

Solar and Salt—Sunshine Is Making Hay

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Mark F. Sommer, Daniel G. Mudd, Elizabeth D. Mosley, and Abi Z. McFarland illustrate the steps one must take in advising on solar power investments by explaining the state and local incentives in America's core—Indiana, Kentucky, Ohio, and Tennessee.

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The U.S. solar energy industry has experienced huge growth in recent years. More companies are entering the field by investing in large-scale solar projects, and more traditional oil and gas companies are branching into renewable energy. Federal and state support in the form of various programs and tax incentives, as well as the decreasing cost of solar equipment, contribute to the solar industry's growth. Before developing a solar facility, however, it is important to understand the tax structure of the state in which development may occur, the impacts of regulations in those states, and potential options for limiting state tax liability. As an overview of the national treatment, this article provides an overview of sales and use tax and property tax treatment, as well as state and local incentives, in America's core, Indiana, Kentucky, Ohio, and Tennessee.

I. Sales and Use Taxes

To incent the industry, Indiana, Kentucky, Ohio, and Tennessee all offer various exemptions and exclusions that reduce the overall tax liability for large-scale, capital-intensive solar energy projects.

Indiana

Indiana imposes a 7% sales and use tax on retail transactions and subsequent use of purchased items in the state.¹ However, Indiana provides an industrial

production exemption, which allows for transactions involving manufacturing machinery, tools, and equipment, including material handling equipment purchased for the purpose of transporting materials from an onsite location, to be exempt from the state gross retail tax if the person acquiring that property does so for its direct use in the direct production, manufacture, fabrication, assembly, extraction, mining, processing, refining, or finishing of other tangible personal property.²

Large-scale and capital-intensive projects in the solar energy industry have a number of exemptions and incentives available upon entering the field.

The industrial production exemption allows for a solar energy production company's acquisition, storage, use and/or consumption of foundations, posts, racks, modules, inverters, and related component parts, which consist of or become a part of the solar energy plant, to be exempt from sales and use tax.³ Transformers and electrical interconnection systems are considered to be part of the transmission and distribution processes, not the production process, and therefore are not exempt from sales and use tax.⁴ Similarly, access roads and fencing are not considered direct use in the production of electricity and thus do not fall under this exemption.⁵

Kentucky

Kentucky imposes a 6% sales and use tax on tangible and digital property purchased or used in the state.⁶ Tangible personal property, digital property, and enumerated services for delivery or access in Kentucky are presumed taxable unless specifically exempted.⁷ However, similar to Indiana, the Kentucky Department of Revenue considers the solar generation of electricity to be a form of manufacturing and allows for certain exemptions from sales and use tax.

Kentucky's new and expanded industry exemption exempts machinery, equipment, and materials directly used in the installation of such machinery and equipment.⁸ In order to qualify for this exemption, the machinery, equipment, and materials must be incorporated for the first time into new or existing plant facilities, must not replace other machinery, and must be directly used in a

manufacturing or processing production operation.⁹ Solar manufacturing machinery includes solar panels, mounting systems, trackers, DC system items, inverters, converters, AC system items, meters and regulators used directly within the manufacturing process for the generation of electricity at the plant facility, transformers used directly within the manufacturing process for the generation of electricity at the plant facility, and computer systems and equipment used to control and monitor the machinery.¹⁰

Despite the above eligible assets, there is still some uncertainty regarding the inclusion of AC lines, transformers, and/or substations as exempt machinery, because again, they could be considered part of the transmission and distribution processes, and not the production process itself. Other solar-related items that are generally not eligible for the new and expanded industry exception are materials used for construction of the actual facility, meters and regulators used in the delivery or transmission of electricity, electric transmission property used to transmit the electricity to the grid, security structures and systems, communication equipment, and batteries.¹¹

Ohio

Ohio imposes a sales and use tax of 5.75% on property bought or sold in the state.¹² Again, there is an exemption to the sales and use tax that may apply to the solar industry. The sales tax does not apply to sales of tangible personal property and services to a provider of electricity used or consumed directly and primarily in generating, transmitting, or distributing electricity for use by others.¹³ This exemption includes property that is or will become a part of the consumer's production, transmission, or distribution system and that retains its classification as tangible personal property after incorporation; fuel or power used in the production, transmission, or distribution of electricity; energy conversion equipment; and tangible personal property and services used in the repair and maintenance of the production, transmission, or distribution system.¹⁴

"Energy conversion equipment" is defined as tangible personal property connected to a wind turbine tower, connected to and behind solar radiation collector areas and designed to convert the radiant energy of the sun into electricity or heat, or connected to any other property used to generate electricity from an energy resource, through which electricity is transferred to controls, transformers, or power electronics and to the transmission interconnection point.¹⁵ It includes, but is not limited to, inverters, batteries, switch gears, wiring, collection lines, substations, ancillary tangible personal property, or any lines and associated tangible personal property located between substations and the transmission interconnection point.¹⁶

Tennessee

Tennessee imposes a sales and use tax of 7%.¹⁷ In 2015, however, Tennessee established an emerging industry credit program that allows for a taxpayer to receive a credit of all sales and use tax, less 0.5%, on the sale or use of qualified tangible personal property.¹⁸ The credit applies to clean energy technology, development, and installation, as determined by the Tennessee Commissioner of Revenue and the Commissioner of Economic and Community Development.¹⁹ “Clean energy technology” is defined as technology resulting in energy efficiency; technology used to generate energy from biomass, geothermal, hydrogen, hydropower, landfill gas, nuclear, solar, and wind sources; and technology that is designed to result in the development of advanced coal through carbon capture and sequestration or other manner that significantly reduces CO₂ emissions.²⁰

Building materials, machinery, equipment, furniture, fixtures, and software used exclusively for the qualified facility and purchased or leased during the investment period may be credited; supplies, repairs, and lease payments may not.²¹ To qualify for this credit, the qualified facility must maintain 50 full-time employee positions and support the industry for a period of at least 10 years following substantial completion.²² The taxpayer must also make a minimum investment of \$100 million within a six-year investment period, submit an application to the Commissioner of Revenue, and submit a claim for credit.²³

II. Property Tax and Valuation

Indiana, Kentucky, Ohio, and Tennessee each employ different methods when determining the property tax and valuation of solar energy facilities.

Indiana

In Indiana, light, heat, or power companies are subject to tax as public utility companies.²⁴ In the past, a “light, heat, or power company” meant a company engaged in the business of furnishing light, heat, or power by electricity, gas, or steam; but effective as of January 1, 2022, that term also includes utility grade solar energy installation facilities.²⁵ A utility grade solar energy installation facility is a renewable utility grade solar electricity facility that is used for the purpose of generating solar electricity for resale to consumers.²⁶ In order to determine property taxes, township assessors assess the fixed property of public utility companies.²⁷ The Department of Local Government Finance (DLGF) assesses the distributable property of public utility companies, including generators, boilers, transformers, transmission lines, distribution lines, and pipelines.²⁸

For assessment dates after December 31, 2021, the land portion of the fixed property of a utility grade solar energy installation facility shall be assessed at an amount that does not exceed the solar land base rate for the region in which the property is located.²⁹ The solar land base rate, determined annually by the DLGF for each region of the state, reflects the median true tax value per acre of all land in the region classified under the utility property class codes for the immediately preceding assessment date.³⁰

Kentucky

Prior to a solar power facility becoming operational, the Property Valuation Administrator (PVA) will assess the real estate separately as it would with any for-profit business and the solar power company shall file a Tangible Personal Property Tax Return to report tangible personal property related to the construction work in process.³¹ Once operational, solar power companies are considered public service corporations (PSCs).³² The Kentucky Department of Revenue determines the valuation of PSC property and certifies to the county clerk the amount due for local property taxes.³³ The Department of Revenue determines the fair cash value of the operating property of a domestic PSC as one unit encompassing the company’s real property, tangible personal property, and franchise.³⁴ Here, “franchise” is essentially an intangible asset akin to “earning value.”³⁵ The non-operating property, both tangible and intangible, is valued in the same manner. Once determined, the fair cash value is then apportioned to Kentucky based on the average of the property factor and the business factor.³⁶ The property factor and the business factor, respectively, reflect the amount of operating property operated, owned, or leased in Kentucky compared to the total everywhere, and the utilization of the operating property in Kentucky compared to the utilization everywhere.³⁷

Ohio

In order to determine property taxes in Ohio, the county auditor typically determines the true value of the fee simple estate of real property and of the buildings, structures, and other improvements located on that property, based on information such as the current agricultural use of the land, acreage, and sale price.³⁸ When it comes to tangible personal property, the tax commissioner publishes an annual procedure taking into consideration factors including the type of business, types and classes of property, useful life of property, physical deterioration, repair and maintenance practices, and salvage value.³⁹

Ohio authorizes property tax exemptions for solar energy systems. A solar, wind, or hydrothermal energy system, constructed or installed between August 14, 1979 and December 31, 1985, that meets the guidelines

established under Ohio Rev. Code Ann. §1551.20, is exempt from real property taxation.⁴⁰ These guidelines define a “solar or wind energy system” as any method used to directly provide space heating or cooling, hot water, industrial process heat, or mechanical or electric power by the collection, conversion, or storage of solar or wind energy, including, but not limited to, active or passive solar systems.⁴¹ Any fixture or other real property included in an energy facility with an aggregate nameplate capacity of 250 kilowatts or less is also exempt from taxation if its construction or installation is completed on or after January 1, 2010.⁴² “Energy facility,” as used in this context, is defined as one or more interconnected wind turbines, solar panels, or other tangible real property used to generate electricity from an energy resource owned by the same person.⁴³ This includes all interconnection equipment, devices, and related apparatus connected to such tangible personal property; and all cables, equipment, and related apparatus that connect the generators to an electricity grid, building, or facility.⁴⁴

Tennessee

On April 29, 2013, Tennessee adopted Senate Bill No. 1000, which limited the value of green energy source property.⁴⁵ The General Assembly found that property generating electricity using green sources, such as geothermal, hydrogen, solar, or wind, would likely produce less electricity than conventional sources due to intermittent energy sources or other factors, and would therefore be competitively disadvantaged.⁴⁶ In order to prevent discouragement from using green sources, the General Assembly determined that the value of green energy source property should not exceed a percentage of total installed costs equal to the ratio of projected electricity output over a period of one year to the maximum capacity of the project.⁴⁷ For solar source property specifically, the value should not exceed 12.5% of total installed costs.⁴⁸

III. Solar-Related Local and State Incentives

In addition to the various sales and use and property tax exemptions already mentioned, states have also implemented various other initiatives to encourage the production of solar energy.

Indiana

The Indiana Voluntary Clean Energy Portfolio Standard Program, otherwise known as the Comprehensive Hoosier Option to Incentivize Cleaner Energy (CHOICE)

Program, launched on January 1, 2013.⁴⁹ The CHOICE Program works toward achieving three goals: participating electricity suppliers providing their customers with an average of at least 4% electricity from renewable sources between January 1, 2013 and December 31, 2018; at least 7% between January 1, 2019 and December 31, 2024; and at least 10% in the calendar year ending on December 31, 2025.⁵⁰

To participate, an electricity supplier must file an application, including a business plan and description of projects, with the Indiana Utility Regulatory Commission.⁵¹ If approved, a participating electricity supplier must obtain clean energy resources or clean energy credits, in an amount of megawatt hours, at least equal to the percentage set forth in the goals during the specified goal period; use clean energy resources located in Indiana for at least 50% of the clean energy obtained to meet the goal; and must not satisfy more than 30% of the goal using any combination of clean coal, nuclear energy, electricity generated by a customer, combined heat and power systems, and electricity generated from natural gas at a facility constructed in Indiana after July 1, 2011.⁵² “Clean energy resources,” as defined here, include wind energy, solar energy, photovoltaic cells and panels, dedicated crops grown for energy production, organic waste biomass, hydropower, fuel cells, hydrogen, energy from waste to energy facilities, energy storage systems, geothermal energy, coal bed methane, industrial byproduct technologies, waste heat recovery, or other sources approved by the Indiana Utility Regulatory Commission.⁵³ A “clean energy credit” or “CEC” is an interest that represents one megawatt hour of clean energy, is quantifiable and transferrable, and is possessed by no more than one entity at a time.⁵⁴

Electricity suppliers receive incentives for reaching the CHOICE goals.⁵⁵ After attaining each goal, the utility company may be allowed to increase its return on equity by as many as 50 basis points over its currently approved rate of return.⁵⁶

Kentucky

Kentucky provides certain tax incentives under the Kentucky Enterprise Initiative Act (“KEIA”) Program.⁵⁷ KEIA provides a sales and use tax refund to an eligible company based on the total amount of tax paid on such things as building and construction materials, electronic processing equipment, research and development equipment, and acquisition of real property that is owned, used, or occupied by the company.⁵⁸ This refund requires a minimum investment of \$500,000 in the project.⁵⁹ Eligible companies include businesses primarily engaged in manufacturing; service or technology activities;

agribusiness; headquarters operations; alternative fuel, gasification, energy-efficient alternative fuels, or renewable energy production; carbon dioxide transmission pipelines; or operating or developing a tourism attraction.⁶⁰

A solar project may qualify for a KEIA refund as both a manufacturing and a renewable energy production company. While specific types of solar equipment, such as transformers/AC lines, may not always qualify under the sales and use tax new and expanded industry exemption, as discussed under the Sales and Use Taxes section above, they could qualify for a KEIA refund as electronic processing equipment. To qualify, an eligible company must submit an application and fee, negotiate terms with the Cabinet for Economic Development, and be approved by the Kentucky Economic Development Finance Authority (KEDFA).⁶¹ Upon approval, the company will enter into an agreement based upon the previously negotiated terms.⁶² The maximum state-wide refund pool available in each fiscal year for all of KEDFA's projects is \$20 million for building and construction materials and \$5 million for eligible equipment.⁶³

In addition to KEIA, Kentucky also has a Kentucky Business Investment (KBI) Program.⁶⁴ Similar to KEIA eligibility requirements, KBI is open to business entities engaged in manufacturing; agribusiness; headquarters operations; non-retail service or technology activities designed to serve and provided to a customer base that is majority non-residents; coal severing and processing; hospital operations; alternative fuel, gasification, energy-efficient alternative fuels, or renewable energy production; or carbon dioxide transmission pipeline.⁶⁵ The business entity must incur eligible costs of at least \$100,000, but unlike KEIA, KBI requires a project to create a minimum of 10 new full-time jobs, with at least 90% of new full-time employees earning hourly wages of at least 150% of the federal minimum wage and benefits (oftentimes a difficult ask for a solar project).⁶⁶ Incentives are awarded in the form of tax credits, up to 100% of corporate income or limited liability entity tax liability arising from the project. Like with KEIA, applicants for KBI must submit an application and fee, negotiate terms with the Cabinet for Economic Development, and be approved by KEDFA.⁶⁷ The business entity must also show that the project could reasonably locate outside of Kentucky and would likely do so if not for these incentives—commonly known as the “but for” test.⁶⁸

Ohio

In addition to the previously discussed property tax exemption, Ohio also has a solar generation fund, established as of June 30, 2021.⁶⁹ This fund is administered by

the Ohio Air Quality Development Authority, in consultation with the Public Utilities Commission.⁷⁰ Although it is too late for a new company to apply for funding, it should be noted that Ohio is currently using the solar generation fund to issue payments for solar energy credits. The owner or operator of a qualifying solar resource could have applied to the Ohio Air Quality Development Authority no later than February 1, 2020, to receive payments for solar energy credits.⁷¹ The Ohio Air Quality Development Authority then reviewed and approved applications if they met the definition of a qualifying solar resource. A “qualifying solar resource,” as used in this case, is an electric generating facility in Ohio which uses or will use solar energy as the primary energy source, which obtained a certificate for construction of a major utility facility from the power citing board prior to June 1, 2019, and which is interconnected with the transmission grid subject to operational control by PJM Interconnection, LLC.⁷²

Before developing a solar facility, however, it is important to understand the tax structure of the state in which development may occur, the impacts of regulations in those states, and potential options for limiting state tax liability.

Beginning in April 2021 and ending in January 2028, on a quarterly basis, the Ohio Air Quality Development Authority shall direct the Treasurer of State to remit funds to the owners and operators of qualifying solar resources, according to the number of credits earned by the resources during the quarter that ended 12 months prior to the last day of the previous quarter.⁷³ The Ohio Air Quality Development Authority shall issue one solar energy credit per megawatt hour of electricity produced.⁷⁴ As of June 30, 2021, the price for one solar energy credit was nine dollars.⁷⁵

Tennessee

Tennessee allows for a certified green energy supply chain manufacturer, and their integrated customers or suppliers, to receive a green energy tax credit and a carbon charge credit against the total imposed by franchise and

excise taxes.⁷⁶ A “certified green energy supply chain manufacturer” is any manufacturer who has made a capital investment of at least \$250 million within an investment period of three years in order to construct, expand, or remodel a facility that is certified by the Commissioner of Revenue, Commissioner of Economic and Community Development, and Commissioner of Environment and Conservation to be engaged in manufacturing a product that is necessary for the production of green energy.⁷⁷ While these tax credits may not apply to solar energy facilities themselves, they have an indirect impact on the facilities.

The green energy supply chain manufacturer and their affiliates are allowed a green energy tax credit equal to the amount by which the charge for electricity sold to the manufacturer exceeds the charge that would have been made for the total electricity delivered if the maximum certified rate, issued by the Commissioner of Revenue, had been applied during the tax year.⁷⁸ If the credit exceeds the franchise and excise tax liability, the amount

of excess shall be refunded, up to a one-year amount of \$1.5 million for each \$250 million in capital investments made by the manufacturer.⁷⁹ If the manufacturer incurred a carbon charge during the tax year, the manufacturer is allowed the same amount as a credit against the franchise and tax liability, and any excess amount shall also be refunded.⁸⁰

Conclusion

Large-scale and capital-intensive projects in the solar energy industry have a number of exemptions and incentives available upon entering the field. Although all states structure their taxes differently and have taken varied approaches when it comes to valuing and taxing solar power companies and property, examining the core states of Indiana, Kentucky, Ohio, and Tennessee, ample tax subsidies and incentives exist in support of solar projects, and generally stated, most other states have similar programs in place.

ENDNOTES

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¹ Ind. Code Ann. §6-2.5-2-2.

² Ind. Code Ann. §6-2.5-5-3.

³ Indiana Rev. Rul. ST 12-03, July 27, 2012.

⁴ *Id.*

⁵ *Id.*

⁶ Ky. Rev. Stat. Ann. §139.310.

⁷ Ky. Rev. Stat. Ann. §139.260.

⁸ 103 Ky. Admin. Regs. 30:120.

⁹ *Id.*

¹⁰ Kentucky Technical Advice Memorandum KY-TAM-21-01, April 24, 2021.

¹¹ *Id.*

¹² Ohio Rev. Code Ann. §5739.02.

¹³ Ohio Rev. Code Ann. §5739.02.

¹⁴ *Id.*

¹⁵ Ohio Rev. Code Ann. §5727.01.

¹⁶ *Id.*

¹⁷ TN Department of Revenue, *Sales and Use Tax*, TN.gov, available at www.tn.gov/revenue/taxes/sales-and-use-tax.html/.

¹⁸ Tennessee Sales and Use Tax Guide, January 2, 2015.

¹⁹ *Id.*

²⁰ *Id.*

²¹ *Id.*

²² *Id.*

²³ *Id.*

²⁴ Ind. Code Ann. §6-1.1-8-3.

²⁵ Ind. Code Ann. §6-1.1-8-2.

²⁶ *Id.*

²⁷ Ind. Code Ann. §6-1.1-8-24.

²⁸ *Id.*

²⁹ *Id.*

³⁰ Ind. Code Ann. §6-1.1-8-24.5.

³¹ Kentucky Technical Advice Memorandum KY-TAM-21-01, April 24, 2021.

³² *Id.*

³³ Ky. Rev. Stat. Ann. §136.180.

³⁴ Ky. Rev. Stat. Ann. §136.160.

³⁵ *Dayton Power & Light Co. v. Dep't of Revenue*, 405 SW3d 527, 529 (Ky. App. 2012).

³⁶ *Id.*

³⁷ *Id.*

³⁸ Ohio Rev. Code Ann. §5713.03.

³⁹ Ohio Admin. Code 5703-3-11.

⁴⁰ Ohio Rev. Code Ann. §5709.53.

⁴¹ Ohio Rev. Code Ann. §1551.20.

⁴² *Id.*

⁴³ Ohio Rev. Code Ann. §5727.01.

⁴⁴ *Id.*

⁴⁵ S.B. 1000, 108th Gen. Assemb., 1st Reg. Sess. (Tn. 2013).

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ 170 Ind. Admin. Code 171-3-1.

⁵⁰ 170 Ind. Admin. Code 171-3-3.

⁵¹ 170 Ind. Admin. Code 171-4-1.

⁵² 170 Ind. Admin. Code 171-3-4.

⁵³ Ind. Code Ann. §8-1-37-4.

⁵⁴ Ind. Code Ann. §8-1-37-3.

⁵⁵ Ind. Code Ann. §8-1-37-13.

⁵⁶ *Id.*

⁵⁷ Ky. Rev. Stat. Ann. §154.31.

⁵⁸ *Id.*

⁵⁹ *Id.*

⁶⁰ *Id.*

⁶¹ *Id.*

⁶² *Id.*

⁶³ *Id.*

⁶⁴ Ky. Rev. Stat. Ann. §154.32.

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ *Id.*

⁶⁹ Ohio Rev. Code Ann. §3706.49.

⁷⁰ *Id.*

⁷¹ Ohio Rev. Code Ann. §3706.41.

⁷² Ohio Rev. Code Ann. §3706.40.

⁷³ Ohio Rev. Code Ann. §3706.55.

⁷⁴ Ohio Rev. Code Ann. §3706.45.

⁷⁵ *Id.*

⁷⁶ Tenn. Code Ann. §67-4-2109.

⁷⁷ *Id.*

⁷⁸ *Id.*

⁷⁹ *Id.*

⁸⁰ *Id.*

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