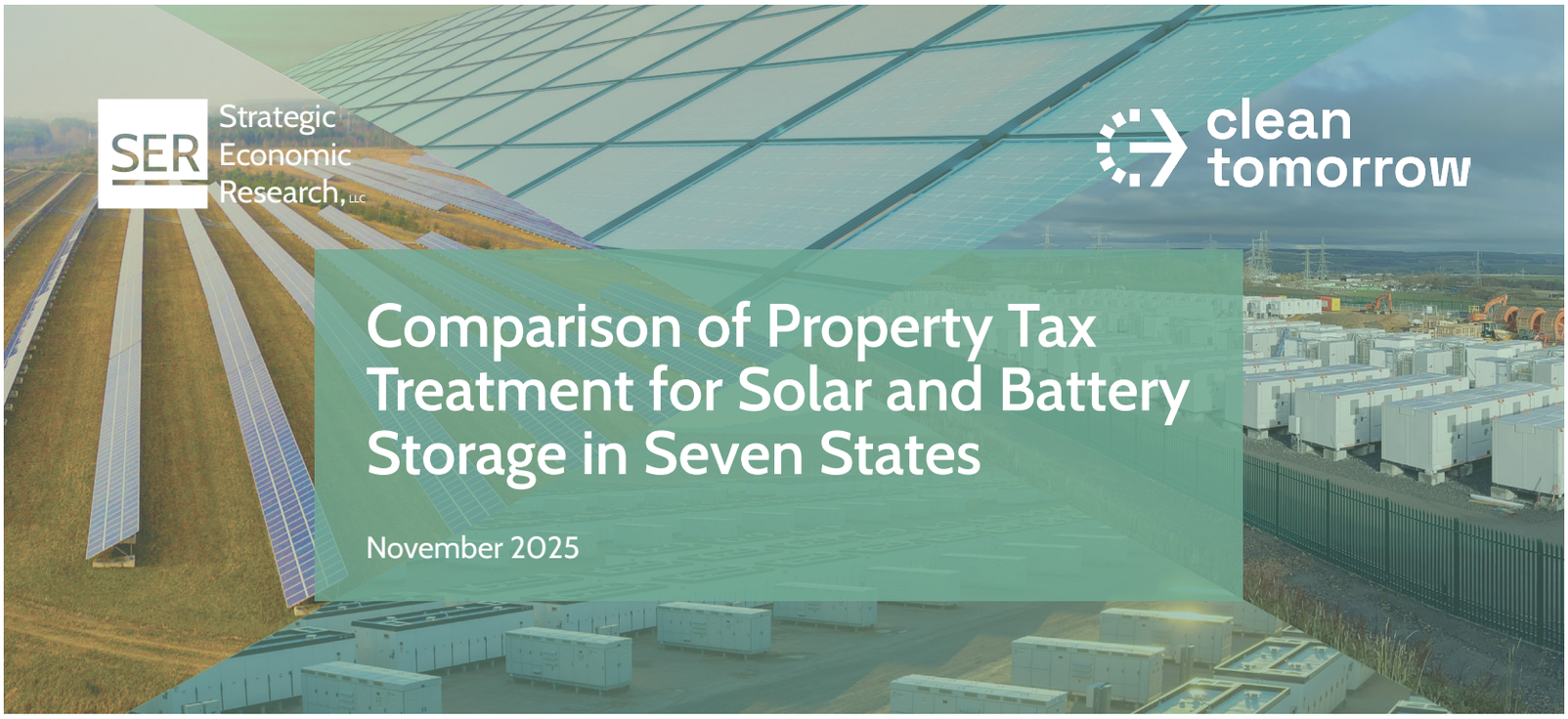


Strategic Economic Research, LLC

clean tomorrow

Comparison of Property Tax Treatment for Solar and Battery Storage in Seven States

November 2025

I. Executive Summary

About the Report

Renewable energy projects such as solar farms and battery storage facilities bring new investment to communities. But the way property taxes are calculated for these projects varies widely across states. Since property taxes fund local services such as schools, roads, and emergency response, these differences can have a real impact on communities deciding whether to host a project.

This report compares how seven states, **Colorado, Indiana, Kansas, North Carolina, Ohio, Pennsylvania, and Virginia**, treat property taxes for a hypothetical solar-plus-battery storage project.

This report was prepared by Strategic Economic Research (SER) and commissioned by Alex Breckel and Nelson Falkenburg at Clean Tomorrow. This report reflects the views of the authors alone. Any errata or omissions are the sole responsibility of the authors.

Key Findings

- Every state taxes renewable energy projects differently. Some determine the value of a project at the state-level, while others rely on local assessors. Certain states apply standard commercial property rules to renewable energy, while others replace standard taxes with a replacement tax based on the energy generated or other factors.

- Exemptions and agreements matter. States like Kansas and North Carolina offer broad exemptions for renewable energy equipment that every project qualifies for, while Indiana and Ohio often rely on local negotiations or special programs like Ohio's Qualified Energy Project (QEP) PILOT (Payment in Lieu of Taxes).

- The total expected taxes vary widely per state. Depending on the state's tax rules, the same project could generate anywhere from $6 million in total property taxes (Pennsylvania) to over $73 million (Ohio) across a 35-year timespan.

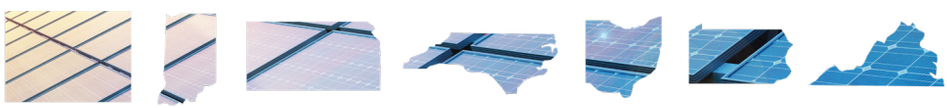
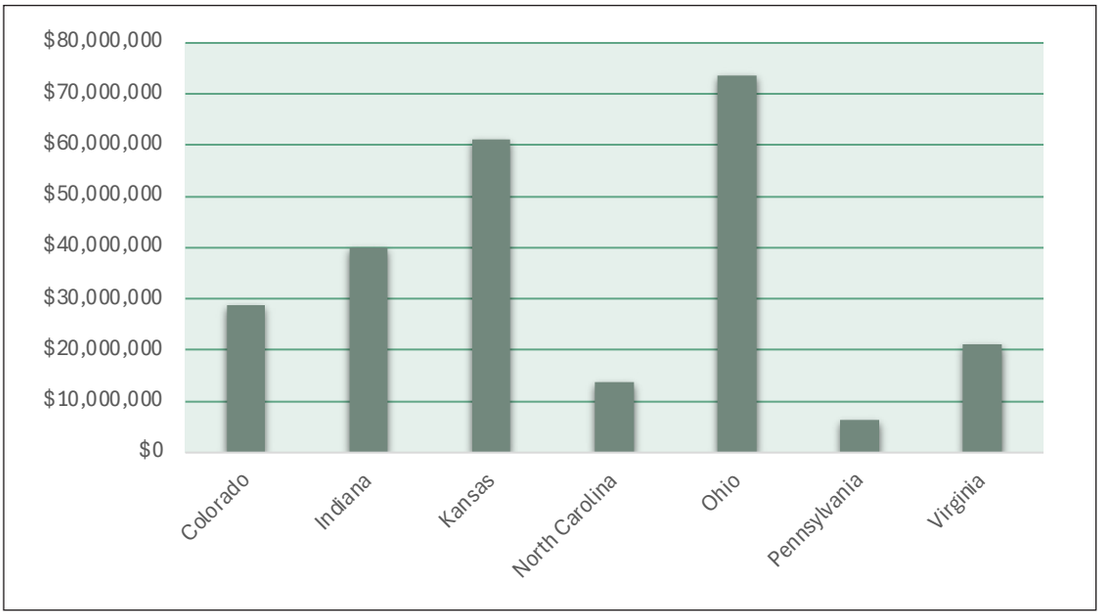


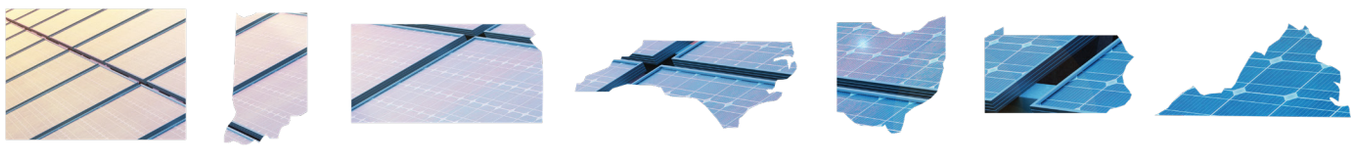
Table 1.1 – Calculated Property Tax Outcomes by State

State	Calculated Total Property Taxes (Project Life)	Implied Avg. Annual
Colorado	$28,643,131	$818,375
Indiana	$39,869,153	$1,139,119
Kansas	$61,053,945	$1,744,398
North Carolina	$13,733,612	$392,389
Ohio*	$73,500,000	$2,100,000
Pennsylvania	$6,841,184	$195,462
Virginia	$21,131,293	$603,751

*Ohio figures reflect a QEP PILOT assumption of $7,000/MW for 300 MW AC, constant across the period (per Section III).

Figure 1.1 – Calculated Property Tax Outcomes by State





What Drives the Differences?

These results aren't random. They reflect how each state structures its property tax system. Differences in who assesses, what gets taxed, and how value is set can greatly affect the property tax totals for projects. The same project can look very different from state to state and from project to project.

Who assesses the project: Some states, like Ohio and Colorado, handle assessment at the state level. Others, like Indiana, Kansas, North Carolina, and Pennsylvania, rely on local assessors. Virginia uses a mix, with the State Corporation Commission handling larger "electric supplier" projects. This distinction matters because central assessment creates more consistent and predictable results across counties, while local assessment can produce wider swings in outcomes depending on assessor judgment and county practices.

What gets taxed: Property is generally classified as personal property, which is movable, and real property, which is not. In most states, solar panels, batteries, and electrical equipment are treated as tangible personal property (TPP), while roads, fencing, and buildings are taxed as real property. Pennsylvania is the main outlier, since it does not tax generation equipment at the local level. The implication is that states taxing generation equipment produce much higher totals over the life of a project, while exempting equipment keeps totals far lower. In our model, this is why Pennsylvania shows only about six million dollars over 35 years compared to over seventy million dollars under Ohio's PILOT structure.

How value is set: Indiana allows big upfront deductions; Kansas uses a 10-year exemption followed by valuation as commercial machinery; North Carolina excludes 80% of solar value; Ohio can replace taxes entirely with a fixed-rate PILOT; Colorado applies a state unit valuation model; Virginia offers either a step-down exemption or a revenue-share in place of ordinary taxes; and Pennsylvania does not tax generation equipment, leaving only land and improvements taxable. These rules drive the shape of the revenue curve. Short schedules without floors create steep early-year revenues that then decline, while floors, levelization, or fixed-rate PILOTs produce more stable long-term outcomes.

Land and rollback rules: Land is always locally assessed. Converting agricultural land to be used for solar may trigger "rollback" taxes in states like North Carolina (Present Use Value program), Pennsylvania (Clean & Green program), and Virginia (agricultural use). Rollbacks are one-time paybacks of prior tax savings. They are small relative to life-of-project taxes, typically in the tens of thousands to low hundreds of thousands, and they appear as a Year 1 cost when triggered. The modeled totals include applicable rollback charges on a one-time basis where a change in use applies.

Scenario-based results: The totals shown are calculated projections. Actual tax payments could vary depending on final project design, interconnection costs, negotiated agreements, and local tax rates.

Why It Matters

For many communities, renewable energy projects represent one of the largest new sources of property tax revenue in decades. Understanding how these revenues are calculated helps policymakers and communities make informed decisions about hosting projects.

II. Methodology

The calculations of property tax in this report use a consistent set of assumptions to model how property taxes would be applied to a representative renewable energy project across seven states. The approach is designed to showcase differences in tax policy rather than project design.

Project Description and Rationale

- **Project Size (200 MW solar + 100 MW / 400 MWh battery storage):** This scale was selected because it reflects the type of utility-scale solar-plus-storage projects commonly built in today's market. Modeling solar paired with storage better captures the hybrid facilities that communities are increasingly asked to evaluate, rather than a solar-only facility.
- **Capital Costs ($318M solar, $154M storage):** These values are based on recent industry benchmarks, including the National Renewable Energy Laboratory's Annual Technology Baseline (NREL ATB) and U.S. Energy Information Administration (EIA) cost data. They are consistent with costs observed in comparable projects reviewed by SER and provide a realistic basis for project values.
- **In-Service Date (January 1, 2027):** Aligns with typical project timelines for permitting, financing, and construction currently in the development pipeline.
- **Project Life (35 years):** Reflects a standard assumption based on typical lease lengths for the land used for solar and storage projects, consistent with both financing models and expected equipment lifespans before decommissioning.
- **Federal Tax Credits:** Federal incentives such as the Investment Tax Credit (ITC) and Production Tax Credit (PTC) reduce project financing costs but do not reduce assessed taxable value in the states modeled here. Accordingly, the calculations presented in this report assume no direct effect of federal tax credits on property tax assessments or payments.

Tax Modeling Approach

Average Tax Rates: Where available, statewide average property tax rates are applied to capture a representative project in that state. When applicable, a breakdown of the percent of taxes received by the county, school, and other local categories is provided. This provides a realistic picture of how revenues are distributed among taxing jurisdictions in that state.

Comparability Across States: Using the same project design and tax rate structure ensures that differences in total taxes calculated reflect policy variation (for example, depreciation schedules, exemptions, or PILOTs) rather than differences in project design.

Illustrative Nature of Results: These results are illustrative and reflect current statutes, ratios, and millage conventions. Actual payments may vary if laws, assessment practices, or local rates change in the future.

Scope of Taxes Included: The results model only local property tax receipts, including county, school district, and other local taxing jurisdictions. State-level tax receipts, such as corporate income taxes or state fees, are excluded from the totals shown.

Terms Used in This Report

Ad Valorem: Latin for "according to value", this refers to a system of property taxation where tax rates are applied to the fair market value of the property being taxed.

Assessment: The process of appraising and classifying property so that it can be taxed.

Assessment Ratio: A percent reduction applied to a project's value before it is taxed. In states like Colorado, assessment ratios are not designed as incentives but as part of the standard classification of property. They reduce the portion of value subject to taxation but do not function like an exemption or credit.

Circuit Breaker Cap: A limit on the annual growth of a property's tax bill. Some states cap yearly increases to prevent large spikes in tax burden.

Circuit Breaker Losses: The forgone portion of property tax when calculated liability exceeds the circuit breaker cap. It is the shortfall relative to full assessed taxation.

Construction Work in Progress: A period of time where a project is being built but is not fully operational. Different states have different policies about taxing construction work in progress.

Depreciation: The decrease in value that machinery and equipment experiences as it ages.

Economic Development Agreement (EDA): An agreement that a company will pay a certain amount to a local government over a period of time. Economic Development Agreements can accompany partial or full exemptions of property tax.

Exemption: A partial or full exclusion of a project's value from taxation.

IAC: Indiana Administrative Code. Where cited in the Indiana section, IAC references denote Indiana's administrative rules governing property assessment and classification.

Intangible: Not a physical item. When property is considered intangible, it is not taxed.

Levelization: The practice of flattening out taxes paid over a period of time rather than allowing variation due to depreciation or other factors.

Millage: The rate of taxation expressed in mills, where one mill equals one dollar of tax per $1,000 of assessed value.

Payment in Lieu of Taxes (PILOT): An agreement that a company and a local government enter into that exempts the company from property taxes and replaces it with a standardized annual payment.

Percent Good: The annual depreciation schedule used to adjust a project's original cost down to its current valuation.

Real Property: Property that is permanently affixed.

Residual Floor: A minimum taxable value below which depreciated property cannot fall, even after many years of use. Floors are intended to ensure that long-lived equipment retains some taxable value until decommissioned.

Rollback Taxes: Taxes that are due when land use changes, such as from agriculture to solar. These taxes pay back exemptions received under the prior use for a certain number of years.

Tangible Personal Property: Property that is movable.

UD-45 Filing: Utility declaration form filed with the state's property tax authority for state-assessed electric generation. In this report it refers to the annual property statement used to report plant in service, capacity, and related data for unit valuation.

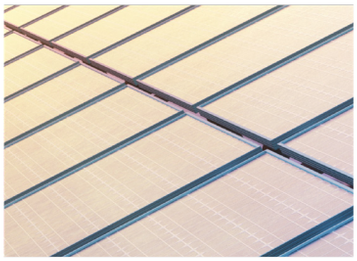
Utility: A company that sells electricity or other items directly to consumers. In many states, property is taxed under different rules if it is owned by a utility.

Valuation: The process of determining the fair cash value of property. In many states, property is taxed according to its value, making valuation a key step in determining the taxes it will pay.

Structure of the Report

This report's format draws inspiration from the University of Michigan Graham Sustainability Institute's factsheets on renewable energy tax impacts. Like those factsheets, it seeks to present complex tax policy in a clear, accessible way for policymakers and communities, while still providing the technical detail needed for accurate comparison.

III. Colorado



Colorado assesses renewable energy projects of 2 MW or more under a standardized formula called unit valuation that is administered by the Division of Property Taxation (DPT) pursuant to C.R.S. § 39-4-102. This formula applies to both real and personal property used for electricity generation, including solar and battery storage equipment. Land, however, is assessed separately at the county level as real property. Local assessors may also value site-specific improvements such as foundations, fencing, and onsite buildings as real property. Intangible costs such as permitting fees, legal studies, and interconnection rights are excluded from taxation.

The value of a project is found by multiplying the project's nameplate capacity (the amount of power it can output) by annual threshold generation rates published by Colorado. For hybrid projects, the nameplate capacity for both solar and storage are included. A fixed $70,000 is then added for the intertie line to establish the project's original taxable value.

That total value is depreciated using straight-line depreciation of 5% annually over 30 years, with a residual floor of 20%. Rather than letting value fall sharply over time, Colorado applies levelization, which averages the depreciated value across the full 30-year period. This method creates a more predictable tax base for local governments.

Residual floor and duration: The 20 percent floor means the depreciable value does not fall below 20 percent while the asset remains in service; it does not imply taxation in perpetuity. When equipment is decommissioned and removed, assessed value for that equipment goes to zero; only any remaining taxable land or improvements continue on the roll.

The state applies an assessment ratio of 29% to the levelized value, though for 2023 and 2024 the ratio was temporarily reduced to 26.4%. Each year, the DPT may also apply a trending factor to account for actual energy production levels or Power Purchase Agreement (PPA) terms, allowing valuations to better track real project performance.

Battery storage paired with solar is treated under the same rules as solar equipment. Standalone storage facilities may instead be assessed locally if not regulated as utility property.

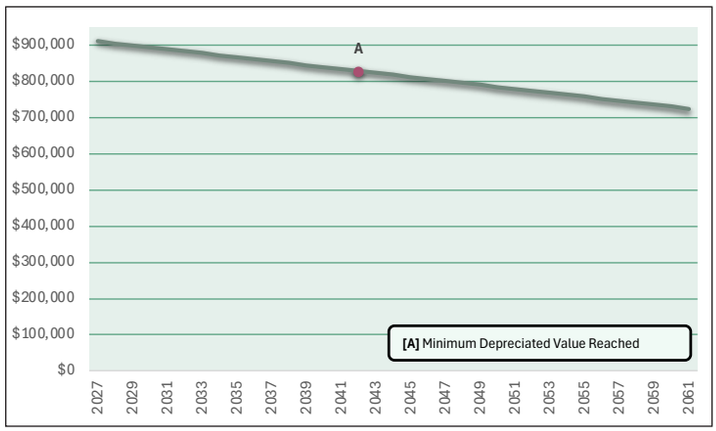
Key Concepts

- **Unit valuation:** Projects ≥2 MW are valued at the state level under a standardized formula.
- **Depreciation with a floor:** 5% annual decrease in value, but value never falls below 20%.
- **Levelization:** Stabilizes the tax base by averaging depreciated value across the full 30-year life.
- **Assessment ratio:** 29% of a project's levelized value is taxed (temporarily 26.4% in 2023–2024).
- **Trending factor**: Allows adjustments to taxes based on project-specific production and contract terms.
- **Hybrid projects:** Solar + storage assessed together; standalone storage may be locally assessed.

Table 3.1 – Total Property Taxes Paid by the Project in Colorado

Year	Total Paid
2027	$911,331
2028	$905,863
2029	$900,395
2030	$894,927
2031	$889,459
2032	$883,991
2033	$878,523
2034	$873,055
2035	$867,587
2036	$862,119
2037	$856,651
2038	$851,183
2039	$845,715
2040	$840,247
2041	$834,779
2042	$829,311
2043	$823,843
2044	$818,375
2045	$812,907
2046	$807,439
2047	$801,971
2048	$796,503
2049	$791,035
2050	$785,567
2051	$780,099
2052	$774,631
2053	$769,163
2054	$763,695
2055	$758,227
2056	$752,759
2057	$747,291
2058	$741,823
2059	$736,355
2060	$730,887
2061	$725,419
TOTAL	$28,643,131
AVG ANNUAL	$818,375

Figure 3.1 – Annual Property Taxes Paid by the Project in Colorado



Modeling Results

For the modeled 200 MW solar + 100 MW storage project (in service 2027):

- First-year taxes: approximately $911,000
- Average annual taxes: approximately $818,000
- Total over 35 years: approximately $28.6 million

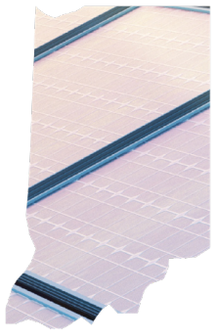
Assumptions

- Depreciation: 5% annually over 30 years, with 20% residual floor
- Levelized value used to stabilize the tax base
- Assessment ratio: 29%
- Analysis based on Colorado Renewable Energy Tax Factor Template and C.R.S. § 39-4-102

Implications for Communities

Colorado's centralized unit valuation ensures consistency across projects statewide, rather than leaving values to county discretion. The 20% floor guarantees that projects remain on the tax rolls even after decades of depreciation, while levelization provides stable revenues over time instead of steep declines. Local governments still benefit from county-assessed land and site improvements, which supplement the state-administered valuation.

IV. Indiana

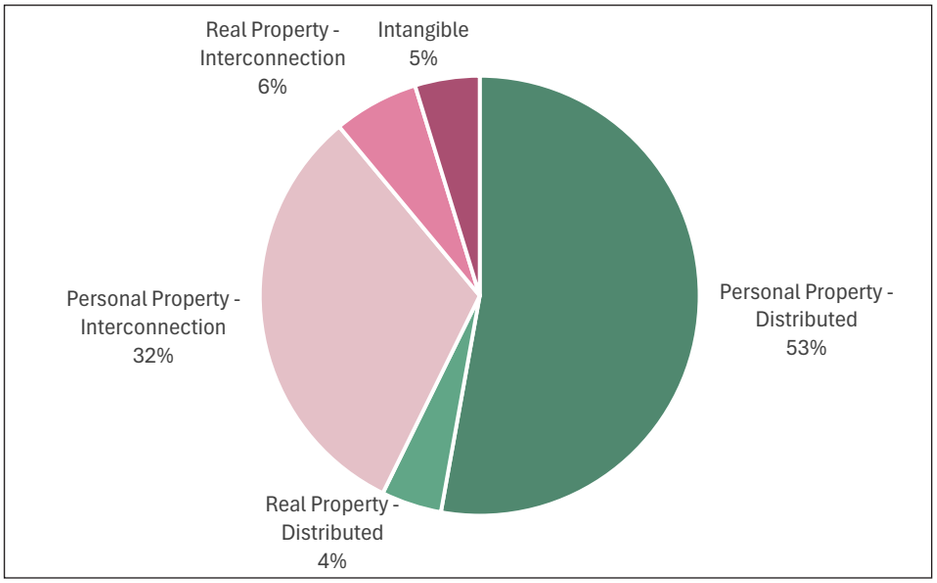


Like most of its property, Indiana taxes renewable energy projects under its ad valorem (Latin for "according to value") property tax system, separating assets into real property and tangible personal property (TPP). Land beneath solar facilities is valued using the Department of Local Government Finance's (DLGF) published Solar Land Base Rates. Real property also includes site improvements such as foundations, fencing, roadways, and operations and maintenance (O&M) buildings.

Distributable personal property covers electrical and mechanical equipment, including solar modules, inverters, racking, transformers, battery systems, transmission lines, substations, and supporting electrical systems. This equipment is depreciated under a 5-year MACRS (Modified Accelerated Cost Recovery System) schedule (per 50 IAC), while real property improvements are depreciated over 15 years. For property placed in service on or after January 1, 2025, Indiana eliminated the 30% minimum valuation floor for TPP under Senate Enrolled Act 1 (2025), allowing assets to fully depreciate to zero. A "gross additions" deduction applies in the first assessment year, which reduces taxable personal property to 40% of acquisition cost when reported on the UD-45 filing. Both real and personal property are reported and assessed locally, and the aggregate assessed value is multiplied by the applicable local tax rate and distributed across local taxing bodies.

Projects that combine multiple renewable technologies, such as solar and storage, are usually taxed under the same framework. Local assessors may still classify components differently depending on their use, but if the project is functionally integrated, the installation is typically treated under a single classification method.

Figure 4.1 – Total Project Costs by Classification in Indiana



Key Concepts

- **Assessment & Reporting:** Renewable property is reported on UD-45 forms and assessed by county auditors; liability is calculated by applying local tax rates.
- **Depreciation:** 5-year MACRS accelerated depreciation for distributable TPP and 15-year MACRS accelerated depreciation for real property improvements. No 30% valuation floor applies for TPP placed in service on or after January 1, 2025 (Senate Enrolled Act 1, 2025).
- **Gross Additions Deduction:** A 60% deduction in the first assessment year reduces TPP's taxable basis to 40% of acquisition cost.
- **Solar Land Base Rates:** Land is valued at state-published rates with an assumed inflation factor (2.35% annually in this analysis).
- **Circuit Breaker Caps & Maximum Levies:** Indiana's constitutional circuit breaker caps and maximum levy limits may prevent local governments from realizing the full amount of calculated liability.
- **Senate Bill 1 (2023):** Updated provisions for renewable projects, including clarifications to distributable property reporting and assessment procedures.
- **EDAs (Economic Development Agreements):** Local governments may negotiate EDAs in lieu of standard taxation, which provide certainty and often feature escalating payments. These agreements can also be paired with tax abatements of up to 10 years. Before the passage of Senate Bill 1, EDAs for large-scale solar had become the norm in many counties, though the structure and terms vary widely. With Senate Bill 1 going into effect just this year, the future of EDAs in Indiana is uncertain.

Modeling Results

For the modeled 200 MW solar + 100 MW storage project (in service 2027):

- Construction work in progress (2026): approximately $437,000
- First year of operations (2027, with gross additions deduction): approximately $3.4 million
- Year 2 of operations (2028, without deduction): approximately $5.2 million
- Long-term average: approximately $1.1 million annually over the 35-year life
- Total property taxes: approximately $39.8 million

Table 4.1 – Total Property Taxes Paid by the Project in Indiana

Year	Total Paid
CWIP-2026	$437,202
2027	$3,440,567
2028	$5,204,026
2029	$3,538,275
2030	$2,520,598
2031	$1,509,969
2032	$986,021
2033	$945,495
2034	$905,240
2035	$865,175
2036	$825,482
2037	$785,991
2038	$746,886
2039	$707,998
2040	$669,509
2041	$631,252
2042	$619,441
2043	$633,998
2044	$648,897
2045	$664,146
2046	$679,754
2047	$695,728
2048	$712,078
2049	$728,811
2050	$745,938
2051	$763,468
2052	$781,410
2053	$799,773
2054	$818,567
2055	$837,804
2056	$857,492
2057	$877,643
2058	$898,268
2059	$919,377
2060	$940,982
2061	$963,095
TOTAL	$39,869,153
AVG ANNUAL	$1,139,119

Assumptions

- Depreciation: $390M under 5-year MACRS (distributable TPP), $49M under 15-year MACRS (real property improvements)
- Gross additions deduction: 60% in Year 1 (taxable basis reduced to 40% of acquisition cost)
- No minimum valuation floor
- No reduction in basis from federal tax credits
- Solar Land Base Rates applied to land with 2.35% annual inflation factor
- Constant 2026 tax rates applied throughout
- Analysis based on DLGF guidance (50 IAC, UD-45 instructions) and Solar Land Base Rates

Implications for Communities

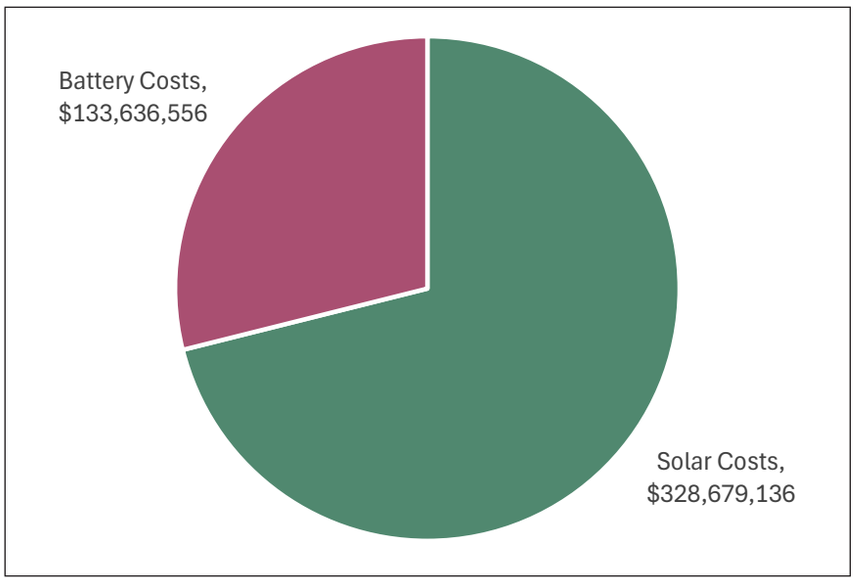
Indiana projects deliver high near-term revenues but decline quickly as TPP depreciates. Solar Land Base Rates ensure some ongoing land-related revenue, though annual averages are far lower after the first decade. Circuit breaker caps and levy limits further reduce the effective benefit for local governments.

EDA Scenario

To illustrate how EDAs compare to standard taxation, we modeled a capacity-based EDA with payments starting at $1,000/MW and escalating 2% annually. Under this framework, the project would contribute roughly $300,000 in Year 1, rising gradually over time and totaling about $14–16 million over 35 years. While lower than ad valorem taxation, EDAs are attractive to counties because they provide stable, predictable revenues and reduce the risk of circuit breaker losses. Though EDAs had been popular before 2025, it is uncertain if counties and developers will view them as more or less desirable after the passage of Senate Enrolled Act 1.

Circuit breaker losses: Some Indiana Economic Development Agreements include "circuit breaker" provisions that cap annual growth in tax liability for a project. When projected property tax payments exceed the statutory cap, the difference is not collected. This forgone revenue is reported as "circuit breaker losses" and represents the shortfall between full assessed taxation and the capped amount.

Figure 4.2 – Project Solar and Storage Costs



V. Kansas

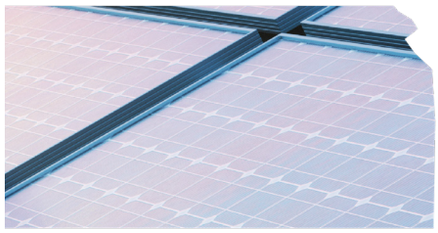
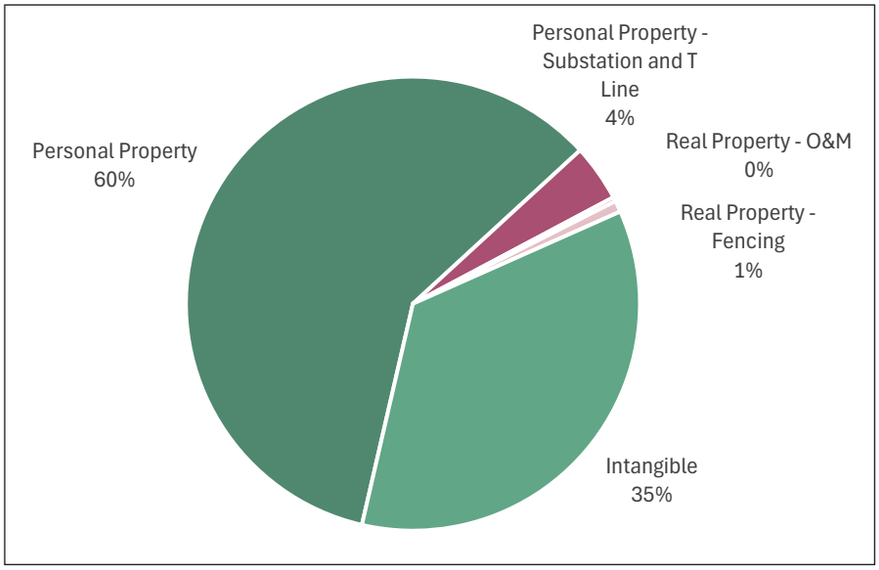


Figure 5.1 summarizes how Kansas classifies project costs between real property and tangible personal property.

Figure 5.1 – Total Project Costs by Classification in Kansas



TPP for renewable energy projects in Kansas generally includes solar panels, racking, inverters, transformers, batteries, substations, and other supporting electrical equipment. Installation costs are not considered taxable in Kansas, lowering the total value compared to other states. Assets are depreciated using a straight-line schedule over seven years, with a floor of 20% of original cost.

If the project is locally appraised, TPP is valued as Commercial/Industrial Machinery and Equipment (CIME) and assessed at 25% of depreciated value. If the project is state-appraised as public utility property, TPP is assessed at 33% of depreciated value. State appraisal generally applies to property owned by a regulated utility that provides service directly to the public. Developer-owned projects selling wholesale power are typically locally appraised.

Battery energy storage systems (BESS) follow similar rules. If paired with solar, storage is generally treated as TPP and follows the same depreciation and assessment framework. Standalone BESS facilities may be treated differently depending on ownership and use, and their eligibility for renewable exemptions is less clear; some may fall under K.S.A. 79-223.

Intangible costs such as permitting fees, road use agreements, legal costs, and interconnection studies are excluded from taxation. The total assessed value of real property and TPP is multiplied by the millage rates of local taxing jurisdictions to determine annual tax liability.

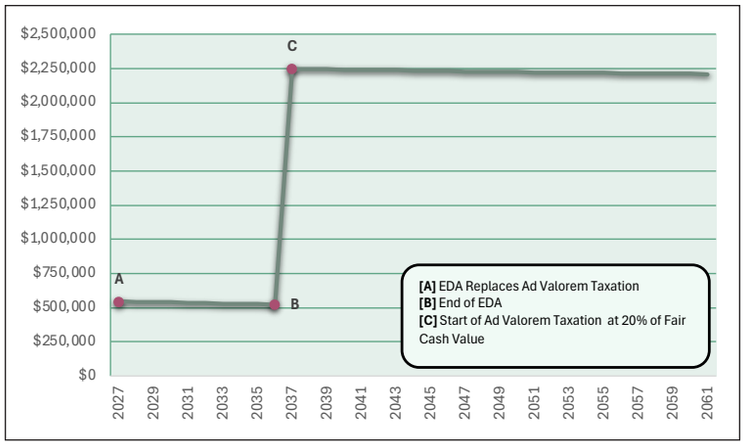
Key Concepts

- **Assessment Ratios:** 25% for commercial/industrial property; 33% for public utility property.
- **Depreciation:** Seven-year straight-line to a 20% floor.
- **Exemptions**: Renewable energy equipment may receive a 10-year property tax exemption under K.S.A. 79-201 (Eleventh). After expiration, locally assessed equipment is taxed as CIME at a 20% floor.
- **Battery Storage:** Standalone BESS is not automatically included in the renewable exemption; eligibility depends on classification and may be considered under K.S.A. 79-223.
- **Local Agreements:** Kansas does not have a statewide PILOT program. Counties may negotiate Economic Development Agreements (EDAs) or local PILOTs, often tied to capacity or investment. Since property taxes are exempted for the first ten years of operations under state law, most developers do not sign EDA agreements with counties, but some do as a gesture of goodwill to provide the counties with some revenue during the initial operating period.

Table 5.1 – Total Property Taxes Paid by the Project in Kansas

Year	Total Paid
2027	$547,738
2028	$544,920
2029	$542,172
2030	$539,492
2031	$536,880
2032	$534,333
2033	$531,850
2034	$529,428
2035	$527,068
2036	$524,766
2037	$2,249,661
2038	$2,247,473
2039	$2,245,340
2040	$2,243,260
2041	$2,241,232
2042	$2,239,254
2043	$2,237,326
2044	$2,235,447
2045	$2,233,614
2046	$2,231,827
2047	$2,230,085
2048	$2,228,386
2049	$2,226,730
2050	$2,225,115
2051	$2,223,541
2052	$2,222,006
2053	$2,220,509
2054	$2,219,050
2055	$2,217,627
2056	$2,216,240
2057	$2,214,888
2058	$2,213,569
2059	$2,212,283
2060	$2,211,029
2061	$2,209,807
TOTAL	$61,053,945
AVG ANNUAL	$1,744,398

Figure 5.2 – Annual Property Taxes Paid by the Project in Kansas



Modeling Results

For the modeled 200 MW solar + 100 MW storage project (in service 2027):

- First 10 years: approx. $547,000 annually, reflecting real property taxes plus an assumed $435,000 annual EDA during the exemption period (a fairly standard EDA amount in Kansas for a project of this size).
- Post-exemption (starting 2037): personal property taxes resume, sharply increasing total payments to about $2.25 million annually.
- Lifetime impact: total property taxes of approx. $61.0 million over 35 years, averaging $1.74 million annually.

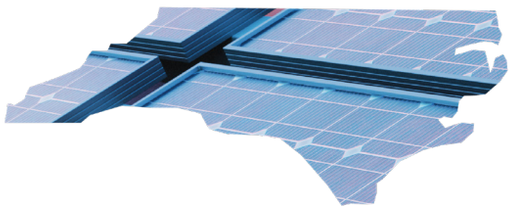
Assumptions

- $340M classified as personal property; $3.5M as real property
- 10-year exemption for personal property under K.S.A. 79-201 (Eleventh)
- Post-exemption, personal property valued at 20% of original cost
- Annual $435,000 EDA assumed during the 10-year exemption, based on typical Kansas EDA structures for projects of this size observed in comparable SER analyses
- Real property (fencing, O&M building) not included in the exemption
- Project locally assessed as an independent power producer (25% assessment ratio)
- Constant 2024 (payable 2025) tax rates used
- Analysis based on K.S.A. 79-201 (Eleventh), K.S.A. 79-223, and appraisal guidance from the Kansas Department of Revenue

Implications for Communities

Kansas' 10-year exemption front-loads benefits for developers but delays significant local revenues until year 11, when the exemption expires. Counties can mitigate this gap by negotiating EDAs or local PILOTs to ensure stable revenues throughout the project life. Once the exemption period ends, the return of taxable value creates a sharp increase in annual revenues, though circuit breaker provisions and millage changes may affect how much local governments ultimately collect.

VI. North Carolina



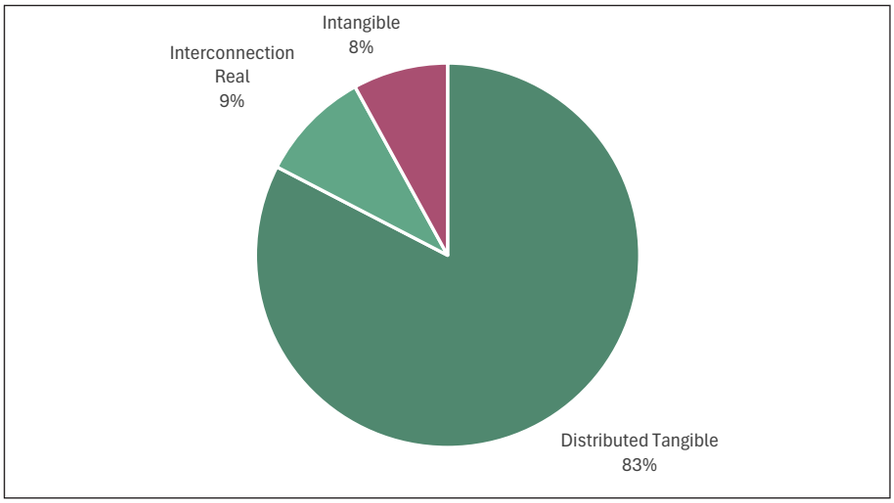
North Carolina uses an ad valorem property tax model to assess renewable energy projects, separating assets into real property, tangible personal property (TPP), and intangible property. Solar equipment such as modules, inverters, and supporting electrical systems are treated as TPP. Battery energy storage systems (BESS) are generally taxable as TPP, unless integrated with and appraised as part of a solar facility.

Real property includes land, operations and maintenance (O&M) buildings, foundations, and site fencing. Land is assessed separately by local entities under G.S. 105-283 (true value) and G.S. 105-317 (appraisal standards). If land shifts from Present Use Value (PUV) to solar or storage, rollback taxes apply – projects must pay back the taxes that had been exempt under agriculture for the current year plus three prior years with interest.

TPP is depreciated under the Department of Revenue's Schedule T tables, with percent-good factors updated annually. Solar equipment is assigned an 18-year useful life. Solar equipment also qualifies for an 80% exemption under G.S. 105-275(45), which applies to most generation equipment but not land or buildings.

Intangible costs such as crop compensation, permitting fees, and interconnection studies are excluded from taxation.

Figure 6.1 – Total Project Costs by Classification in North Carolina



Key Concepts

- **Schedule T Depreciation**: TPP is depreciated using Schedule T tables with an 18-year useful life and annual percent-good factors.
- **Assessment Method:** Property is assessed at 100% of fair market value; local tax rates are applied per $100 of value.
- **80% Exemption:** Solar equipment qualifies for an 80% exemption under G.S. 105-275(45), significantly reducing taxable value.
- **Local Incentives:** No statewide PILOT exists, but counties may negotiate EDAs or PILOT-style agreements, often tied to job creation or manufacturing.
- **Land Conversion:** Rollback taxes apply if land leaves Present Use Value (PUV), requiring repayment of current and three prior years' deferred taxes with interest.

Modeling Results

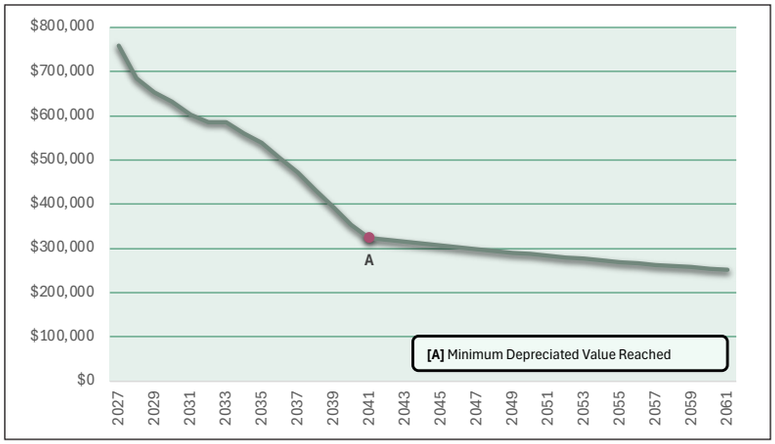
For the modeled 200 MW solar + 100 MW storage project (in service 2027):

- First-year taxes: approximately $759,000
- Taxes decline steadily with depreciation, averaging $392,000 per year
- Total over 35 years: approximately $13.7 million

Table 6.1 – Total Property Taxes Paid by the Project in North Carolina

Year	Total Paid
2027	$758,856
2028	$683,717
2029	$652,930
2030	$632,069
2031	$601,596
2032	$585,926
2033	$585,055
2034	$559,908
2035	$539,786
2036	$505,149
2037	$470,646
2038	$431,389
2039	$392,259
2040	$353,252
2041	$324,133
2042	$319,551
2043	$315,083
2044	$310,727
2045	$306,480
2046	$302,338
2047	$298,301
2048	$294,364
2049	$290,526
2050	$286,784
2051	$283,135
2052	$279,577
2053	$276,109
2054	$272,727
2055	$269,430
2056	$266,215
2057	$263,080
2058	$260,024
2059	$257,044
2060	$254,139
2061	$251,306
TOTAL	$13,733,612
AVG ANNUAL	$392,389

Figure 6.2 – Annual Property Taxes Paid by the Project in North Carolina



Assumptions

- 80% exemption applied to solar equipment (not land/buildings) for project life
- TPP valued at $390M, real property (land + improvements) at $44M
- TPP depreciated under Schedule T with an 18-year life
- Real property improvements depreciated at 2.5% annually
- Deferred land taxes assumed at $19,000 (rollback exposure included)
- Constant 2023 tax rates applied
- Analysis based on NC Department of Revenue Schedule T and statutes cited above

Implications for Communities

The 80% solar exemption substantially reduces the tax base compared to states without such exclusions. Local governments benefit from modest, stable revenues tied to land and non-exempt property, averaging under $400,000 annually. While EDAs or PILOTs are possible, they are less common in North Carolina due to the generous exemption. The exemption encourages more projects to be developed so that communities can benefit from other factors such as job creation, infrastructure, and land use changes.

VII. Ohio

Ohio assesses utility-scale solar facilities (greater than 250 kW) as public utilities, with equipment centrally assessed by the Ohio Department of Taxation, while land and buildings remain locally assessed. Tangible personal property (TPP) includes generation equipment such as panels, racking, inverters, transformers, wiring, batteries, and related electrical systems. TPP "true value" is derived from the Tax Commissioner's composite annual allowance (percent-good) schedule, subject to a floor. Historically, production equipment was assessed at 24% of true value and conversion equipment at 85%. For TPP first taxable in Tax Year 2027 and after, both production and conversion equipment are assessed at 7% of true value. Real property (land, pads, roads, fencing, O&M buildings) is assessed at 35% of fair market value. Tax liability is determined based on the project's status as of January 1 each year.

Ohio also offers the Qualified Energy Project (QEP) Payment in Lieu of Taxes (PILOT) for solar and solar-plus-storage projects (but not standalone BESS). The QEP PILOT replaces ad valorem taxation on equipment with a fixed payment of $7,000 per MW (AC) per year. Counties may add up to $2,000 per MW and may attach local conditions (such as road use agreements or emergency responder support). To qualify, projects must meet prevailing wage, apprenticeship, and reporting requirements; otherwise, ad valorem taxation is reinstated.

Key Concepts

- **Central Assessment:** Utility-scale solar and storage equipment is centrally assessed by the Ohio Department of Taxation, while land and buildings remain locally assessed.
- **Assessment Percentages:** For property first taxable in Tax Year 2027 or later, TPP is assessed at 7% of true value. Real property is assessed at 35% of market value.
- **QEP PILOT Option:** Allows solar and solar-plus-storage projects to pay $7,000 per MW annually, with counties permitted to add up to $2,000 per MW. Payments are not subject to depreciation and are distributed through the county treasurer.
- **Standalone BESS:** The QEP PILOT does not apply to standalone storage; these projects are taxed under ad valorem rules.
- **Timing:** Liability is determined annually based on project status as of January 1.

Modeling Results (QEP PILOT path)

For the modeled 200 MW solar + 100 MW storage project (in service 2027):

- Annual payment: approximately $2.1 million (300 MW × $7,000/MW), constant each year
- Total over 35 years: approximately $73.5 million
- Average annual: approximately $2.1 million

Non-QEP (Ad Valorem) Path

While most utility-scale solar projects elect the QEP PILOT, the ad valorem method is included here for context. Under ad valorem rules, TPP is valued using percent-good schedules and assessed at 7% of true value (beginning in Tax Year 2027). Real property is assessed at 35% of fair market value. Because ad valorem taxation applies depreciation and local millage rates, payments typically start higher and then decline, resulting in lower lifetime totals than under QEP. Table 7.1 shows projected payments under this framework.

Table 7.1 – Total Ad Valorem Taxes Paid by the Project in Ohio

Year	Total Paid
2027	$758,856
…	$683,717
2061	$652,930
TOTAL	$13,733,612
AVG ANNUAL	$392,389

Assumptions

- Modeled tax path: QEP PILOT at $7,000/MW (no county adder assumed)
- Land and real property continue to be locally assessed; QEP PILOT replaces ad valorem for equipment
- Rates and statutes: Based on current Ohio Department of Taxation guidance for public utility property and QEP rules

Implications for Communities

The QEP PILOT provides stable, predictable revenues that simplify budgeting and may be enhanced through county adders or conditions. By contrast, ad valorem taxation introduces valuation and millage variability and generally produces lower long-term revenues under the 7% assessment regime.

VIII. Pennsylvania

Pennsylvania uses an ad valorem property tax system to assess renewable energy projects. Assets are divided into real property and tangible personal property (TPP). Importantly, all TPP used in power generation, including solar panels, inverters, and battery systems, is exempt under 72 P.S. § 5020-201. This means only the land and certain site improvements are taxable.

Real property includes the land, O&M buildings, foundations, roads, and fencing. Land is valued at 100% of fair market value, while improvements may be depreciated at an informal rate of about 2.5% annually (not set by statute, but common in county practice). Each county assessor determines the valuation approach, so treatment of site-specific assets can vary across jurisdictions.

If land previously enrolled in Pennsylvania's Clean and Green Program is converted to commercial energy use, it may trigger rollback taxes under 72 P.S. § 5490.4a. Rollback equals the difference between Clean and Green and standard assessment for up to seven years, plus 6% simple interest.

Pennsylvania has no statewide exemption or standardized PILOT program for renewable energy. Counties may negotiate voluntary PILOTs or other incentives on a project-by-project basis, subject to local approval.

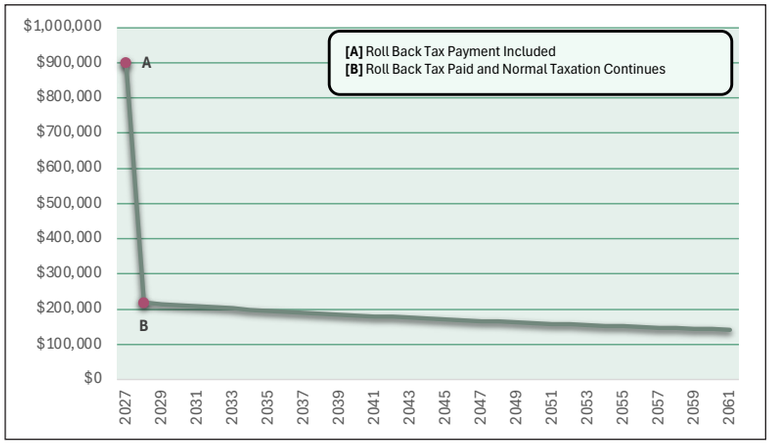
Key Concepts

- **TPP Exemption:** Generation equipment, such as solar panels, inverters, and batteries, is exempt from taxation.
- **Real Property:** Land and improvements like foundations, fencing, and O&M buildings are taxable.
- **County Authority:** Real property is assessed locally, and approaches vary by jurisdiction.
- **Depreciation:** Improvements may depreciate at about 2.5% annually, though this is based on practice, not statute.
- **Rollback Taxes:** Land leaving Clean and Green is subject to repayment of foregone taxes for up to seven years, plus 6% simple interest.
- **No Statewide PILOT:** Local governments may negotiate agreements individually.

Table 8.1 – Total Property Taxes Paid by the Project in Pennsylvania

Year	Total Paid
2027	$900,349
2028	$218,241
2029	$214,852
2030	$211,547
2031	$208,326
2032	$205,185
2033	$202,122
2034	$199,136
2035	$196,225
2036	$193,386
2037	$190,618
2038	$187,920
2039	$185,289
2040	$182,724
2041	$180,223
2042	$177,784
2043	$175,406
2044	$173,088
2045	$170,828
2046	$168,624
2047	$166,476
2048	$164,381
2049	$162,338
2050	$160,347
2051	$158,405
2052	$156,512
2053	$154,666
2054	$152,867
2055	$151,112
2056	$149,401
2057	$147,733
2058	$146,107
2059	$144,521
2060	$142,975
2061	$141,468
TOTAL	$6,841,184
AVG ANNUAL	$195,462

Figure 8.1 – Annual Property Taxes Paid by the Project in Pennsylvania



Modeling Results

For the modeled 200 MW solar + 100 MW storage project (in service 2027):

- First-year taxes: approximately $900,000
- Total over 35 years: approximately $6.8 million
- Average annual: approximately $195,000

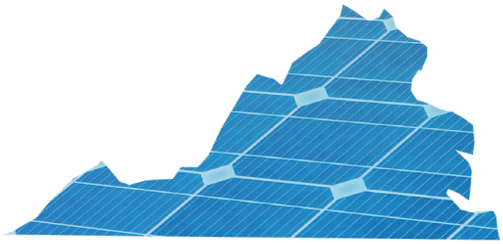
Assumptions

- No personal property taxes are paid; only land and improvements (e.g., O&M buildings) are taxable.
- Land retains assessed value but loses agricultural benefits under Clean and Green.
- O&M building value depreciates about 2.5% annually.
- Rollback taxes apply on converted Clean and Green acreage (current year + up to 7 prior years, + 6% simple interest).
- Real property is assessed at 100% of fair market value.
- Rates were fixed at 2021 levels for modeling.
- Sources/statutes: 72 P.S. § 5020-201 (TPP exemption); 72 P.S. § 5490.4a (Clean and Green rollback); county appraisal practice for improvements

Implications for Communities

Because Pennsylvania exempts generation equipment from taxation, renewable projects contribute far less in property taxes than in most other states. Revenues are limited to land and improvement values, averaging under $200,000 per year in this model. Rollback taxes may provide a one-time boost, but the absence of a standardized PILOT or exemption program means long-term contributions are relatively modest. Local governments considering projects may pursue voluntary agreements to stabilize revenues.

IX. Virginia



Virginia taxes renewable energy projects under an ad valorem framework, but the rules depend on project size and whether the facility qualifies as an "electric supplier." Projects larger than 25 MW are generally centrally assessed by the State Corporation Commission (SCC), while smaller or non-utility projects are locally assessed. Land is always assessed by the locality, and if converted from agricultural use, it may trigger rollback taxes under Clean & Green rules.

Equipment such as solar modules, racking, inverters, cabling, batteries, and other electrical systems is typically treated as tangible personal property (TPP). For SCC-assessed projects, the TPP value follows the SCC's 35-year percent-good table under 23VAC10-580-300, with a 90% ceiling and a 10% floor. For locally assessed projects, TPP follows the county's machinery and tools (M&T) percent-good schedule. Real property includes site improvements such as O&M buildings, foundations, fencing, and access roads, typically depreciated at 2.5% annually.

Virginia law also provides important exemptions and alternatives. Under Va. Code § 58.1-3660, projects between 5 and 150 MW that begin construction before July 1, 2030 receive a step-down exemption: 80% in the first 5 years, 70% in the next 5, and 60% thereafter. This applies to both solar and storage, unless the locality adopts a revenue share ordinance, which exempts the equipment from ad valorem taxes entirely.

If adopted, the revenue share replaces equipment taxation with a payment of up to $1,400/MW, increasing by 10% on July 1, 2026 and every five years thereafter (Va. Code § 58.1-2636). Land value is not exempted and continues to be locally assessed.

Key Concepts

- **Central vs. Local Assessment:** SCC centrally assesses "electric supplier" projects over 25 MW; smaller projects are locally assessed.
- **Percent-Good Depreciation:** 35-year SCC schedule with 90% ceiling and 10% floor; localities may use M&T schedules.
- **Step-Down Exemption (§ 58.1-3660):** 80% reduction for 5 years, then 70% for 5 years, then 60% thereafter. Applies to projects 5–150 MW started before July 1, 2030.
- **Revenue Share Alternative (§ 58.1-2636):** Up to $1,400/MW, escalating 10% every five years, replaces ad valorem taxation on equipment.
- **Rollback Taxes:** Agricultural land converted to energy use may owe up to 7 years of back taxes plus 6% interest.

Table 9.1 – Total Property Taxes Paid by the Project to Virginia

Year	Total Paid
2027	$488,001
2028	$484,753
2029	$484,184
2030	$483,629
2031	$483,088
2032	$524,561
2033	$524,047
2034	$523,546
2035	$523,057
2036	$522,581
2037	$564,116
2038	$563,664
2039	$563,222
2040	$562,791
2041	$562,372
2042	$603,962
2043	$603,563
2044	$603,174
2045	$602,795
2046	$602,425
2047	$644,064
2048	$643,713
2049	$643,370
2050	$643,036
2051	$642,710
2052	$684,392
2053	$684,082
2054	$683,780
2055	$683,486
2056	$683,199
2057	$724,919
2058	$724,646
2059	$724,379
2060	$724,120
2061	$723,867
TOTAL	$21,131,293
AVG ANNUAL	$603,751

Figure 9.1 – Total Project Costs by Classification in Virginia

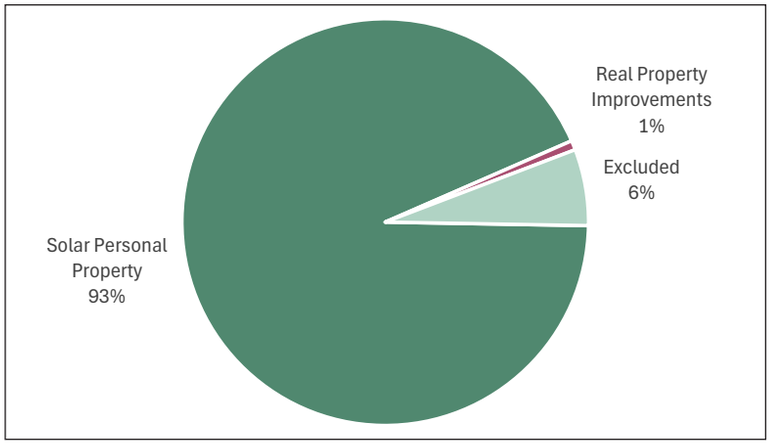
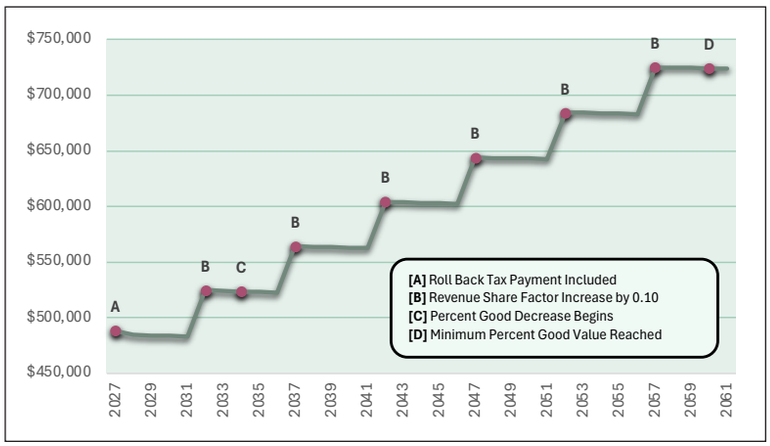


Figure 9.2 – Annual Property Taxes Paid by the Project in Virginia



Modeling Results

For the modeled 200 MW solar + 100 MW storage project (in service 2027):

- First-year taxes: approximately $488,000
- Long-term average: approximately $603,000 annually
- Total over 35 years: approximately $21.1 million

Assumptions

- $440M in capital expenditures classified as solar TPP
- $3.5M in capital expenditures classified as real property improvements
- TPP depreciated on SCC's 35-year percent-good table (90% ceiling, 10% floor)
- Real property improvements depreciated at 2.5% annually
- Revenue share applied at $1,400/MW, escalating 10% every 5 years
- Rollback taxes: 5 years on $50 thousand deferred assessed value, with 10% simple interest
- Rates fixed at 2023 levels
- Sources/statutes: Va. Code §§ 58.1-3660, 58.1-2636; 23VAC10-580-300

Implications for Communities

Virginia provides local governments with flexibility. Counties may benefit from stable, predictable revenue streams under a revenue share ordinance or from potentially higher but fluctuating revenues under ad valorem taxation. Step-down exemptions reduce the taxable base for mid-sized projects, but the revenue share option is increasingly popular because it simplifies administration and ensures predictable contributions.

X. Translating Revenues into Local Benefits

How will the taxes paid by renewable energy projects be used in local communities? While property tax budgets are set at the discretion of local officials, it is possible to illustrate how revenues can support tangible services in the community by looking at common practices for each category of property tax.

a. County Revenue

Revenues allocated to the county typically support a wide range of essential county-level services. These include funding for public safety, such as the sheriff's department, jail operations, emergency management, and 911 dispatch centers. They also help cover public health programs, which may include county hospitals or clinics, vaccination programs, senior services, and mental health initiatives. In addition, county revenues are critical for infrastructure and transportation, such as county road and bridge maintenance, snow removal, and equipment upgrades for highway departments. County funds can also be directed toward courts and legal services, supporting the judicial system, county prosecutors, and public defenders. Administrative services like record-keeping, permitting, and elections also rely heavily on county tax revenue. For example, a modest increase in county revenue could translate into several additional miles of road resurfacing, new patrol vehicles or radios for the sheriff's office, updated equipment for public works crews, or the ability to hire additional staff to process permits and manage community programs. In short, county-level revenues provide the backbone for the broad services that residents rely on every day.

b. School District Revenues

School districts often receive the largest amounts of property taxes paid versus any other taxing body. School districts generally dedicate their portion of property tax revenue to a wide array of educational operations and support services. The largest share often goes toward teacher and staff salaries and benefits, which are essential for attracting and retaining qualified educators. Beyond salaries, these revenues support classroom supplies, instructional materials, and technology that directly enhance student learning. Funds are also used for facility operations and maintenance, including heating, cooling, utilities, custodial services, and routine building repairs. In some districts, revenues may help pay for student transportation services, ensuring that students in rural or spread-out communities have safe and reliable access to schools. At a program level, property tax dollars can sustain or expand extracurricular activities, such as athletics, music, arts, and after-school programs. For capital-intensive years, revenues may also support major building renovations, roof or HVAC replacements, or new classroom construction to accommodate growing enrollment. In the modern classroom, revenues are increasingly directed toward technology upgrades, such as providing laptops or tablets, updating computer labs, and maintaining internet infrastructure. At a high level, property tax revenues for schools may therefore translate into smaller class sizes, improved learning environments, more extracurricular opportunities, and safer, better-maintained facilities.

c. Other Local Districts

The "other" category encompasses a variety of special-purpose local districts that deliver community-specific services, such as townships, fire protection districts, library districts, park districts, and road and bridge districts (if separate from the county fund). Revenues directed to fire protection districts may be used to purchase new fire trucks or ambulances, upgrade protective gear, and provide training for volunteer or career firefighters. Townships often rely on these revenues to fund basic services like road maintenance, snow removal, drainage improvements, and administrative functions. Library districts may use their share to purchase books and media, support public programming, and maintain facilities. Park districts typically allocate funds to maintain playgrounds, athletic fields, trails, and community centers, while also offering recreational programming and updating facilities. Road and bridge districts may use their portion to repair bridges, pave local roads, upgrade culverts, or purchase essential maintenance equipment.

d. In Summary

While each taxing entity has the flexibility to budget their tax dollar according to its needs, these examples demonstrate how tax revenues from the Project can translate into everyday services and infrastructure investments that directly benefit local communities.

XI. Comparison of State Policies

a. Overview

Property tax treatment of renewable energy projects shares some common features across states, but the rules differ in important ways that shape how much revenue communities receive and how predictable that revenue is. In all seven states studied, land is locally assessed and intangibles such as permitting fees, legal costs, and studies are excluded. Beyond those similarities, states diverge on who conducts the assessment, how solar and storage assets are classified, what valuation schedules apply, and whether exemptions or alternatives like PILOTs are available.

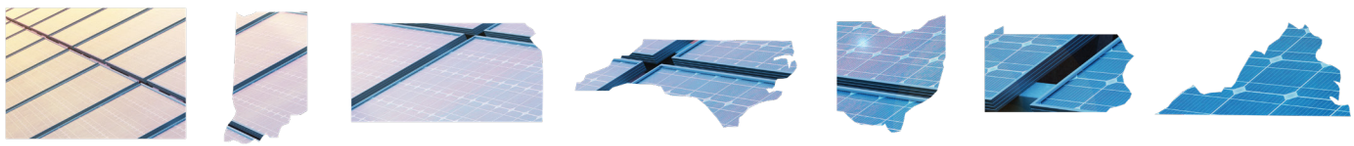
These differences explain why the same 200 MW solar-plus-100 MW storage project could generate $6.8 million in property taxes over 35 years in Pennsylvania, but more than $73 million in Ohio under its Qualified Energy Project (QEP) PILOT. The following sections compare Colorado, Indiana, Kansas, North Carolina, Ohio, Pennsylvania, and Virginia, highlighting both similarities and differences and their implications for local revenues and tax stability.

b. Assessment Authority (State vs. Local)

States differ in whether renewable energy projects are assessed centrally or locally:

- **Colorado** and **Ohio**: Centrally assessed at the state level for utility-scale renewable projects.
- **Virginia**: Uses a mixed system. The State Corporation Commission (SCC) centrally assesses projects owned by regulated "electric suppliers," while smaller or non-utility projects are assessed locally.
- **Indiana**, **Kansas**, **North Carolina**, and **Pennsylvania**: Rely primarily on county assessors for valuation and administration.

Implication: Centralized models promote consistency and predictability across jurisdictions, while local assessment gives communities more discretion but creates the potential for variation in how similar projects are treated.

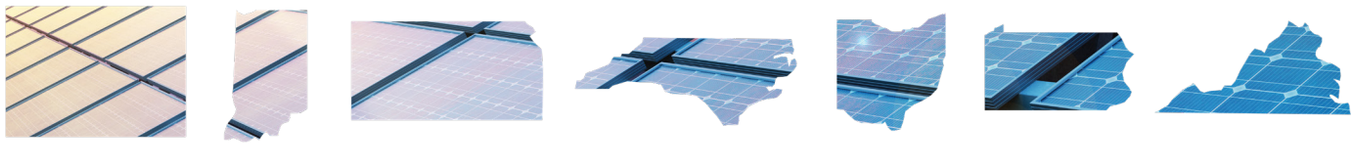


c. Classification: Solar Equipment & BESS

States generally classify solar and storage equipment as tangible personal property (TPP), while land and site improvements are treated as real property:

- **Most States (CO, IN, KS, NC, VA):** Solar panels, inverters, batteries, transformers, and other electrical equipment are taxed as TPP. Roads, foundations, fencing, and O&M buildings are classified as real property.
- **Indiana**: Labels equipment as distributable personal property and applies MACRS depreciation.
- **Kansas**: Treats equipment as TPP or, if locally appraised, as commercial/industrial machinery and equipment (CIME).
- **North Carolina**: Uses Schedule T; BESS is fully taxable as TPP unless functionally integrated with solar.
- **Virginia**: Treats equipment as TPP but applies either SCC percent-good tables (for regulated "electric suppliers") or local machinery & tools schedules.
- **Pennsylvania**: Exempts all generation equipment from local taxation, leaving only land and site improvements subject to property tax.
- **Ohio**: Replaces TPP taxation with a fixed-rate Qualified Energy Project (QEP) PILOT for solar and hybrid solar-plus-storage projects.

Implication: While most states tax solar and storage equipment as TPP, Pennsylvania's exemption and Ohio's PILOT substantially reduce taxable value and shift revenues toward alternative mechanisms.

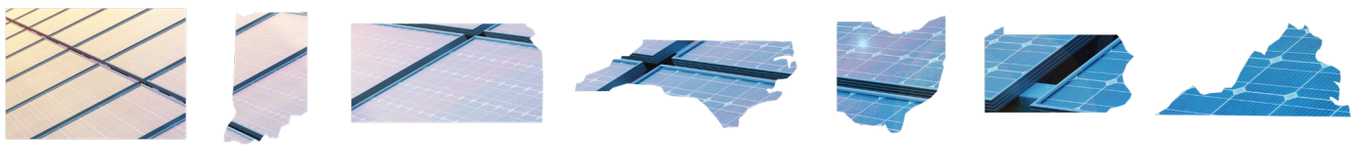


d. Valuation & Depreciation

Valuation methods vary significantly:

- **Colorado** uses a 30-year straight-line depreciation with a 20% floor and then levelizes the value to stabilize revenue, applying a 29% assessment ratio (26.4% for 2023–24).
- **Indiana** applies 5-year MACRS with a 60% gross additions deduction in Year 1, no valuation floor for post-2025 property (per Senate Enrolled Act 1, 2025), and 15-year MACRS for real improvements.
- **Kansas** uses a 7-year straight-line schedule to a 20% floor; post-exemption, property may be classified as CIME at 25% assessment or utility at 33%.
- **North Carolina** uses Schedule T percent-good, assuming an 18-year life for solar.
- **Virginia** applies a 35-year percent-good table with a 10% floor for SCC-assessed projects; locally, machinery & tools schedules may apply.
- **Ohio** sidesteps valuation entirely for most projects through the QEP PILOT.
- **Pennsylvania** does not tax generation equipment, so valuation applies only to land and improvements.

*Implication: States relying on standard depreciation create high near-term revenues but sharp declines, while methods like **Colorado's** levelization or **Virginia's** long schedules smooth revenues. Alternatives like **Ohio's** PILOT and **Pennsylvania's** exemption bypass valuation completely. **Indiana's** recent removal of a valuation floor means far less revenue late in a project's life.*

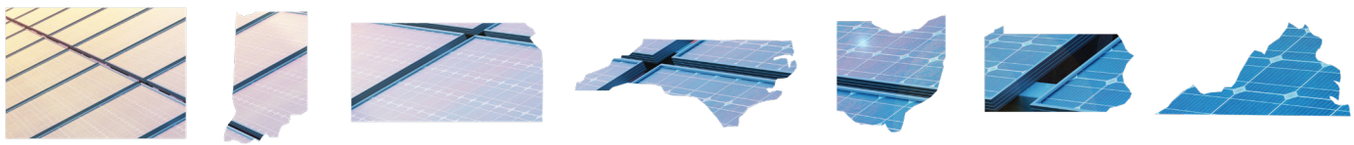


e. Exemptions & Alternatives

States use a mix of exemptions, PILOTs, and revenue-share mechanisms to reduce tax burdens or stabilize payments:

- **Kansas** provides a 10-year renewable exemption, after which property may be appraised as CIME.
- **North Carolina** excludes 80% of solar equipment value; BESS remains taxable unless integrated.
- **Virginia** offers a step-down exemption for projects 5–150 MW (80% for 5 years, 70% for 5 years, then 60%) or a revenue-share alternative ($1,400/MW, escalating).
- **Ohio** uses its QEP PILOT ($7,000/MW, plus optional $2,000/MW for local governments if certain conditions are met).
- **Indiana** has no statewide exemption or PILOT but relies on local EDAs or abatements.
- **Colorado** provides no renewable-specific exemption; standard unit valuation applies.
- **Pennsylvania** exempts generation equipment statewide, but local voluntary PILOTs are possible.

Implication: Exemptions and alternatives drive competitiveness for developers but often reduce or standardize revenues for communities.



f. Land, Base Rates & Rollback

While land is always locally assessed, rollback provisions differ in scope and length across states:

- **Indiana**: Land is valued at Solar Land Base Rates with a 2.35% inflation factor.
- **North Carolina**: Present Use Value (PUV) rollback applies to current year plus three prior years.
- **Virginia:** Agricultural rollback applies when land leaves reduced-use classification.
- **Pennsylvania**: Clean and Green rollback covers current year plus up to seven years with 6% simple interest.
- **Colorado, Kansas, Ohio**: Land is assessed under standard local rules.

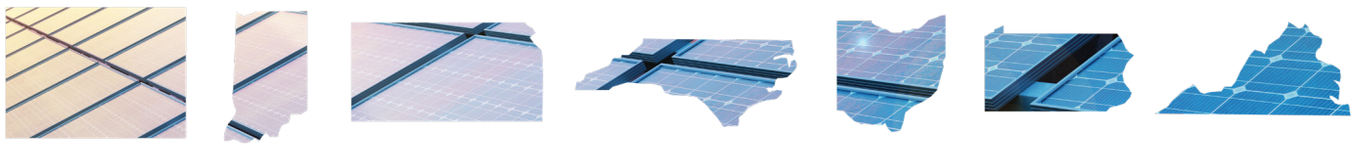
Implication: Rollback provisions create added taxes in year 1 for developers converting farmland, especially in Pennsylvania where the rollback spans up to seven years.

g. Timing & Administration

States also differ in how liability is set and what administrative processes apply:

- **Ohio**: Liability is set annually as of January 1; QEP PILOT payments remain fixed.
- **Indiana**: First-year gross additions deduction significantly reduces liability before a sharp rise in Year 2.
- **Kansas**: Exemption filings are processed by counties or the Property Valuation Division with Board of Tax Appeals orders.
- **North Carolina**: Requires annual TPP filings with audit exposure and 30-day appeal windows.
- **Virginia**: Treatment depends on MW thresholds, construction dates, and whether revenue share is adopted.
- **Colorado**: Allows annual trending adjustments based on production and PPA terms.
- **Pennsylvania**: Leaves administration entirely to counties.

Implication: States with fixed or standardized mechanisms (OH PILOT, VA revenue-share) reduce uncertainty, while states requiring annual filings (NC, KS) add administrative burden.

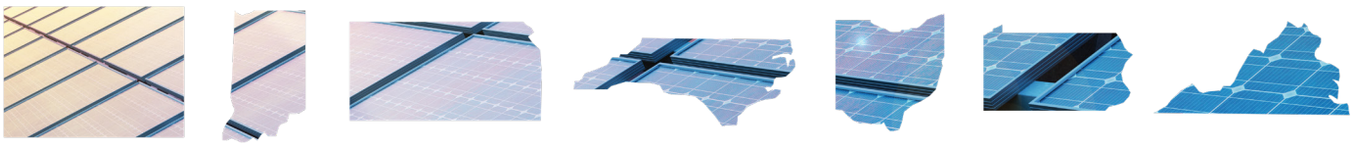


h. Comparative Results

Modeled results show the impact of these policy differences for a 200 MW solar + 100 MW storage project:

- **Ohio**: approximately $73.5M total (highest, under QEP PILOT)
- **Kansas**: approximately $61M total
- **Indiana**: approximately $39.8M total
- **Colorado**: approximately $28.6M total
- **Virginia**: approximately $21.1M total
- **North Carolina**: approximately $13.7M total
- **Pennsylvania**: approximately $6.8M total (lowest)

Implication: Policy design affects the total revenues received by communities, with differences reaching tens of millions of dollars for projects of the same size.



About the Authors

Bryan Loomis, MBA

Vice President
Strategic Economic Research, LLC

Bryan Loomis has been conducting economic impact, property tax, and land use analyses for Strategic Economic Research since 2019. He has performed or overseen over 200 wind and solar analyses and provided expert testimony for permitting hearings and open houses in many states, including Colorado, Kansas, Indiana, Illinois, and Iowa. He improved the property tax analysis methodology at SER by researching various state taxing laws, implementing depreciation and taxing jurisdiction millage rates, and incorporating other factors into the tax analysis tool. Before working with SER, Bryan ran a consulting agency that collaborated with over 30 technology startups on their growth and marketing strategies. Bryan received his MBA from Belmont University in 2016.

Deborah Dingess

Director of Property Tax Research
Strategic Economic Research, LLC

Deborah Dingess leads property tax research across all 50 states, focusing on tax codes, case law, and incentive structures. Deborah's responsibilities include classifying project costs, determining appropriate depreciation methods, and researching tax incentives. She also develops and refines research templates, reviews property tax models used in reports, and supports stakeholders by providing property tax guidance. Prior to this role, Deborah held senior tax positions in the energy and healthcare sectors, managing multi-state tax compliance and tax technology automation initiatives. Deborah received her Master of Science in Taxation degree from the University of Cincinnati in 2021 and is an IRS Enrolled Agent (EA) candidate.

Strategic Economic Research, LLC (SER) provides economic consulting for renewable energy projects across the U.S. We have produced over 400 economic impact reports in over 35 states. Research Associates who performed work on this project include Paige Afram, Amanda Battaglia, Lindsey Cohn, Sawyer Keithley, Clara Lewis, Ethan Loomis, Hannah Loomis, Nita Loomis, Jessica Lucht, Mandi Mitchell, Russell Piontek, Isabelle Soto, Tim Roberts, Katrina Schaffer, Julian Schmitt, Briana Reuter, and Ashley Thompson.