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Government Incentives and the Valuation of Wind Parks
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Should the 30 percent federal investment tax credit (ITC) on the construction cost of a new wind park (or other renewable energy project) be automatically deducted from the original cost that is recorded for property tax assessment purposes? Some observers say “yes,” reasoning that because the ITC is available only to the first owner, the second owner (hypothetical buyer) of the wind park would not benefit from it. This loss in value is 30 percent of the construction cost and is treated as economic obsolescence on the wind park’s first day of operation.

Those who oppose this viewpoint state that the mere existence of the ITC does not prove that economic obsolescence exists. There may be sufficient operating income in support of the full construction cost of the wind park, even without the ITC benefit. This is possible because of the favorable power purchase agreement (PPA) with the local utility that supports a premium price for the electricity generated by the wind park. These PPAs are mandated by state renewable energy standards (RES) and obligate the utility

to buy wind-generated energy at a price significantly above the amount paid for conventionally produced electricity. The higher PPA price negates any economic obsolescence caused by the loss of the ITC to the hypothetical buyer of the wind park.

According to the ASA, economic obsolescence should be determined after physical and functional depreciation has been deducted.

It is also contended that generally accepted valuation procedures are circumvented by automatically deducting the ITC from the wind park’s construction cost. The American Society of Appraisers (ASA) textbook, *Valuing Machinery and Equipment*, is the authoritative source and provides a method for identifying all deductions including physical, functional, and economic obsolescence (ASA 2011). According to the ASA, economic obsolescence

should be determined after physical and functional depreciation has been deducted. As a result, wind park profits are used to support the lower depreciated amount (construction cost less physical and functional depreciation), resulting in less or no economic obsolescence. Even a brand-new wind park with no physical or functional obsolescence may have PPA-supported profits sufficient to exclude any economic obsolescence. Automatically deducting the ITC from the wind park’s original cost does not conform to generally accepted appraisal procedures.

Both viewpoints on the treatment of the ITC have merit. In states where federally mandated RES have not been initiated, the 30 percent ITC amount can provide a rough estimate of economic obsolescence. However, in states where RES supports PPAs at above-market electricity pricing, economic obsolescence will be significantly reduced and possibly become zero. In these situations, an analysis should be performed on the subject wind park to determine whether PPA pricing is sufficient to

support the construction cost without the ITC incentive.

Background of the ITC

To promote the construction of wind parks and to make wind energy competitive with energy generated by traditional fossil fuel and nuclear power plants, federal tax incentives are provided to subsidize the relatively high construction cost of wind parks. A project developer has the choice of two federal tax credit programs: the ITC or the production tax credit (PTC). The selection of one incentive over the other is based on operating and economic characteristics of the specific wind park project.

The eligibility for obtaining the ITC is set forth in Internal Revenue Code Section 48. For qualified energy properties, including wind and other renewable energy projects, the ITC is equal to 30 percent of the project's eligible construction cost. This means that 30 percent of the eligible construction cost is provided to the taxpayer, dollar-for-dollar, through income tax credits. Eligible costs are those costs recorded for income tax depreciation and covered in Internal Revenue Code Section 263A. Both direct and indirect costs incurred during construction of a wind park can be capitalized under Section 263A and are considered part of the eligible cost basis for ITC calculation. Generally excluded from the eligible indirect cost basis are marketing, selling and advertising, research and experimental, general and administrative costs, and officer compensation not related to construction, and start-up and organizational expenses.

On December 31, 2015, new amendments regarding the ITC were passed. For wind park projects that begin construction after December 31, 2016, a gradual stepdown from the 30 percent tax credit occurs, with a complete phaseout of ITC benefits ending on December 31, 2020.

As an alternative to the ITC, wind park developers are eligible for the PTC. The PTC was created in 1992 and provides wind parks with a tax credit of 1.5 cents per kilowatt-hour of electricity production. Today, the inflation-adjusted PTC is 2.3 cents for every kilowatt-hour produced by a wind park over its first 10 years of operation. Starting in 2017, the PTC is being partially phased out, declining by 20 percent in each of the subsequent 3 years.

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Which is better: ITC or PTC? The PTC program may provide a better tax benefit than the ITC depending on the specific operating characteristics of the wind park. For example, a wind park that is in a strong wind location may benefit more by electing the PTC, whereas a lower average wind speed region may favor the ITC election. Also, there are restrictions on selling an ITC-subsidized wind park that may trigger recapture of a portion of the ITC amount. In certain situations, this restriction may direct developers toward electing the PTC program instead.

The DeLacy Argument

As mentioned earlier, some observers argue that the 30 percent ITC amount should automatically qualify as economic obsolescence. In an often-cited article supporting this notion, DeLacy suggests that significant tax credits are necessary to make wind farms viable

and that federal incentives provide the necessary monetary support to industry participants that would otherwise invest elsewhere. DeLacy states,

But for the PTCs [and ITC], most U.S. wind projects would not get built, because of continued uncertainty over PTC incentives (DeLacy 2014).

The PTC benefit can closely correspond to the ITC benefit in many cases. Because the PTC is based on production, it compares better with PPA revenue, which is also production-based. According to DeLacy, the federal incentives may be regarded as “inverse economic obsolescence,” whereas without them, as with the hypothetical buyer, “the need for upfront capital incentives should be treated as economic obsolescence” (DeLacy 2014).

Although DeLacy's comment may be true for some projects, the need for ITC and PTC varies by project type (e.g., biomass, solar, wind) and by project-specific economics. In instances in which there are RES-supported PPAs, the ITC and PTC provide federal incentives that may not be necessary to achieve a fair economic return on investment. This is evidenced by the federal phaseout of the ITC and partial phaseout of the PTC over the next several years; the government believes that the current level of federal incentives is no longer necessary to support the construction of wind parks.

May Department Stores Decision

Further supporting the nondeductibility of the ITC is the decision in *May Department Stores v. County of Los Angeles* (1987). In this case, the California Court of Appeals ruled that the ITC is not deductible from the original cost for property tax purposes. The key reason cited is that the ITC is subject to “uncertainty” resulting from the possibility of its recapture because

... the taxpayer, by reason of premature disposal of the property, may have to repay or 'recapture' some or all of the [incentive] (*May Department Stores Company v. County of Los Angeles* 1987, 4, 10).

The decision in *May Department Stores* supports the argument that the ITC should not be deducted from wind park assessed value, because regulations require that a refund (recapture) be made if the wind park ceases to operate during its initial five years.

For example, if a wind park is shuttered at the end of its second year, the government recaptures 60 percent (3 years divided by 5 years) of the ITC paid to the original owner of the wind park. Also, if the wind park is sold to a hypothetical buyer and subsequently ceases to operate, it seems that both the original owner and the buyer are jointly liable for the recapture amount (Marciano 2012, 26–28). Therefore, as of the property tax assessment date, the hypothetical buyer would be at risk and should receive the future value of any remaining ITC. The argument that the buyer would not receive any value from the ITC seems incorrect within the first five years of operation of the wind park.

The PPA as an Intangible Asset

If it is found that no economic obsolescence exists because the PPA alone provides a sufficient return on investment for the construction of a wind park, then the PPA could be considered an intangible asset that is not assessable for property tax purposes. Some believe that to the extent a wind park receives above-market prices for the electricity it generates under the PPA, the premium price paid can be used to support an intangible asset valuation. This is because without the PPA, the wind park would receive only the market price for the electricity it generates.

The PPA as a non-assessable intangible asset is controversial, and there are sev-

eral court cases on the topic. The Michigan Tax Tribunal (MTT) addressed the issue in *TES Filer City Station v. Township of Filer* (MTT Docket No. 192808 2006). In this case, the MTT concluded that the higher rates paid under the PPA do not represent an intangible asset exempt from property taxation. According to the MTT, the PPA acts as a *value influencer* by allowing the electric power generator to operate at maximal productivity and therefore is inseparable from the tangible property. This decision was affirmed by the Court of Appeals of Michigan, and application for leave to appeal the Court of Appeals judgment was denied by the Michigan Supreme Court (*TES Filer City Station v. Township of Filer* 2006).

In its decision, the MTT stated,

*Indeed, Petitioner's appraisers have advanced an alternative Highest and Best Use (that of a merchant plant) based upon a faulty understanding that the actual current Highest and Best Use (that of a QF COGEN [Qualified Facility, Cogeneration Plant] operating under its current PPA) was impermissible under Michigan law. Petitioner alleges that the QF/PPA is an intangible non-taxable element in Michigan, thereby rendering its cash flow outside the value question and therefore requiring the search for another income stream (merchant plant) to support the facility. All of this rests upon acceptance of Petitioner's theory that the actual QF/PPA cannot be considered. If, however, one rejects petitioner's theory on this point, and considers the QF/PPA to be a value influencer of the variety mentioned in *Antisdale v. City of Galesburg* (1984) and *Meadowlands Ltd. Dividend Housing Ass'n v City of Holland* (1991), then Petitioner's **Highest and Best Use** must be rejected, as not meeting the fourth test regarding Maximally Productive Use. [Emphasis added.]*

(*TES Filer City Station v. Township of Filer* 2006)

Highest and Best Use

The concept of highest and best use discussed in *TES Filer City Station* is a fundamental and significant stage in the appraisal process. When personal property is being valued, IAAO requires an analysis of "highest and best use," defining it as,

A principle of appraisal and assessment requiring that each property be appraised as though it were being put to its most profitable use (highest possible present net worth), given probable legal, physical, and financial constraints. The principle entails first identifying the most appropriate market and, second, the most profitable use within that market. The concept is most commonly discussed in connection with underutilized land. (IAAO 2013, 78)

In *TES Filer City Station*, the MTT stated that,

This case is really a highest and best use case more than anything else.

While the taxpayer's appraisal expert in this case assumed that the subject is identical to a conventional power plant and uses the lower income derived from market-priced electricity, the MTT opinion was that market pricing does not reflect the highest and best use and that the PPA contract pricing supports the value derived from this more efficient and environmentally friendly power plant.

In an article titled "Full Cost Accounting for the Life Cycle of Coal," Paul R. Epstein, the lead author and a director of the Harvard Medical School Center for Health and Global Environment, wrote,

Accounting for the [environmental] damages conservatively doubles to triples the price of electricity from coal per kWh generated, making wind, solar, and other forms of nonfossil

fuel power generation, along with investments in efficiency and electricity conservation methods, economically competitive (Epstein et al. 2011).

Consistent with the MTT's opinion and Epstein et al., the highest and best use of a wind park is to produce environmentally friendly *clean electricity*, which is fundamentally different from electricity generated by conventional power plants. Therefore, attempting to appraise a wind park using the market price for conventionally generated electricity is inconsistent with the highest and best use definition. The premium price provided by a PPA is for a premium product—clean electricity.

Few would argue the justification for paying a premium price for organically grown vegetables even though the look and taste are identical to those of their conventionally grown counterparts. This also holds true for the premium electricity generated by wind parks. The total cost for conventional electricity is its production cost *plus* the hidden long-term social cost of air, water, and land pollution, along with the human health risks. It is this total cost that represents the market price for conventionally produced electricity.

Conclusion

Although the federal incentives attract investor capital and accelerate wind park development, there is little evidence to suggest the viability and survival of today's wind park industry require both federal and state incentives. In fact, some PPAs stipulate that the contractual electricity prices will be reduced by any federal incentive amount; if the wind park owner elects ITC or PTC, the contracted electricity price under the PPA will be reduced by the credit amount. These wind parks would not receive the benefit of the federal incentive, and it is not reasonable to deduct it as economic obsolescence.

Although it may be found that a specific wind park has economic obsolescence equal to the ITC amount, other wind parks will have less economic obsolescence and some wind parks will have none. The best approach to determining economic obsolescence is to follow the ASA guidelines, which have been peer-reviewed and vetted by tax courts. In addition, *May Department Stores* distinguishes the ITC from sales taxes and rebates and concludes that the ITC should not be deducted from the original cost when assessable value is established for property tax purposes.

The PPA is not separable from the taxable personal property because it provides the necessary funding for the construction of a wind park. Without the RES-supported PPA, most wind parks would not be built. Therefore, the PPA establishes the market price for environmentally friendly *clean electricity* and should be used in support of, not as a deduction from, the original cost. This is thoroughly discussed by the MTT in *TES Filer City Station*, in which it found that the PPA did *not* represent an intangible asset exempt from property taxation.

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