Clean Energy—Implications from an Ad Valorem Tax Perspective

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Ad valorem taxation valuation practice around the country relating to the assessment of clean energy projects ranges from complete exemption to conventional depreciated replacement cost. While clean energy valuation issues remain uncertain in many jurisdictions, what is certain is that the growth of clean energy is not going to slow down in the near future. The U.S. Energy Information Administration, or EIA, projects that 46 percent of new electricity consumption in the United States will come from clean energy by 2030.[1] Until property owners, assessing officers, and legislators are able to agree upon consistent and uniform guidelines for the valuation and taxation of clean energy projects in each state, litigation in this area is expected to continue.

Introduction

In 2015, clean energy projects consisting of wind, solar, biomass, geothermal, and hydropower accounted for over 65 percent of new installed U.S. electrical generating capacity (11,298 MW of the 17,272 MW total installed).[2]

In addition, U.S. clean energy investments in 2015 exceeded $56 billion.

The significant role of clean energy in providing new electric generating capacity is continuing a trend that has been more than a decade in the making.

Clean energy projects are frequently seen as beneficial to the sparsely populated rural counties in which they are often located. However, the issue of how these projects are valued for ad valorem property tax purposes has evolved on an ad hoc basis around the country.

Not surprisingly, state and local ad valorem property assessment practices have yet to converge on any uniform treatment.

This divergence of practice is leading to a great deal of uncertainty both to property owners and to property tax assessment authorities.

Clean Energy—What Is It and Where Is It?

Clean energy, also referred to as *renewable energy* or *green energy*, specifically refers to energy produced from renewable resources without creating environmental debt. The basic forms of clean energy are often cited as those that come from water, wind, or sun.

Clean energy sources now account for 17.83 percent of total installed U.S. operating generating capacity: water accounts for 8.56 percent; wind accounts for 6.31 percent; biomass accounts for 1.43 percent; solar accounts for 1.20 percent; and geothermal steam accounts for 0.33 percent.

Over half of the total renewable energy generation is provided by five states: Washington, Oregon, California, Texas, and New York. For 2015, the most significant wind capacity additions occurred in Texas, Oklahoma, Kansas, Iowa, and Colorado. The most significant solar capacity additions occurred in California, North Carolina, Nevada, Massachusetts, and New York.

In 2015 the United States saw a slowing of natural gas power plant additions compared to 2014, while solar and wind power capacity combined outpaced the 2014 installation rate.[3]

No utility-scale coal plants have been added since 2013. Wind and solar energy, which generated only 3 percent of U.S. electricity in 2010, are projected to experience significant growth and provide 17 percent of electricity by the year 2030.

Valuation—The Importance of Clarity and Predictability

Owners of clean energy properties, like all property owners, want to pay as little in property taxes as possible, but they are willing to pay their fair share of those taxes. Assessing officers, whose primary role is to determine the fair market value of properties placed on the tax roll, strive to be fair in their assessments.

Unfortunately, assessors face certain statutory, policy, and valuation constraints and challenges that can make the appraisal of clean energy properties challenging.

Additionally, assessors often feel pressured by representatives of taxing jurisdictions to raise property values, as higher values result in higher tax revenue. These competing forces often lead to a significant disparity between the initial assessed value of a property, the value urged by the property owner, and the final value determined through litigation.

Inconsistent Assessments

What appears to most often lead to litigation over the assessed value of clean energy properties around the country is the inconsistent assessment treatment of identical properties from county to county, and state to state.

Directors of tax for some of the major clean energy companies have uniformly indicated that what is important to them in the valuation of their projects is two things: clarity and predictability.

It is important to the success of clean energy companies that they be able to accurately forecast their property tax bills from year to year for planning purposes.

Unfortunately, clarity and predictability vary widely around the country, which has led to costly litigation, but has also led to successful legislative efforts to eliminate the problems.

There are many factors that complicate the valuation of clean energy properties. Solar photovoltaic (PV) systems, for example, are unique in that their costs, including the cost to construct utility scale projects, have decreased dramatically over the past 10 years.

Costs for new solar PV projects are expected to continue to decline significantly each year as new and more economical technology is developed. Representatives of taxing jurisdictions at times seem unable to understand how a project that cost $50 million to build is worth half that value two years later.

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Federal subsidies for the cost of construction of clean energy projects, renewable energy certificates, power purchase agreements, locational issues, and project efficiency further complicate the valuation process and highlight the need for clarity and predictability.

States such as Nebraska, Wisconsin, and Illinois have each passed state laws that dictate how wind farms are taxed. This is extremely beneficial to companies in forecasting property tax bills and has significantly reduced litigation over the value of those properties.

Texas currently falls on the other end of the spectrum. There are no agreed-upon formulas or state laws that dictate a uniform method of valuing most clean energy properties.

Although the basic methodology for the valuation of such properties in Texas has been established, appraisal districts often apply their own "unique" adjustment factors. These adjustment factors often have no support in literature. Rather, they are based on the appraiser's "years of experience."

This somewhat haphazard technique can result in a significant variation in assessed values as determined by various appraisal firms hired by the appraisal districts in each county. Similar properties in neighboring counties, or across the state, can have a wide range of assessed values.

It is understandable why in states where the valuation of identical types of properties can vary by county, there is going to be an increased amount of property tax litigation. A lack of clarity and predictability in the valuation of all types of properties harms not only property owners, but also taxing jurisdictions.

Taxing jurisdictions rely on the tax roll to budget for future planning purposes, and clean energy projects may account for a major portion of the taxable value in a given county.

When property tax litigation results in a significant reduction in the final assessed value of a property, often after several years in the court

system, taxing jurisdictions can be thrown into fiscal disarray. Jurisdictions that were expecting a certain amount of revenue based on the initial assessed value are forced to find the funds to issue a refund to the property owner.

Case Study—Attempting to Value the Wind

Whatever wind is, it's inherent in the value of the land.[4]

An example of how a lack of predictability or uniformity in the appraisal of clean energy property can lead to litigation occurred in Scurry County, Texas. Scurry County is located in northwest Texas near the city of Lubbock, and has been referred to as the Saudi Arabia of wind power.

It is home to several of the largest wind energy projects in the United States. And, it is also home to one of the tallest wind towers in the United States, standing in excess of 345 feet in height.

Beginning in 2011, a local assessing officer sought to appraise for taxation the lease payments being paid by wind turbine companies to lease the land in Scurry County. He created his own methodology, which could not be found in any learned treatises.

The assessing officer carved out 0.0290/acre tracts of land where the wind turbines were sited, which he referred to as "wind tower sites," and increased the value to only those sites using an income approach based on lease payments.

Land in Scurry County has traditionally been used for agriculture and hunting, and the land is valued at an average of about $900 per acre. At $900 per acre, a carved-out 0.0290/acre section should be valued at $26.10.

However, the appraisal district, in applying the local assessor's self-created methodology, changed the assessed value on the newly created 0.0290 per acre "wind tower sites" to $55,000 each. That valuation is the equivalent of one acre of land in Scurry County being worth approximately $1.9 million! This new methodology resulted in a significant increase in the potential tax liability to the wind farm owner in that county.

Following a survey of other counties with wind turbines, it was determined that out of the 11 surveyed, 4 county appraisal districts did not separately value wind turbine sites and 7 did value the sites.

Of the seven appraisal districts that valued the sites, the values applied to each site varied substantially, with Scurry County being the most egregious valuation. Litigation was brought by the wind farm operator against the local appraisal district.

In Texas, land is valued to its highest and best use as if vacant. When owning land, the owner acquires a bundle of rights, including the right to lease the property. The market takes that fact into account when valuing the fee simple estate.

Wind energy companies enter into leases with land owners for the right to install wind turbines and related equipment. The value of those leases is included in the fee simple estate and should be reflected in the sales price for such properties. Texas law requires that property not only be on the appraisal roll at market value, but that the value be equal and uniform to other comparable property, similarly situated.

In the Scurry County lawsuit, experts were designated by both sides and a substantial amount of discovery took place. A review of the terms of a typical wind lease highlighted one of the fatal flaws in the methodology developed by the appraiser.

Generally, each wind farm lease entered into with a property owner is to lease several hundred acres of the owner's land. For the Scurry County project, on average, one wind turbine was installed for every 160+ acres of land. Under the terms of the lease, the wind farm operator has rights over the entire leased property for wind energy purposes.

The operator has the right to construct wind turbines wherever deemed appropriate; the right to relocate the turbines; and the right to install underground and overhead lines, roads, storage facilities, control buildings, and telecommunications facilities. Additionally, the wind turbine company has the right to ingress and egress on the property.

The assessor's methodology in Scurry County ignored the fact that the wind farm operator was leasing far more than just a "wind tower site." This company leased over 27,000 acres in Scurry County for its project on which it had installed 167 wind turbines.

The net result of this flawed methodology was that the appraisal district was placing $9.2 million in value on 4.843 acres of "wind tower sites" (167 turbines × 0.0290/acres) out of over 27,000 acres of leased land, and was placing $0 dollars of additional value on the remaining 26,995+ acres under lease.

The case was finally settled after the deposition of the principal expert hired by the appraisal district, who was forced to admit that the appraised value which he had calculated for each "wind tower site" actually included far more assets and property than the value of the "wind tower site."

In order to reach the value placed on the property by the appraisal district, he valued the wrong property. The appraisal district no longer had a cause of action. The county now values each wind tower site at the average value of a typical acre of land in Scurry County.

Unique Appraisal Issues

A survey of states with significant clean energy development reveals that each state has its own unique property appraisal, assessment administration, and property tax policy issues.

No state uses the exact same valuation methodologies, provides the exact same property tax abatements, or has the exact same legislative property tax policies relating to the promotion of clean energy.

There are a number of excellent websites and papers that provide detailed information regarding the property tax treatment of clean energy properties by state.[5]

Uncertainty

Property taxes represent a potentially significant cost for solar PV system owners. Apart from California, which extended its property tax exemption for solar power systems to 2025, the ambiguity around solar and property taxes gives every indication it may get worse before it gets better.

While many U.S. states have adopted policies specifically addressing how solar PV systems should be valued for property tax purposes, a number of states have not adopted such policies, leaving it up to local tax assessors to determine how to value solar assets.[6]

Officials in a number of states have been responding to increasing criticism over the cost of clean energy by calling for an end to tax breaks and subsidies, which could significantly impact the valuation for property tax purposes of clean energy properties in the future.

Texas Comptroller of Public Accounts, Susan Combs, in September of 2014, said it is time for the state to change how it approaches electricity—including additions to its large portfolio of wind energy. "It's time for wind to stand on its own two feet," Combs said in a statement.[7]

"Billions of dollars of tax credits and property tax limitations on new generation helped grow the industry, but today they give it an unfair market advantage over other power sources." "When taxpayers are asked to foot the bill for energy policy choices, we need to be sure they are the right choices," Combs said in the letter.

Because property taxes are abated for some period of time on many clean energy projects around the country, property owners are often less concerned about the value placed on their property. As those abatements begin to expire, expect legislation to extend the abatements, legislation to establish a method of valuing the properties, or a significant increase in property tax litigation relating to the assessed value of those projects.

Net Metering

As the use of solar power skyrockets across the United States, disputes have arisen in several states over how much customers should be compensated for excess power produced by their solar panels and sold back to the grid—a policy known as net metering.

Net metering laws have come under fire from a number of groups, primarily backed by fossil fuel corporations and utility companies. Forty-three states and the District of Columbia currently have net metering policies in place. The groups have set their sights on repealing them, often referring to homeowners and small business owners with their own solar panels as "free-riders on the system."

Oklahoma may be the first complete defeat for solar advocates in their fight against utility efforts to recover costs lost to distributed generation use. Net metering survived attacks in Colorado and Kansas, and Vermont recently increased its policy in a bipartisan effort.

The rapid growth in rooftop solar is catching utilities off-guard across the United States and many are fighting back against the trend due to the perceived threat it poses to their bottom line. Quite simply, more customers installing their own rooftop solar panels means they are producing more of their own electricity and buying less from their utility company.

Any significant changes in the assessment of fees to individuals or small business that generate their own electricity through clean energy devices will

likely have an impact on property tax valuation of such devices in the future.

What Does the Future Hold?

The one certainty concerning clean energy is that it is here to stay, and property owners and assessors will have to continue to deal with a myriad of issues regarding the valuation of such properties for ad valorem tax purposes. The industry continues to mature and make its presence felt among decades old, fossil-fuel energy sources.

Over 30 states and territories, and the District of Columbia, currently have renewable portfolio standards, policies designed to increase generation of electricity from renewable resources. These policies require or encourage electricity producers within a given jurisdiction to supply a certain minimum share of their electricity from designated renewable resources.

Generally, these resources include wind, solar, geothermal, biomass, and some types of hydroelectricity, but may include other resources such as landfill gas, municipal solid waste, and tidal energy.

Clean energy sectors are expected to continue to grow over the next 10 years. As clean energy grows, assessors in each state will face the complicated task of working with property owners, appraisers, legislators and others to deal with the valuation of such properties.

The strongly worded pronouncement from the Texas Comptroller of Public Accounts that "it's time for wind to stand on its own two feet" is a sentiment echoed around the country that property tax incentives and other types of subsidies offered to clean energy projects are going to face ever increasing scrutiny.

If incentives such as abatements are withdrawn or are no longer granted, some argue that certain clean energy projects will cease to be economically viable. As abatements expire, litigation regarding the valuation of clean energy projects is likely to increase.

The growth of rooftop solar PV and other distributed generation (DG) and energy storage assets is challenging the traditional utility centralized generation business model as never before.

Many large utility companies are now fighting regulatory battles in about a dozen states as they attempt to reduce the credits that rooftop solar customers get for the electrons that their PV panels return to the grid. The outcome of these battles will affect the valuation of solar properties in the future.

Clean energy technology is rapidly changing and becoming increasingly economical. When designing clean energy property tax policies to deal with this technology, policy makers must confront a number of challenges. One is the diversity of the technology and how it is employed by its owners.

Identical models of a wind turbine, for example, have different efficiencies based on where they are located and their technical configurations. These variations need to be understood by assessors and other policy makers to insure fair valuations.

Conclusion

The desire for clarity and predictability with regard to the assessment and taxation of clean energy properties is shared by both assessors and property owners. Policies should continue to be developed in each state that strive for permanence and predictability.

Clean energy companies and assessors should work together to develop systems that improve the ability of assessors to consistently and accurately value clean energy properties using generally accepted property appraisal methods.

Local, state, and national energy and tax policies will ultimately determine if, or how, this value is taxed. If all parties invested in this process work towards greater clarity, permanence, and predictability in the assessment of clean energy properties in the future, litigation will be reduced significantly. Working together, assessors and property owners will be able to form a healthier climate and stronger economy.

Notes:

1. U.S. Energy Information Administration.
2. "Energy Infrastructure Update for January 2016" Federal Energy Regulatory Commission's Office of Energy Projects.
3. U.S. Energy Information Administration.
4. For an interesting live daily wind map of the United States, see Wind Map website at http://hint.fm/wind/.
5. For a comprehensive guide to state incentives/policies for renewables & efficiency, see U.S. Department of Energy Website http://dsireusa.org; and "Property Taxes and Solar PV Systems: Policies, Practices, and Issues," Justin Barnes, et al., July 2013.
6. See U.S. Department of Energy Website http://dsireusa.org.
7. Texas Power Challenge—Getting the Most From Your Energy Dollar, Susan Combs Comptroller of Public Accounts.

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