Property Values and Utility-Scale Solar Facilities

Introduction

The utility-scale solar industry has seen significant growth over the past decade and demand for renewable energy continues to grow as utility companies increase their investment in solar energy to meet customer demand, take advantage of affordable pricing, and to diversify their energy portfolio. The solar industry drives economic development, especially in rural communities and can be a major economic contributor that benefits all property owners through investments and tax payments for roads, schools, and community services. In 2020, utility-scale solar projects contributed $750 million in state and local taxes and land-lease payments to property owners and have invested nearly $116 billion total in projects nationwide.[1] The industry also supports over 231,000 jobs across all 50 states.

Background

Utility-scale solar is the fastest growing source of renewable energy in the United States with 12 gigawatts (GW) of capacity added to the grid in 2020 and an expected 2021 growth of 15.4 GW of capacity.[2] There is generally broad support across the United States to increase solar capacity. However, with utility-scale solar installations requiring large tracts of land, siting of these projects has caused community concern in some regions of the United States which has led to the misconception that property values are negatively affected when a solar facility is built in a community. Real world experience demonstrates that is not true.

Research shows solar parks do not adversely impact neighboring properties

Lawrence Berkeley National Laboratory (LBNL) partnered with the University of Texas at Austin to support student-led research on solar energy markets and economics. An LBNL partnered study from the University of Texas at Austin, LBJ School of Public Affairs[3] used geographic information systems (GIS) data to evaluate 956 unique solar projects completed in 2016 or earlier across the United States. The analysis indicated that cumulatively, the majority of homes are in proximity (within three miles) to 1 megawatt (MW) solar installations (approximately five to seven acres), while fewer homes are within 100 feet of 100 MW facilities (approximately 200 acres or greater). The results are consistent with the researchers' expectations that higher population density areas do not have the land capacity to permit utility-scale solar facilities; therefore, larger solar facilities are sited and permitted in rural areas that are less densely populated.

The researchers also surveyed approximately 400 property value assessors nationwide, asking if the surveyor believed there was an impact on home prices, the scale and direction of those impacts, and the source of those impacts. The results indicate that most respondents believe that proximity to a solar installation has either no impact or a positive impact on home values. The study also found that the assessors who responded to the survey believe that some features of solar facilities may be associated with positive impacts, such as a location on land that previously had an unappealing use, or the presence of trees or other visual barriers around the array.[4]

[1]American Clean Power Association. 2021. Utility-scale Solar Power Facts. Accessed at https://cleanpower.org/facts/solar-power/.
[2]U.S. Energy Information Administration (EIA). 2021. Accessed at https://www.eia.gov/todayinenergy/detail.php?id=46416
[3]Al-Hamoodah, Leila; Koppa, Kavita; Schieve, Eugenie; Reeves, D. Cale; Hoen, Ben; Seel, Joachim; and Rai, Varun. 2018. An Exploration of Property-Value Impacts Near Utility-Scale Solar Installations. Policy Research Project (PRP), LBJ School of Public Affairs, The University of Texas at Austin, May 2018. Accessed at https://emp.lbl.gov/sites/default/files/property-value_impacts_near_utility-scale_solar_installations.pdf
[4]Al-Hamoodah et al. 2018.

Additionally, numerous property value assessments have found no evidence of decreased property values after construction of a solar farm:

- Marous & Company studied the value of properties adjacent to solar projects in Wisconsin and concluded that concerns regarding negative property value impacts were not substantiated. There is no market data indicating a solar project will have a negative impact on either rural residential or agricultural property values in the surrounding area. Further, for agricultural properties that host photovoltaic panels, the study indicated that the additional income from the solar lease, and other solar agreements, may increase the value and marketability of those properties. The study also included an in-depth analysis of recent residential sales near existing solar farms in Minnesota, North Carolina, Indiana, Arizona, and Illinois. The analysis concluded that proximity of a solar farm does not have any measurable negative impact on surrounding residential property values.[5]

- CohnReznick, LLP studied the value of properties adjacent to solar farms in California, Hawaii, Illinois, Indiana, New York, and Minnesota and concluded that the solar farms do not adversely affect the property values in either the short or long term.[6,7,8,9] CohnReznick analyzed property sale prices and marketability of single-family homes and agricultural land adjacent to solar farms and compared this data to comparable properties in the same county. They also conducted interviews with county assessors and local real estate professionals. Consensus was that solar farms in their areas had not impacted property values.

- Kirkland Appraisals, LLC studied the value of properties adjacent to solar farms in North Carolina.[10,11,12] Kirkland's analyses strongly support the compatibility of solar farms with adjoining agriculture and residential uses and conclude that there is no impact in home values due to proximity of a solar farm

- Christian P. Kaila & Associates studied the value of properties adjacent to solar farms in Virginia[13]. The analysis concluded that adjacent property value, residential and agricultural property, is not adversely affected by construction and operation of solar facilities.

The utility-scale solar industry understands the importance of engaging with the host community to balance economic, environmental, safety, and social concerns when developing and operating their projects. Solar developers prioritize being a good neighbor and long-term partner with host communities.

[5]Marous & Company. 2021. Market Impact Analysis: Koshkonong Solar Energy Center Dane County, Wisconsin. April 13, 2021. Accessed at https://apps.psc.wi.gov/ERF/ERFview/viewdoc.aspx?docid=409444

[6]CohnReznick, LLP. 2018. Property Value Impact Study. A Study of Nine Existing Solar Farms: Champaign, LaSalle, and Winnebago Counties, Illinois; and, Lake, Porter, Madison, Marion, and Elkhart Counties, Indiana. March 2018. Accessed at http://www.co.champaign.il.us/CountyBoard/ZBA/2018/180412_Meeting/180412_Adjacent%20Property%20Values%20Solar%20Impact%20Study%20by%20CohnReznick.pdf

[7]CohenReznick, LLP. 2018. Property Value Impact Study. A Study of Nine Exisiting Solar Farms: Champaign, LaSalle, and Winnebago Counties, Illinois; and, Lake, Porter, Madison, Marion, and Chisago County, Minnesota. May 2018. Accessed at https://www.oglecounty.org/document_center/planning%20&%20zoning/Solar%20Ad%20Hoc%20Committee/PV%20Impact%20Studies/CR%20-%20SunVest%20Solar%20-%20Solar%20Farm%20Impact%20Study%20(Report%20Date%205-30-2018).pdf

[8]CohnReznick, LLP. 2018. Property Value Impact Study. A Study of Nine Existing Solar Farms: Champaign, LaSalle, and Winnebago Counties, Illinois; and, Lake, Porter, Madison, Marion, and Chisago County, Minnesota. July 2018. Accessed at https://www.mcleancountyil.gov/DocumentCenter/View/13192/Patricia-L-McGarr--Property-Value-Impact-Study?bidId=

[9]CohnReznick, LLP. 2018. Property Value Impact Study. A Study of Six Existing Solar Farms: Honolulu County, Hawaii; San Francisco County, California; Suffolk County, New York; Marion County, Indiana; and Chisago County, Minnesota. May 2020. Accessed at https://www.innergex.com/wp-content/uploads/2020/05/CohnReznick-Proposed-Paeahu-Solar-Property-Value-Impact-Study_Draft_May-2020.pdf

[10]Kirkland, Richard C. 2016. Grandy Solar Impact Study. Kirkland Appraisals, February 25, 2016. Accessed at https://www.southripleysolar.com/wp-content/uploads/2020/09/Kirkland-Grandy-Solar-Impact-Study.pdf

[11]Kirkland, Richard C. 2018. Flatwood Solar Impact Study. Kirkland Appraisals, April 28, 2018. Accessed at https://www.chathamcountync.gov/home/showdocument?id=39355

[12]Kirkland, Richard C. 2018. Culpeper Solar Impact Study. Kirkland Appraisals, March 7, 2018.

[13]Christian P. Kaila & Associates. 2020. Property Impact Analysis of Round Hill Solar, Proposed Solar Power Plant Augusta County, Virginia. June 2020. Accessed at https://www.roundhillsolarproject.com/wp-content/uploads/2020/11/Attachment-L-Property-Value-Impact-Study.pdf.

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