/topics/pubs/index.php#FGWE

"Negotiating Wind Energy Property Agreements"
Prepared by Farmers Legal Action Group, available at
www.flaginc.org/topics/pubs/arts/WindPropertyAgrmnts2007.pdf

"Wind Energy Easement and Lease Agreements"
Prepared by Windustry
www.windustry.com/sites/windustry.org/files/LandEMain.pdf

"Wind Energy Easement and Leases: Compensation Packages"
Prepared by Windustry
www.windustry.com/sites/windustry.org/files/LandECompPackages.pdf
[Please note: this document was prepared in 2005 from publicly available information and may represent conservative estimates of project compensation amounts, especially in light of the quality of many Oklahoma wind resource areas.]

"Leasing Your Land to a Developer,"
Prepared by Windustry
www.windustry.com/leases

Wind Energy Explained: Theory, Design, and Application
J.F. Manwell, J.G. McGowan and A.L. Rogers
John Wiley & Sons Ltd., 2002.

University of Texas Wind Energy Institute CLE, June 1-2, 2006 (available from Texas Bar Association).

1. Many of the issues raised in this article derive from the author's experiences in reviewing wind power development agreements from a number of developers, but attribution of direct sources will in most cases be precluded by confidentiality.

2. *See* Dick Hays & Bill Allen, Windmills and Pumps of the Southwest, 2 (Eakin Press 1983).

3. *See* T. Lindsay Baker, A Field Guide to American Windmills 45 (University of Oklahoma Press, 1985).

4. Paul Gipe, Wind Energy Basics 7 (Chelsea Green Publishing Co., 1999).

5. The variable "p" (the Greek "rho") is the density of the air, which is largely a function of a location's elevation and temperature. Since this impact of this factor compared to the other two is negligible, it will not be discussed at further length for the purposes of this article.

6. For an excellent discussion and illustrations of factors that can impact wind speeds at a turbine site, refer to the discussion "Turbine Siting" presented by the Danish Wind Industry Association at www.windpower.org/en/tour/wres/shear.htm. A more thorough and technical discussion may be found in J.F. Manwell, J.G. McGowan and A.L. Rogers, Wind Energy Explained: Theory, Design, and Application 21-82 (John Wiley & Sons Ltd., 2002).

7. *See* Gipe, *supra* note 4, at 1.

8. American Wind Energy Association, *Top 20 States with Wind Energy Resource Potential*, available at www.awea.org/pubs/factsheets/Top_20_States.pdf.

9. Oklahoma Wind Power Initiative, *Oklahoma Wind Resource Map,* available at www.ocgi.okstate.edu/owpi/. Reprinted with permission.

10. *See* U.S. Census Bureau, *Oklahoma Quick Links, available at* quickfacts.census.gov/qfd/states/40000lk.html; *see also* Oklahoma Wind Energy Resource Map, available at www.ocgi.okstate.edu/owpi/.

11. *See* California Energy Commission, *Comparative Cost of California Central Station Electricity Generation Technologies*," available at www.energy.ca.gov/reports/2003-06-06_100-03-001F.PDF.

12. *See* Oklahoma Wind Power Initiative *Oklahoma Wind Farms, available at* www.ocgi.okstate.edu/owpi/OKWindInfo/OWPI_documents/Oklahoma_Wind_Farms.pdf, *see also* American Wind Energy Association, *3rd Quarter 2008 Market Report*, available at www.awea.org/publications/reports/3Q08.pdf.

13. *See* U.S. Department of Energy, Energy Efficiency and Renewable Energy Office, *States with Renewable Portfolio Standards, available at* www.eere.energy.gov/states/maps/renewable_portfolio_states.cfm.

14. *See* University of Texas Wind Energy Institute Seminar, Roundtable on Wind Deals, June 1, 2006 (available from Texas Bar Association). This seminar's panel estimated the costs at approximately $1.3 to $1.7 million per megawatt of capacity, but follow-ups to this event indicate the escalation of such costs to the $2 million range.

15. Pub. L. 95-617.

16. 16 U.S.C. §§ 824a-3 *et seq.*

17. Pub. L. 109-58.

18. *See* 16 U.S.C. §§ 824a-3 as amended by Pub. L. 109-58.

19. 26 U.S.C. § 45.

20. 68 O.S. § 2357.32A.

21. 68 O.S. § 2357.32A(F).

22. *See* Windustry, *Community Wind Toolbox, Chapter 14: Interconnection – Getting Energy to Market*, available at windustry.advantagelabs.com/sites/windustry.org/files/Interconnection.pdf.

23. *See, e.g.,* Jim Roth, *Oklahoma Wind Power has Vast Potential*, Tulsa World, May 8, 2008.

24. House Bill 2813, 2008 Regular Session of the 51st Legislature of the State of Oklahoma, signed by Governor on May 12, 2008.

25. *See* Southwest Power Pool, *Wind Integration,* available at www.spp.org/publications/SPP_Wind_Integration_QA.pdf.

26. *See, e.g.* South Dakota Code §43-13-19 (limiting option periods to five years).

27. *See generally* Windustry, *Wind Energy Easement and Lease Agreements,* available at www.windustry.org/sites/windustry.org/files/LandEMain.pdf.

28. *See* American Wind Energy Association, *Wind Energy and the Environment, available at* www.awea.org/faq/wwt_environment.html. The American Wind Energy Association estimates the total "land use" per megawatt of capacity is 60 acres, with three acres physically occupied by the project, and the remaining 57 acres used only as an unobstructed clear area to preserve wind flow to the turbine array.

29. Most turbines installed at Oklahoma projects range from 1.5 to 2.2 megawatts in capacity. *See* Oklahoma Wind Power Initiative, *supra* note 12; *see also* American Wind Energy Association, *supra* note 12.

30. *See, e.g.* New York State Department of Agriculture and Markets, *Guidelines for Agricultural Mitigation for Wind Power Projects,* available at www.farmlandinfo.org/documents/30658/NYS-DAM-Wind-Power-Guidelines.pdf.

31. *See Rankin v. FPL Energy LLC*, — S.W.3d —, 2008 WL 3864829 (Tex. App. 2008).

32. For a compilation of such cases, *see generally* Stephen Baron, New Meets Old: Wind Turbines and the Common Law of Nuisance, University of Texas Wind Energy Institute (February 19-20, 2008, Austin, Texas), available at www.utcle.org/eLibrary/preview.php?asset_file_id=15069.

33. *See, e.g.*, 7 C.F.R. § 1410.32(h), providing that termination of a CRP contract will trigger repayment of all amounts received by the landowner under the contract, plus interest.

34. For an excellent discussion of these programs, *see generally* Farmers Legal Action Group Inc., *Farmers' Guide to Wind Energy: Legal Issues in Farming the Wind* and its discussion of "Impact[s] on Farm

Program Eligibility" at pp. 4-8 *et seq.*, available at www.flaginc.org/topics/pubs/index.php#FGWE.

35. Agreements that seek water rights from the landowner are of particular concern. Wind energy facilities do not require water for their operation, and thus landowners confronted with such a provision must undertake special care to determine the proposed use of, and compensation for, their water by a project developer.

36. *See* Windustry, *supra* note 27.

37. *See* Windustry, *Wind Energy Easements and Leases: Best Practices and Policy Recommendations*, available at www.windustry.org/sites/windustry.org/files/LandEBestPractices.pdf.

38. *See* Manwell et al, *supra* note 6, at 47.

39. *See* Neil Hamilton, *Roping the Wind: Legal Issues in Wind Energy Development in Iowa*, American Agricultural Law Association Symposium, (October 25, 2008, Minneapolis, Minnesota).

40. For a thorough discussion of liability issues for landowners, *see generally* Farmers Legal Action Group Inc. *supra* note 34, Ch. 5, available at www.flaginc.org/topics/pubs/index.php#FGWE

41. *See* Windustry, *supra* note 37.

42. *See* Farmers Legal Action Group, *Negotiating Wind Energy Property Agreements*, available at www.flaginc.org/topics/pubs/arts/WindPropertyAgrmnts2007.pdf.

43. *See id.*

44. *See, e.g. Enron Oil & Gas Co. v. Worth*, 947 P.2d 610 (Okla. Civ. App. 1997).

45. *See Conway v. Skelly Oil Co.*, 54 F.2d 11 (lOth Cir. 1932).

46. *See Houck v. Hold Oil Corp.*, 867 P.2d 451,458 (Okla. 1993).

47. *See Head v. McCracken*, 102 P.3d 670, 677 (Okla. 2004), stating:

> I]f said attributes [including the location and extent of the easement] are not so fixed by the terms of the granting or reservation instrument, the owner of the dominant estate ... is ordinarily entitled to a right of way of such width, length, and location as is sufficient to give necessary or reasonable ingress and egress over the other person's land.

48. *See generally* Windustry, *Wind Energy Leases and Compensation Packages*, available at www.windustry.org/sites/windustry.org/files/LandECompPackages.pdf.

49. Real property and oil & gas scholars may contest the use of the term "royalty" to describe these payments. For the purposes of this discussion, the term will be used to describe a payment that is correlated to the production of electrical power from the project (rather than correlated to acres or turbines).

50. *See generally* Windustry, *Wind Energy Leases and Compensation Packages*, available at www.windustry.org/sites/windustry.org/files/LandECompPackages.pdf.

51. *See* Oklahoma Production Revenue Standards Act, 52 Okla. Stat. §§ 570.1 et seq.

52. University of Texas Wind Energy Institute CLE, *The Ultimate Guide to Wind Leases*, June 2, 2006 (available from Texas Bar Association).

53. *See* Farmers Legal Action Group, *supra* note 42.

ABOUT THE AUTHOR

Shannon Ferrell is an assistant professor of agricultural law in the OSU department of agricultural economics. He spent a number of years in private practice, focusing on environmental, energy and corporate law, and served as the Oklahoma Renewable Energy Council president for 2006. His research at OSU focuses on energy law issues for Oklahoma landowners, renewable energy and legal issues in production agriculture.

NOTICE OF HEARING ON THE PETITION FOR REINSTATEMENT OF DANIEL MORGAN DILLING, SCBD #5515 TO MEMBERSHIP IN THE OKLAHOMA BAR ASSOCIATION

Notice is hereby given pursuant to Rule 11.3(b), Rules Governing Disciplinary Proceedings, 5 O.S., Ch. 1, App. 1-A, that a hearing will be held to determine if Daniel Morgan Dilling should be reinstated to active membership in the Oklahoma Bar Association.

Any person desiring to be heard in opposition to or in support of the petition may appear before the Professional Responsibility Tribunal at the Oklahoma Bar Center at 1901 North Lincoln Boulevard, Oklahoma City, Oklahoma, at 9:30 a.m. on **Thursday, June 18, 2009**. Any person wishing to appear should contact Gina Hendryx, General Counsel, Oklahoma Bar Association, P.O. Box 53036, Oklahoma City, Oklahoma 73152, telephone (405) 416-7007, no less than five (5) days prior to the hearing.

PROFESSIONAL RESPONSIBILITY TRIBUNAL