

# Valuation of Underlying Leased Land on a Wind Farm



## **Interim Guideline for Valuing Underlying Leased Land on a Wind Farm**

The Department's Centrally Valued Property Unit values electric generation facilities including commercial renewable energy generation facilities. Renewable energy generation facilities include facilities whose energy or fuel is derived from solar, wind, or other nonpetroleum renewable sources. The type of renewable generation addressed in this Guideline involves wind generation.

### **Background**

Normally the Department includes the cost of the land associated with an electric generation facility in the value of the facility when the land is owned by the operator of the electric generation facility. A new development associated with renewable power generation is that these facilities may be located on leased land. The Department has identified existing wind generation facilities that are located on leased land. The leased land identified to date was previously used solely for natural grazing and classified as agricultural land. The ranches where the wind generation facilities are currently located are comprised of fee owned land as well as land leased from a government entity. The wind generation facilities are located on both the fee land and the land leased from the government.

Each wind generation facility identified thus far consists of cleared areas where each wind turbine is located along with an accompanying transformer and/or electrical cable connection box. Wind generation operations collectively are often referred to as a *wind farm*. A wind farm may also include areas used for maintenance and operations facilities, electrical substation(s), underground electrical cables and access roads, and electric transmission lines.

**With the advent of leased land associated with wind generation facilities, the value of the leased land, when not disclosed to the Department, used in association with an electric generation facility, must be established by the County Assessor.** If the cost of the land is disclosed to the Department, the cost will be included in the Department's valuation of the facility.

### **Suggested Valuation Methodology**

The Department's suggested valuation methodology is based on the cost for the generation facility to acquire the land where the equipment/facility is located. With the advent of leased land, the cost to the generation facility is considered to be the cost to the generation facility of leasing the land over the lease term.

Based on research the Department conducted, the typical footprint for a wind turbine is one-quarter acre (0.25 acre) per turbine. The estimated footprint area includes space for the turbine towers, roads, and support acreage such as substations, maintenance and operations facilities etc.

The Assessor's Office should value only the turbine sites and associated support facilities located on privately owned land not reported to the Department. Sites located on land leased from a government entity should not be included in the Assessor's land value.

The land area devoted to wind generation should be excluded from the area devoted to other uses. For example, if the other use on the site is agricultural use, the land area devoted to wind generation should be deducted from the total area of the parcel or parcels owned by the land owner. When it is necessary for the County Assessor to value the land area devoted to wind generation, the Department recommends using the attached methodology for the wind generation portion of the property, with the balance of the land, in this example, being valued as agricultural land.

These properties also require a mixed use legal classification and assessment ratio. The methodology for developing the mixed use legal classification and assessment ratios is contained in Part Three, Chapter 2 of the DOR Assessment Procedures Manual available at this link:

[https://azdor.gov/sites/default/files/media/PROPERTY\\_AssessmentPart3Ch2.pdf](https://azdor.gov/sites/default/files/media/PROPERTY_AssessmentPart3Ch2.pdf)

See suggested methodology on the next page.

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1. Determine the annual amount of the lease. (If not known or given, use market rent)
2. Determine the length of the lease. (If not known or given, use the useful life of the turbines, which has been set by the Department at 25 years.)
3. Determine the Discount Rate, which is equivalent to three points plus the long-term Treasury yield rate (30 years) as of January 1st of the year that the plant was first placed in service. **(See Example Below)**



Then, apply the discount rate to find the present value of the lease payments over the life of the lease. There are several tools to find the present value. One example is shown below utilizing an Excel spreadsheet with the present value (PV) function.

**Example: Find the present value of \$2,500 in annual lease payments with a 20 year lease, discounted at 5.9940% (2.9940% + 3.0000%).**

The use of the PV function on the Excel spreadsheet shown below yields a rounded value of \$28,689.

