Solar Tax Incentives for States Fully Within the PJM Interconnection, LLC Footprint

Data sourced from the North Carolina Clean Energy Technology Center Database of State Incentives for Renewables & Efficiency, August 4 through August 7, 2023.

August 9th, 2023 Meeting of the Task Force to Study Solar Incentives

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INTRODUCTION

One task mandated by Chapter 545 of the 2023 laws of Maryland, is for the Task Force to Study Solar Incentives ("Task Force") to study "tax credits and exemptions…" as they apply to the State reaching its Renewable Portfolio Standard goals.

The information below summarizes the tax environment for states that are fully within the footprint or territory of the regional transmission operator that serves Maryland, PJM Interconnection, LLC ("PJM"). These states share in the electricity that is transmitted among all territories served by PJM and are in relatively close proximity to Maryland, if not bordering it. The data was sourced from "DSIRE", the Database of State Incentives for Renewables & Efficiency[1] operated by the North Carolina Clean Energy Technology Center, and it is accompanied by a disclaimer.[2]

The spreadsheet immediately below is a visual representation of the information obtained from DSIRE. The text that follows is a compilation of information from that same source, unless otherwise noted.

SOLAR TAX INCENTIVES w/in PJM	State:	MD			DE			NJ			OH			PA			VA			WV		
Category	Subcategory	RR	US	O	RR	US	O	RR	US	O	RR	US	O	RR	US	O	RR	US	O	RR	US	O
Property	Permissive Cnty. Credit/Exemption																R					
	Partial Exemption (Solar Property)									Ag		PILOT	PILOT									
	Personal Poperty Exemption			CS													C	nt	y.			
Sales	Purchase Exemption																					
	Production Exemption									Ag												
Corporate	Business and Operation																					C

[1] www.dsireusa.org/

[2] "The information presented on the DSIRE® website provides an unofficial overview of financial incentives and other policies. It does not constitute professional tax advice or other professional financial guidance, and it should not be used as the only source of information when making purchasing decisions, investment decisions or tax decisions, or when executing other binding agreements. Please refer to the original source materials and the individual contact provided below each policy/incentive summary to verify that a specific financial incentive or other policy applies to your project.
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PROPERTY TAX INCENTIVES

Permissive County Property Tax Credit or Exemption for Buildings with Solar Devices

MARYLAND

Title 9 of Maryland's property tax code provides local governments the option to allow a property tax credit for buildings equipped with a solar, geothermal or qualifying energy conservation device. These devices may be used to heat or cool the structure, to generate electricity to be used in the structure, or to provide hot water for use in the structure. The law was initially enacted in 1985, but at that time applied only to heating and cooling and water heating applications. Electricity production for on-site use was added in 2006.

Under this provision, counties determine the amount of the credit and are given the freedom to define solar, geothermal, and energy conservation devices. Counties also determine the length of time that the credit may be available up to a maximum of three years. It should be noted that the statute includes the city of Baltimore in this provision because Baltimore, the city, has its own jurisdiction as a county. Maryland's local option tax incentive is unique because it is applied in the form of a credit -- not an exemption or exclusion as in the case of many other property tax programs. As of July 2020 at least five counties in Maryland offer a property tax credit under this section of the state code:

- Anne Arundel County
- Harford County (solar and geothermal)
- Baltimore County (solar and geothermal)
- Montgomery County (solar, geothermal, and energy conservation)
- Prince George's County (solar and geothermal)

VIRGINIA

The State of Virginia provides the option for any county, city, or town to exempt or partially exempt solar energy equipment and recycling equipment from local property taxes. This status is targeted toward non-commercial participants; commercial entities are fully exempt from state and local taxes under Commercial Property Tax Exemption for Solar.

In 2022, Chapter 496 (SB 686) was added to the Code of Virginia. As of January 1, 2023, residential and agricultural solar installations up to 25 kW will be declared a separate class of taxable property and such facilities shall be wholly exempt from state and local taxation.

The solar equipment and installation has to be inspected and certified by the local building department or the Department of Environmental Quality to provide the value of the system for the purpose of determining tax credit. The statute broadly defines solar energy equipment as any that is "designed and used primarily for the purpose of collecting,

generating, transferring, or storing thermal or electric energy." This includes solar photovoltaic (PV), solar thermal heating, and passive solar systems.

Recycling equipment is defined as equipment which is "certified by the Department of Environmental Quality as integral to the recycling process and for use primarily for the purpose of abating or preventing pollution of the atmosphere or waters.

Cities currently offering a solar energy equipment and facilities exemption include: Alexandria, Charlottesville, Fredericksburg, Hampton, Harrisonburg, Lexington, Lynchburg, Petersburg, Roanoke, Suffolk, and Winchester.

Counties currently offering a solar energy equipment and facilities exemption include: Albemarle, Augusta, Botetourt, Chesterfield, Dinwiddie, Fairfax, Frederick, Giles, Hanover, Isle of Wight, King George, Loudoun, Prince William, Pulaski, Scott, Spotsylvania, Warren, and Wise.

Partial Property Tax Exemption for Solar Devices

MARYLAND

In May 2007, Maryland established a property tax exemption for residential solar energy systems. Under this law, solar energy devices "installed to heat or cool a dwelling, generate electricity to be used in the dwelling, or provide hot water for use in the dwelling" were exempt from state -- but not local -- property taxes. However, in April 2008 H.B. 377 was enacted, repealing this exemption beginning July 1, 2008. In place of the rescinded exemption, H.B. 377 inserted another provision exempting solar photovoltaic (PV) and solar hot water systems from real property taxes. The exemption now applies equally to state and local real property taxes. In addition, by removing the term "dwelling" and replacing it with "structure", the revised exemption appears to no longer be limited to residential systems.

In May 2009, the exemption was amended yet again by H.B. 1171 to add "residential wind energy equipment" as an eligible technology. In order to qualify, equipment must be sited on residential property and produce electricity to be used in a structure on that property. The new law also revised the definition of eligible solar property to include devices that use "solar thermal electric energy" to generate electricity for use in a structure. A separate piece of legislation, S.B. 621, subsequently amended the definition of solar energy property to include property that generates electricity which is put on the electrical grid (e.g., as in a net metering arrangement). These new provisions took effect July 1, 2009.

NEW JERSEY

In October 2008, New Jersey enacted legislation exempting renewable energy systems used to meet on-site electricity, heating, cooling, or general energy needs from local property taxes. (There is not a state component to property taxes in New Jersey). Eligible renewable energy systems[3] include solar PV, wind, fuel cells, sustainable biomass, geothermal electric, landfill gas, hydroelectric, resource recovery, wave, and tidal systems that produce electricity. Systems that produce energy from solar thermal energy (e.g., solar hot water) or geothermal energy (e.g., geothermal heat pumps) are also eligible for the exemption. The exemption may be claimed for all qualified systems installed on residential, commercial, industrial, or mixed use buildings as accessory uses.

In order to claim the exemption, property owners must apply for a certificate from their local assessor which will reduce the assessed value of their property to what it would be without the renewable energy system. Exemptions will take effect for the year after a certification is granted. The New Jersey Department of Treasury, Division of Taxation is required to develop the rules and regulations necessary to implement this law. According to the law, rules relating to the technical qualifications for eligible renewable energy systems will be developed by the New Jersey Board of Public Utilities (BPU) and the Commissioner of Community Affairs. The Department of Community Affairs (DCA) has determined that the existing Uniform Construction Code, which requires compliance with a manufacturer's instructions in cases not specifically covered by the code, is a sufficient basis for determining whether or not a system qualifies for the exemption. Thus, as of this writing detailed technical standards are not expected.

...[U]nder the Farmland Assessment Act, farmland actively devoted to an agricultural or horticultural use is assessed at its productivity value. This practice generally results in a lower tax burden for farmland owners compared to residential or commercial land owners. In January 2010 New Jersey enacted legislation (S.B. 1538), which among other things clarifies how farmland used for biomass, solar, and wind energy generation should be treated under the Farmland Assessment Act. Ultimately, the law states that the addition of a biomass, solar, or wind energy generating system to land that was assessed and taxed as farmland during the prior tax year does not automatically preclude the land from continuing to qualify for this treatment. Instead, the law sets a series of conditions that must be met in order for the land to continue to be assessed as farmland, as follows:[4]

[3] Biomass, hydroelectric, and resource recovery facilities must meet environmental standards as defined by the New Jersey Department of Environmental Protection and minimize environmental and community impacts.

[4] It is also important to note that S.B. 1538 prescribes several other criteria for determining whether it is permissible to construct energy generation facilities on preserved farmland. Among these criteria are requirements that energy production facilities not interfere with farm production; be limited in size to that needed to meet no more than 110% of on-site energy needs; and not occupy more than 1% of the total area of the farm, including both preserved and non-preserved portions.

- The land must be part operating farm for the current year and have been part of an operating farm during the preceding year.
- The power and heat generated by the system must generally, but not exclusively, be used to serve farm energy needs.
- A conservation plan must be filed with and approved by the conservation district.
- For solar energy systems, the property under the panels must be used to the greatest extent practical for shade crops, pasture, or grazing.
- The ratio [of] land devoted to energy production to land devoted to agricultural operations may not exceed 1:5 acres (i.e., maximum 1 acre devoted to energy production for every 5 acres devoted to agricultural operations).
- Facilities are limited in size to the lesser of 10 acres or 2 megawatts (MW) of generating capacity.
- For biomass generation, the property owner must obtain approval from the New Jersey Department of Agriculture.

Income generated from the sale of heat or power generated by solar, wind, biomass facilities is not considered income for the purposes of meeting eligibility requirements for assessment, valuation, and taxation under the Farmland Assessment Act. However, there is no income requirement for land assessed according to the terms described in the law. Any qualifying generation equipment installed in pinelands remains subject to the Pinelands Protection Act.

For the purposes of this law, the definition of land used for energy production does not include land devoted to the production of biomass fuels used in a biomass energy generation facility. Biomass is defined as "an agricultural crop, crop residue, or agricultural byproduct that is cultivated, harvested, or produced on the farm, or directly obtained from a farm where it was cultivated, harvested, or produced, and which can be used to generate energy in a sustainable manner." Any farmland used for solar, wind, or biomass energy generation that does not meet the criteria defined in the law may not be assessed as land devoted to agricultural or horticultural use under the Farmland Assessment Act.

VIRGINA

The following property tax exemptions for solar facilities are available in Virginia:

- 100% property tax exemption for the assessed value of equipment and facilities used in:
    1. Projects equaling 20 MW or less that serve a public institution of higher education or private college.
    2. Projects equaling 5 MW or less.

- 80% property tax exemption for the assessed value of equipment and facilities used in:
    1. Other projects over 5 MW and less than 150 MW. The exemption for projects greater than 20 MW shall not apply to projects upon which the construction begins after January 1, 2024.

The law broadly defines eligible solar facilities as "any property, including real or personal property, equipment, facilities, or devices…designed and used primarily for the purpose of collecting, generating, transferring, or storing thermal or electrical energy." The exemption does not include the land on which the equipment or facility is located.

The tax exemption is generally for "certified pollution control equipment and facilities" which includes any property including real or personal property, equipment, facilities, or devices used for the purpose of abating for preventing pollution of the atmosphere or waters in the State. In addition to solar PV, other properties also include, but not limited to, any equipment used to create mulch, compost, landfill gas, synthetic or natural gas recovered from waste or other fuel.

Personal Property Tax Exemptions

VIRGINIA

HB 1297 enacted in March 2015 provides [an] option for [the] local governing body of any county, city, or town to impose a different property tax on renewable energy generating machinery and tools than other normal use machinery. The rate of property tax imposed must not exceed that is applicable to the general class of machinery and tools.

Renewable energy means energy derived from sunlight, wind, falling water, biomass, sustainable or otherwise (definitions liberally constructed), energy from waste, landfill gas, municipal solid waste, wave motion, tides, or geothermal power and does not include energy derived from coal, oil, natural gas, or nuclear power.

This rate of tax does not apply to machinery and tools used in generating renewable energy by qualifying co-generator or qualifying small power producer under Public Utility Regulatory Policies Act (PURPA), unless the rate of tax under this section would result in a lower property tax on such machinery and tools.[5][6]

[5] 2016 amendment.

[6] Under Chapter 26 (§ 58.1-2600 et seq.) of the Code of Virginia certain tangible personal property of public utilities is required to be taxed at the local real estate tax. Given that the local real estate tax rate generally is the lowest property tax rate imposed in many localities, HB 1297 avoids the situation in which a locality elects a lower machinery and tools tax rate, which exceeds the locality's real estate tax rate, and applies the new machinery and tools tax rate to tangible personal property ordinarily taxed at the locality's real estate tax rate under Chapter 26. This is why the bill specifies that the new machinery and tools tax rate on

MARYLAND

House Bill 908 took effect on July 1, 2023. Under the new statutory provisions, A community solar energy generating system that is placed in service after June 30, 2022, and has been approved by PSC on or before December 31, 2025, is exempt from the county and municipal personal property tax through the life cycle of the system if the system (1) provides at least 50% of the energy it produces to low- to moderate-income customers at a cost that is at least 20% less than the amount charged by the electric company that serves the area where the community solar energy generating system is located and (2) is used for agrivoltaics or is installed on a rooftop, brownfield, parking facility canopy, landfill, or clean fill. However, the supervisor of a county or a municipality may not accept an application from a property owner for the exemption after December 31, 2024.[7]

SALES TAX INCENTIVES

Purchase Tax Exemption

MARYLAND

In May 2011, Maryland enacted legislation providing a sales and use tax exemption for sales of electricity from qualifying solar energy and residential wind energy equipment to residential customers. In order to qualify for the exemption, the sale of electricity must be for residential use on a property owned by a net metering eligible customer-generator. Maryland already exempted energy sales under residential or domestic rate schedules on file with the Maryland Public Service Commission (PSC) from the sales and use tax. The law therefore places sales/purchases of electricity under residential solar or wind retail power purchase agreements (PPAs) on a level playing field with customer purchases of electricity from the grid. The exemption took effect July 1, 2011.

NEW JERSEY

New Jersey offers a full exemption from the state's sales tax for all solar energy equipment. This exemption is available to all taxpayers. All major types [of] solar energy equipment, including equipment for passive solar design, are considered eligible for the exemption as described by the New Jersey Division of Taxation Publication S&U-6 (Sales Tax Exemption Administration). According to S&U-6, the exemption includes all solar energy "devices or systems specifically approved by the Board of Public Utilities, Division of Energy and designed to provide heating or cooling or electrical or mechanical power by converting solar energy to some other usable energy source, including devices for storing solar-generated energy." The exemption does not apply to devices that would be required regardless of the

property used in producing or generating renewable energy does not apply to such property if the lower real estate tax rate is already being imposed.

[7] HB 908: Fiscal and Policy Note, Enrolled - Revised, Maryland Department of Legislative Services (2023).

energy source being utilized. In order to claim the exemption, the purchaser must fill out and submit Form ST-4 (Exempt Use Certificate) to the seller instead of paying sales tax.

Production Tax Exemption

MARYLAND

In May 2011, Maryland enacted legislation providing a sales and use tax exemption for sales of electricity from qualifying solar energy and residential wind energy equipment to residential customers. In order to qualify for the exemption, the sale of electricity must be for residential use on a property owned by a net metering eligible customer-generator. Maryland already exempted energy sales under residential or domestic rate schedules on file with the Maryland Public Service Commission (PSC) from the sales and use tax. The law therefore places sales/purchases of electricity under residential solar or wind retail power purchase agreements (PPAs) on a level playing field with customer purchases of electricity from the grid. The exemption took effect July 1, 2011.

NEW JERSEY

In New Jersey, under the Farmland Assessment Act, farmland actively devoted to an agricultural or horticultural use is assessed at its productivity value. This practice generally results in a lower tax burden for farmland owners compared to residential or commercial land owners. In January 2010 New Jersey enacted legislation (S.B. 1538), which among other things clarifies how farmland used for biomass, solar, and wind energy generation should be treated under the Farmland Assessment Act. Ultimately, the law states that the addition of a biomass, solar, or wind energy generating system to land that was assessed and taxed as farmland during the prior tax year does not automatically preclude the land from continuing to qualify for this treatment. Instead, the law sets a series of conditions that must be met in order for the land to continue to be assessed as farmland, as follows:[8]

- The land must be part operating farm for the current year and have been part of an operating farm during the preceding year.
- The power and heat generated by the system must generally, but not exclusively, be used to serve farm energy needs.
- A conservation plan must be filed with and approved by the conservation district.
- For solar energy systems, the property under the panels must be used to the greatest extent practical for shade crops, pasture, or grazing.

[8] It is also important to note that S.B. 1538 prescribes several other criteria for determining whether it is permissible to construct energy generation facilities on preserved farmland. Among these criteria are requirements that energy production facilities not interfere with farm production; be limited in size to that needed to meet no more than 110% of on-site energy needs; and not occupy more than 1% of the total area of the farm, including both preserved and non-preserved portions.

- The ratio [of] land devoted to energy production to land devoted to agricultural operations may not exceed 1:5 acres (i.e., maximum 1 acre devoted to energy production for every 5 acres devoted to agricultural operations).
- Facilities are limited in size to the lesser of 10 acres or 2 megawatts (MW) of generating capacity.
- For biomass generation, the property owner must obtain approval from the New Jersey Department of Agriculture.

Income generated from the sale of heat or power generated by solar, wind, biomass facilities is not considered income for the purposes of meeting eligibility requirements for assessment, valuation, and taxation under the Farmland Assessment Act. However, there is no income requirement for land assessed according to the terms described in the law. Any qualifying generation equipment installed in pinelands remains subject to the Pinelands Protection Act.

For the purposes of this law, the definition of land used for energy production does not include land devoted to the production of biomass fuels used in a biomass energy generation facility. Biomass is defined as "an agricultural crop, crop residue, or agricultural byproduct that is cultivated, harvested, or produced on the farm, or directly obtained from a farm where it was cultivated, harvested, or produced, and which can be used to generate energy in a sustainable manner." Any farmland used for solar, wind, or biomass energy generation that does not meet the criteria defined in the law may not be assessed as land devoted to agricultural or horticultural use under the Farmland Assessment Act.

CORPORATE TAX INCENTIVES

Business and Operation Tax Exemption

WEST VIRGINIA

In March 2007, West Virginia enacted legislation (SB 441) amending its tax law concerning the business and operation (B&O) tax for wind turbines. Although SB 441 increased the taxable value of wind turbine generating capacity, the taxation level is still significantly lower than that of most other types of electricity generation. For most types of newly constructed electricity-generating units, the B&O tax is calculated by multiplying a pre-determined [*sic*] dollar amount by 40% of the nameplate capacity rating of the generating unit. However, the B&O tax on wind turbines is multiplied by only 12% of the nameplate capacity rating. This results in an effective B&O tax rate on wind powered turbines that is about 30% of the effective tax rate of most other types of newly constructed generating units. Beginning January 1, 2020, the B&O tax on solar photovoltaics is 8% of the nameplate generating capacity.