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Solar Projects:
Power Siting and Tax Abatements

Thursday, August 11, 2022

Solar Projects: Power Siting and Tax Abatements



Ariel Miller

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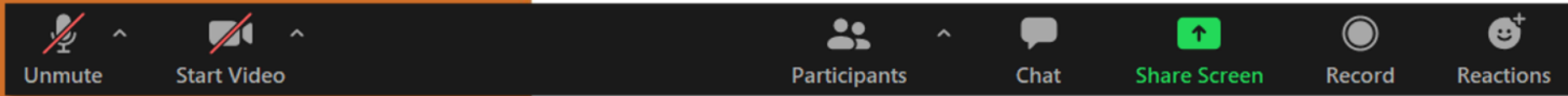
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August 11, 2022

Utility Scale Solar Development and State Tax Abatements and Financing



Bricker & Eckler
ATTORNEYS AT LAW

Roadmap & Objectives



- Background
 - Describe rapid growth in utility scale solar sector
- Ohio as a case study
 - From zero to hero
 - Permitting & tensions
 - Abatement and financing programs
- Share the developer perspective and experience

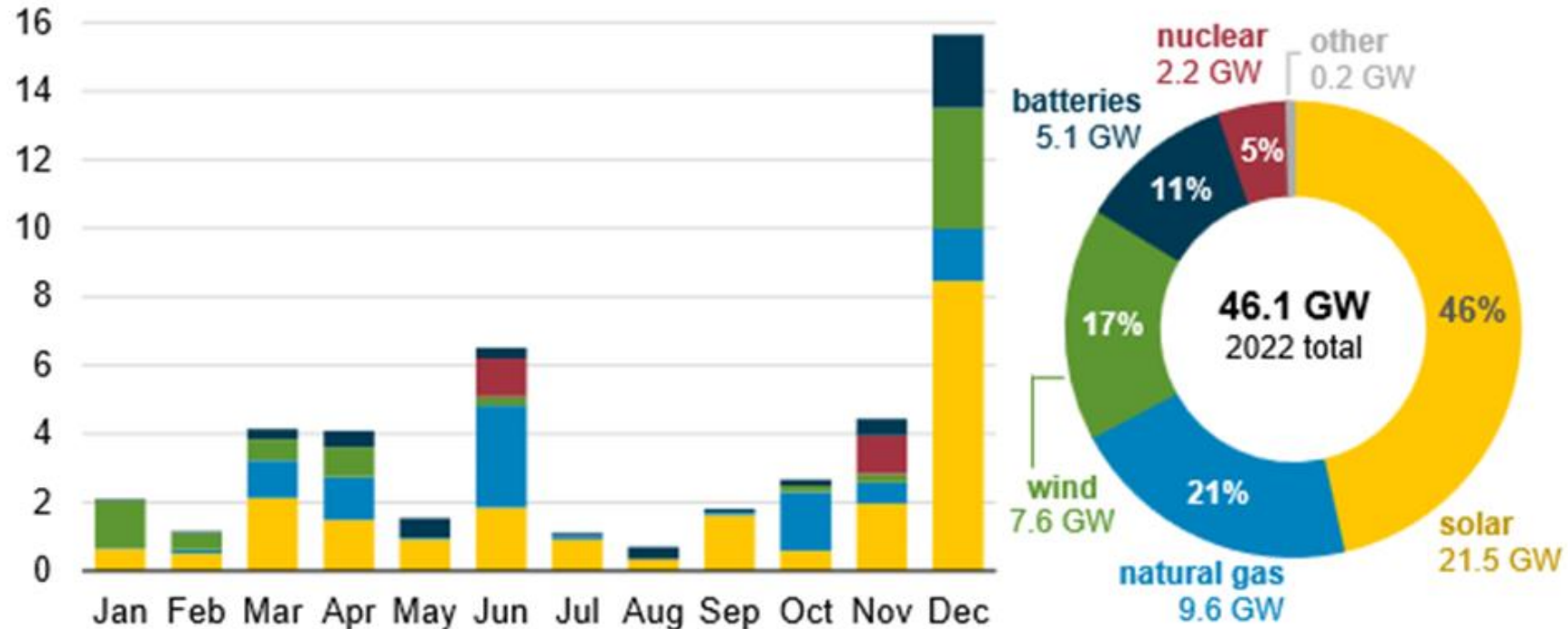


What is utility scale solar?

- Differing definitions
- Scale can vary
- But is different than distributed or “behind the meter” generation

The Rapid Growth of Utility Scale Solar

Planned U.S. utility-scale electric generating capacity additions (2022)
gigawatts (GW)



As Ohio goes, so goes the Nation...



- Significant increase in utility scale solar development
- Permitting summary
- Abatements and financing



Utility Scale Solar in Ohio

As of January 1, 2017

Utility Scale Solar in Ohio Today

As of June 2021

Source: Ohio Power Siting Board, "Solar Farm Map and Statistics"



Why so much solar development in Ohio?

- Corporate Demand
- Located in the World's Largest Electricity Market (PJM)
- Transmission Access
- Access to Land
- Ohio is a competitive market with a long-established permitting regime
- Wood & McKenzie identifies Ohio as one of the most promising solar markets in the country

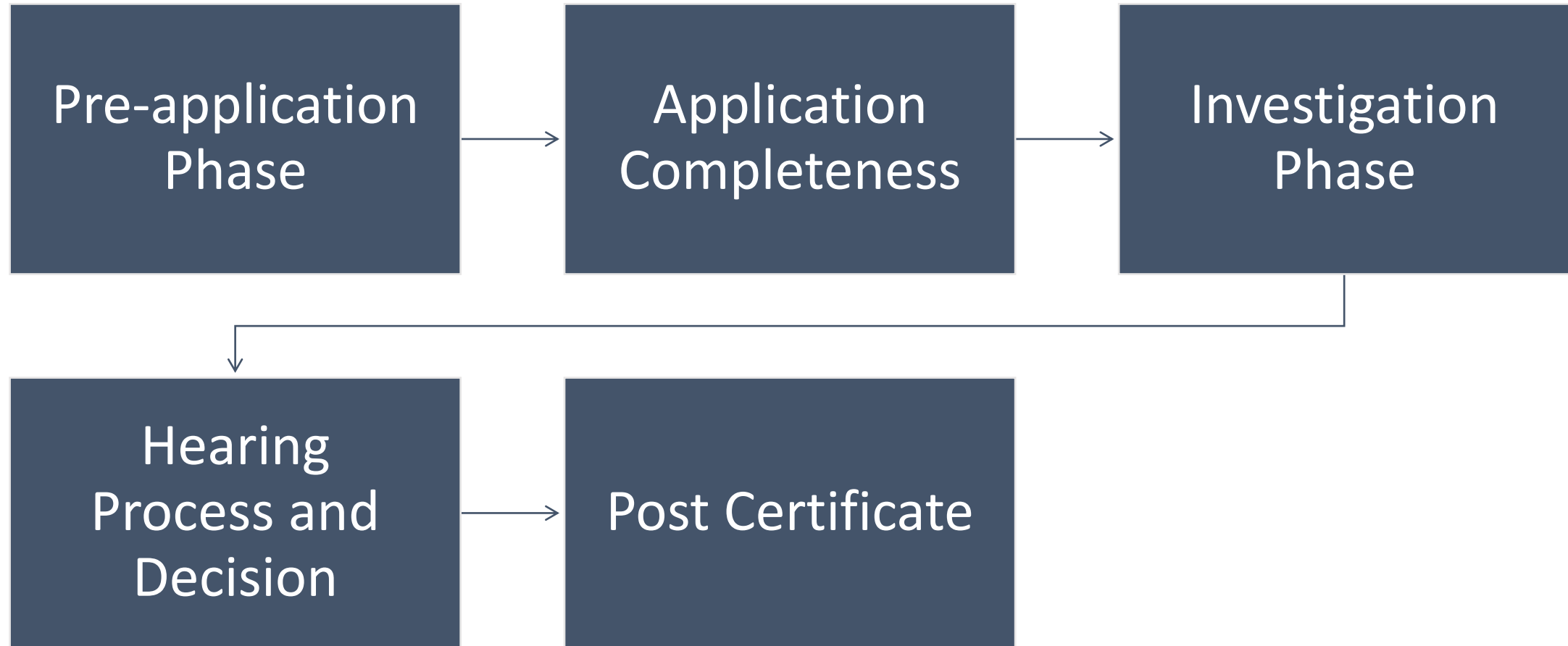


The OPSB Process



- Comprehensive, multi-phased process for siting generation, electric transmission, and natural gas pipeline facilities
- OPSB has jurisdiction over “major utility facilities”
- Over 50 MW for solar generation facility would be a “major utility facility”

Phases in the OPSB Process



Qualified Energy Project Program

Background and Eligibility

- In 2010, Ohio approved a tax abatement from real and tangible personal property taxes for renewable generation known as “Qualified Energy Projects,” under R.C. 5727.75
- The abatement statute was recently updated, extending the deadlines for the abatement:
 - Construction must begin before January 1, 2025 and the project must be placed into service by January 1, 2026.



Qualified Energy Project Program

The PILOT

- In exchange for the abatement, the project must pay a PILOT.
- For solar, the statute requires a minimum PILOT of \$7k/MW. The County also has discretion to add up to an additional service payment amount of \$2k/MW.
- The mandatory \$7k/MW PILOT is distributed to the County and local taxing districts on a millage basis.
- The discretionary amount, up to \$2k/MW, goes to the County general revenue fund.



Qualified Energy Project Program



Application and Approval Process

- To obtain the abatement, a project must first submit its application to become a QEP to the Ohio Department of Development (“Development”)
- After Development receives the application, it informs the County where the project is located. Within 30 days, the County must respond to Development with:
 1. a resolution from the County approving the abatement for that specific project; or
 2. confirmation that the County is an Alternative Energy Zone (AEZ)
- Development will then certify the project as a “Qualified Energy Project”

Qualified Energy Project Program

Obligations

- To maintain the abatement, the project must:
- Meet the deadlines and make the PILOT each year.
- Submit an annual construction progress report.
- For solar, employ at least 80% Ohio-domiciled employees in construction.



Qualified Energy Project Program

Obligations (cont'd)

- To maintain the abatement, the project must:
- Repair roads, bridges, and culverts affected by construction of the project.
- Provide training to local first responders.
- Establish a relationship with an Ohio university or apprenticeship program for the purposes of education and training.



Qualified Energy Project Program



Best Practices and Lessons Learned

- Counties in northern Ohio, where wind projects have traditionally been located, are often more familiar with the PILOT program. In other parts of Ohio, the PILOT is a new concept due to solar development.

Qualified Energy Project Program



Potential PILOT Reform

- The abatement status is fairly inflexible
- Developers and counties are increasingly expressing the need for additional flexibility
- There is currently no abatement legislation pending. However, because the abatement extension window is only a few years, we expect to see increasing dialogue and attention on this issue by the industry and stakeholders.

Annual Allocation of QEP PILOT



Example from 150 MW solar project in Ohio showing annual revenue

PILOT/MW	\$7,000.00
Add. Serv. Payment	\$2,000.00
MW Amount	150
County Millage	10.650000
Township Millage	8.750000
School District Millage	33.000000
XXXXXX Millage	3.500000

Base PILOT - County	Base PILOT - Township	Base PILOT - Schools	Base PILOT - XXXXX	Total Additional Service Payment to County
\$ 200,044.72	\$ 164,355.99	\$ 619,856.89	\$ 65,742.40	\$ 300,000.00

Total Base PILOT + Service Payment = \$1,350,000

Qualified Energy Project Program

Abatement vs. Taxable Scenario Example

- Assumptions – Hypothetical 1
 - Project Size – 185 MW Nameplate Capacity
 - Capital Investment (TPP) - \$180MM (85% comprising production property)
 - Assumes 2% increase in annual value of RP
 - Whole Tax Rate - 66.9
 - Commercial Property (RP) Rate - 58.7
 - PILOT Imposed by County - \$9,000 per MW



QEP Solar Tax Abatements



Hypothetical Revenue Scenario #1

Year	Current CAUV Revenue from Property Without Solar Project	Project PILOT Payments	Total Tax Max Hypothetical Tax on Solar Facility Without Abatement
1	\$ 40,334.00	\$ 1,665,000.00	\$ 4,234,700.71
2	\$ 41,140.68	\$ 1,665,000.00	\$ 4,109,180.06
3	\$ 41,963.49	\$ 1,665,000.00	\$ 3,983,783.66
4	\$ 42,802.76	\$ 1,665,000.00	\$ 3,854,522.09
5	\$ 43,658.82	\$ 1,665,000.00	\$ 3,729,381.71
6	\$ 44,532.00	\$ 1,665,000.00	\$ 3,604,373.00
7	\$ 45,422.64	\$ 1,665,000.00	\$ 3,475,507.25
8	\$ 46,331.09	\$ 1,665,000.00	\$ 3,350,770.43
9	\$ 47,257.71	\$ 1,665,000.00	\$ 3,226,173.53
10	\$ 48,202.86	\$ 1,665,000.00	\$ 3,097,727.44
11	\$ 49,166.92	\$ 1,665,000.00	\$ 2,973,418.86
12	\$ 50,150.26	\$ 1,665,000.00	\$ 2,849,258.78
13	\$ 51,153.26	\$ 1,665,000.00	\$ 2,721,258.25
14	\$ 52,176.33	\$ 1,665,000.00	\$ 2,597,404.13
15	\$ 53,219.86	\$ 1,665,000.00	\$ 2,473,707.60
16	\$ 54,284.25	\$ 1,665,000.00	\$ 2,429,703.20
17	\$ 55,369.94	\$ 1,665,000.00	\$ 2,387,398.11
18	\$ 56,477.34	\$ 1,665,000.00	\$ 2,345,260.25
19	\$ 57,606.88	\$ 1,665,000.00	\$ 2,301,757.61
20	\$ 58,759.02	\$ 1,665,000.00	\$ 2,259,964.31
21	\$ 59,934.20	\$ 1,665,000.00	\$ 2,218,348.48
22	\$ 61,132.89	\$ 1,665,000.00	\$ 2,198,408.65
23	\$ 62,355.54	\$ 1,665,000.00	\$ 2,180,188.80
24	\$ 63,602.65	\$ 1,665,000.00	\$ 2,160,621.93
25	\$ 64,874.71	\$ 1,665,000.00	\$ 2,142,782.51
26	\$ 66,172.20	\$ 1,665,000.00	\$ 2,123,603.68
27	\$ 67,495.65	\$ 1,665,000.00	\$ 2,106,160.06
28	\$ 68,845.56	\$ 1,665,000.00	\$ 2,087,384.94
29	\$ 70,222.47	\$ 1,665,000.00	\$ 2,070,353.11
30	\$ 71,626.92	\$ 1,665,000.00	\$ 2,051,998.01
31	\$ 73,059.46	\$ 1,665,000.00	\$ 2,063,030.99
TOTAL	\$1,709,332.36	\$51,615,000.00	\$85,408,132.32

The difference between the PILOT revenue and the hypothetical maximum tax revenue from a solar project without the QEP abatement is *highly variable* and will be different for every project. Key variables include:

- Differing local tax rates
- The amount of transmission infrastructure associated with the project – transmission is assessed (and thus taxed) at a higher percentage of true value
- The applicable depreciation schedule applied by the project
- **Whether the project elects to seek to reassess its valuation**
 - This is a key consideration. A project not subject to the QEP abatement may seek a reassessment of its valuation, which could lead to significant decreases in revenue.

QEP Solar Tax Abatements

Abatement vs. Taxable Scenario Example

- Assumptions – Hypothetical 2
 - Project Size – 185 MW Nameplate Capacity
 - Capital Investment (TPP) - \$180MM (93% comprising production property)
 - Assumes 2% increase in annual value of RP
 - Whole Tax Rate – 53.075
 - Commercial Property (RP) Rate – 45.734359
 - PILOT Imposed by County - \$9,000 per MW



Qualified Energy Project Program



Hypothetical Revenue Scenario #2

Year	Current CAUV Revenue from Property Without Solar Project	Project PILOT Payments	Total Tax Max Hypothetical Tax on Solar Facility Without Abatement
1	\$32,043.31	\$ 1,665,000.00	\$ 2,896,887.51
2	\$32,684.18	\$ 1,665,000.00	\$ 2,812,602.48
3	\$33,337.86	\$ 1,665,000.00	\$ 2,728,414.26
4	\$34,004.62	\$ 1,665,000.00	\$ 2,641,624.01
5	\$34,684.71	\$ 1,665,000.00	\$ 2,557,635.26
6	\$35,378.40	\$ 1,665,000.00	\$ 2,473,749.24
7	\$36,085.97	\$ 1,665,000.00	\$ 2,387,267.24
8	\$36,807.69	\$ 1,665,000.00	\$ 2,303,592.90
9	\$37,543.84	\$ 1,665,000.00	\$ 2,220,027.58
10	\$38,294.72	\$ 1,665,000.00	\$ 2,133,872.70
11	\$39,060.62	\$ 1,665,000.00	\$ 2,050,532.01
12	\$39,841.83	\$ 1,665,000.00	\$ 1,967,307.03
13	\$40,638.67	\$ 1,665,000.00	\$ 1,881,499.28
14	\$41,451.44	\$ 1,665,000.00	\$ 1,798,512.68
15	\$42,280.47	\$ 1,665,000.00	\$ 1,715,648.86
16	\$43,126.08	\$ 1,665,000.00	\$ 1,702,709.10
17	\$43,988.60	\$ 1,665,000.00	\$ 1,690,465.51
18	\$44,868.37	\$ 1,665,000.00	\$ 1,678,352.21
19	\$45,765.74	\$ 1,665,000.00	\$ 1,665,803.39
20	\$46,681.05	\$ 1,665,000.00	\$ 1,653,958.55
21	\$47,614.67	\$ 1,665,000.00	\$ 1,642,251.98
22	\$48,566.97	\$ 1,665,000.00	\$ 1,638,644.52
23	\$49,538.31	\$ 1,665,000.00	\$ 1,635,749.34
24	\$50,529.07	\$ 1,665,000.00	\$ 1,632,432.46
25	\$51,539.65	\$ 1,665,000.00	\$ 1,629,833.68
26	\$52,570.45	\$ 1,665,000.00	\$ 1,626,819.13
27	\$53,621.86	\$ 1,665,000.00	\$ 1,624,528.72
28	\$54,694.29	\$ 1,665,000.00	\$ 1,621,828.71
29	\$55,788.18	\$ 1,665,000.00	\$ 1,619,859.14
30	\$56,903.94	\$ 1,665,000.00	\$ 1,617,486.38
31	\$58,042.02	\$ 1,665,000.00	\$ 1,626,082.40
TOTAL	\$1,357,977.57	\$ 51,615,000.00	\$ 60,875,978.25

The difference between the PILOT revenue and the hypothetical maximum tax revenue from a solar project without the QEP abatement is *highly variable* and will be different for every project.

Key variables include:

- Differing local tax rates
- The amount of transmission infrastructure associated with the project – transmission is assessed (and thus taxed) at a higher percentage of true value
- The applicable depreciation schedule applied by the project
- Whether or not the project elects to seek to reassess its valuation**
 - This is a key consideration. A project not subject to the QEP abatement may seek a reassessment of its valuation, which could lead to significant decreases in revenue.

Qualified Energy Project Program



Understanding Tax & PILOT Revenue from a Solar Project

- PILOT revenue from a solar project will significantly exceed the current tax revenues from the existing property.
- The difference between the PILOT revenue and the hypothetical maximum tax revenue from a solar project without the QEP abatement is highly variable and will be different for every project. Key variables include:
 - Differing local tax rates
 - The amount of transmission infrastructure associated with the project – transmission is assessed (and thus taxed) at a higher percentage of true value
 - The applicable depreciation schedule applied by the project
 - **Whether or not the project elects to seek to reassess its valuation**
 - This is a key consideration. A project not subject to the QEP abatement may seek a reassessment of its valuation, which could lead to significant decreases in revenue.
- While the PILOT creates significant revenue for local jurisdictions compared to current revenue, the abatement is necessary for many projects to be able to compete – without an abatement, there would be no project built.

Qualified Energy Project Program



Key Characteristics of QEP Program

Personal Property Taxation as a Public Utility (e.g., Pipelines, Electricity Generators without an Abatement)	Qualified Energy Project Abatement of Property Taxes and Payment of PILOTs
Personal property taxes are calculated annually, meaning assessed taxes are never the same year-to-year and can be hard to predict	Annual payments in lieu of tax (“PILOTs”) remain the same over the entire life of the project (unless a portion of the project is decommissioned)
Taxes are based on the “true value” (i.e., FMV) of taxable property, and taxpayers may dispute the true value with appraisal evidence through the appeals process; appeals can take years to resolve	PILOTs are calculated based on an objective criteria—the generation capacity of the project.
Taxpayers may remit assessed taxes, but appeal the value of their property, resulting in political subdivisions having to refund large sums of money in later years	PILOTs are agreed upon upfront prior to development of the project, so political subdivisions are not at risk of having to refund any payments as a result of a tax appeal
Even if taxpayers do not appeal the value of their property, taxes due over time decline because of depreciation deductions permitted by statute	Depreciation is inapplicable to PILOTs; they remain the same over time, provided electricity generation capacity is not reduced
Further reading on how property tax appeals can impact school districts: https://bgindependentmedia.org/rover-pipeline-files-appeal-over-school-taxes-again/	Further reading on how reliable PILOT payments enable partnerships between QEPs and local governments: https://delphosherald.com/Content/Default/News/Article/Blue-Creek-Wind-Farm-pays-another-2-7M-to-Van-Wert-Paulding-counties-and-schools/-3/1183/191398
Tax revenue from the property taxes can impact the local school district’s state formula funding	PILOT revenue to school districts does not impact a school district’s state formula funding

Qualified Energy Project Program



Key Characteristics of QEP Program

- QEP PILOTs are in place for the life of the project and are not subject to tax appeals or reassessments.

THE CANTON REPOSITORY Aug. 21, 2020

Pipelines lose bid to lower tax bills, can appeal

Sentinel-Tribune Jan. 28, 2021

Pipe dreams: School money from pipelines never materialized

The Daily Record Feb. 23, 2021

Safeguard in case Rover pipeline appeal is successful

Qualified Energy Project Program



Additional Resources about the QEP Program

- Ohio Department of Development:
https://development.ohio.gov/bs/bs_qepte.htm
- Bricker Solar Resource Center: bricker.com/solar
 - Paper detailing QEP program and related requirements:
[https://www.bricker.com/Documents/Resources/QEP%20 project white paper.pdf](https://www.bricker.com/Documents/Resources/QEP%20project%20white%20paper.pdf)

OAQDA Financing



An alternative financing mechanism for utility scale solar

- The Ohio Air Quality Development Authority (“OAQDA”) – statewide financing agency for air quality improvements (<https://ohioairquality.ohio.gov/>)
- OAQDA issues conduit revenue bonds that are publicly-offered or privately placed, with proceeds loaned to borrowers that undertake air quality projects
- Long history of providing financing and support for commercial and public projects
- Two new programs—CAIP and Green Bonds

OAQDA Financing



Applying existing program to new project types in renewable energy

- A project financed through OAQDA bonds receives a 100% exemption on real property, tangible personal property, and sales and use tax for qualified project costs, and interest on the bonds may be exempt from certain Ohio taxes.
- Local support requirement: for solar, OAQDA requires a PILOT agreement between the project, county, and school district.
 - However, the amount of the PILOT is not fixed – the amount and terms can be negotiated between the parties.
- Lesson learned: existing financing mechanisms may be powerful tools to support renewable projects

Who is Avangrid Renewables?

Who we are: The Iberdrola Group and Avangrid Renewables



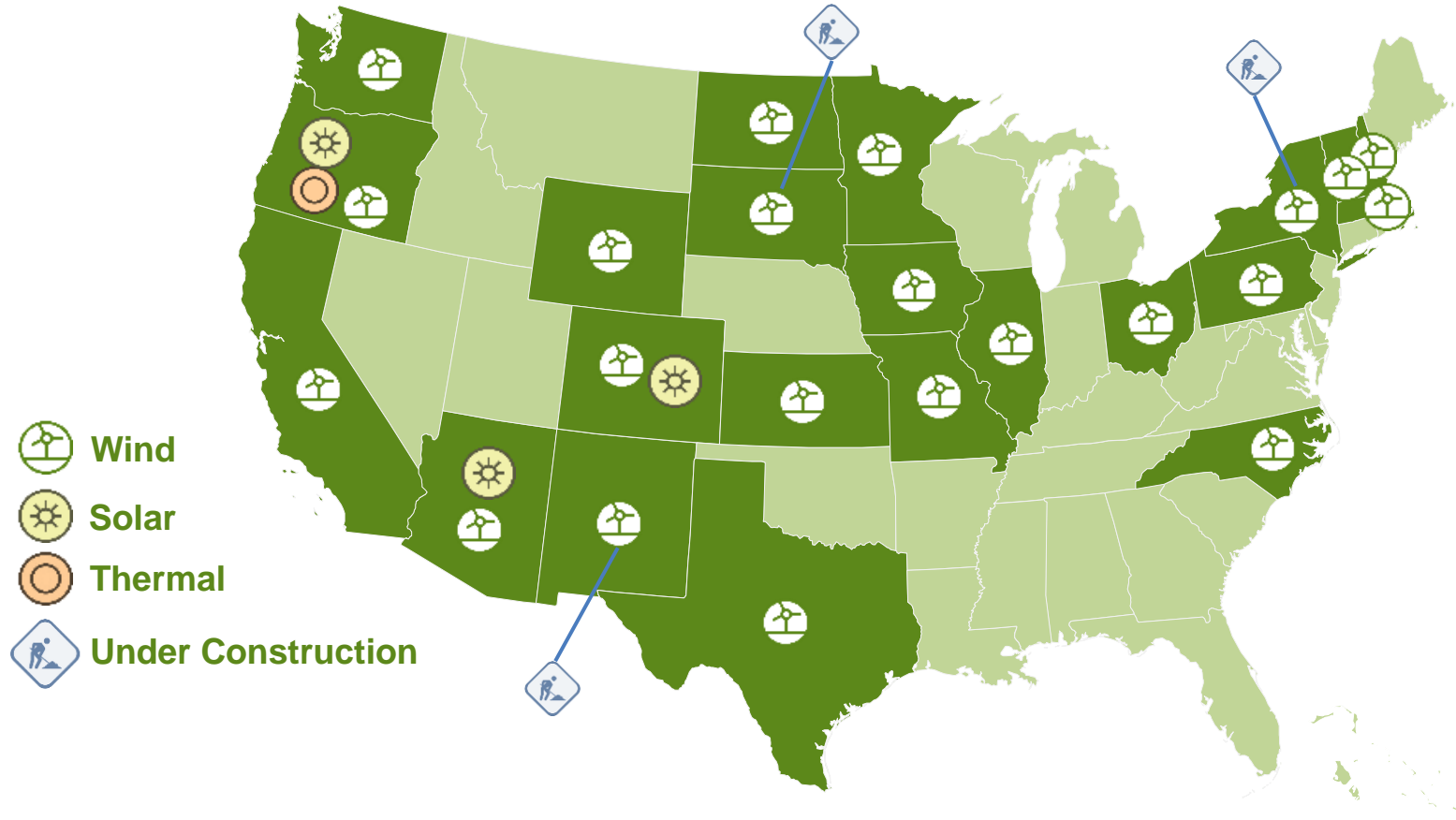
Avangrid Renewables is a subsidiary of Avangrid (NYSE: AGR) and part of the **Iberdrola Group**.

- **Iberdrola**
 - Over **38,000 MW** of renewable energy across a dozen countries.
 - **170-year history**, employs over 28,000 people in **40+ countries**
- **Avangrid Renewables, LLC**
 - HQ in Portland, Oregon
 - Over \$10 billion of operating assets
 - **Over 8,300 MW** of owned and controlled wind and solar generation in **more than 20 states**
 - **23 GW** onshore & offshore wind and solar pipeline



Above: Corporate ownership structure.

Where we are located:



8,300 MW of owned and controlled wind and solar power facilities
20+ States

Avangrid's Use of QEP and OAQDA



- Blue Creek Wind Project, Van Wert & Paulding Counties
 - QEP PILOT (\$9k/MW PILOT)
 - 304 MW project largest county taxpayer
- Great Bear Solar Project
 - Initially started at QEP PILOT but converted to OAQDA PILOT for MOPR reasons (so that abatement would not be treated as a “state subsidy” by PJM)
- Powell Creek Solar Project
 - QEP PILOT but converted to OAQDA PILOT
- Wild Grains
 - OAQDA PILOT, which enabled custom allocation to taxing entities

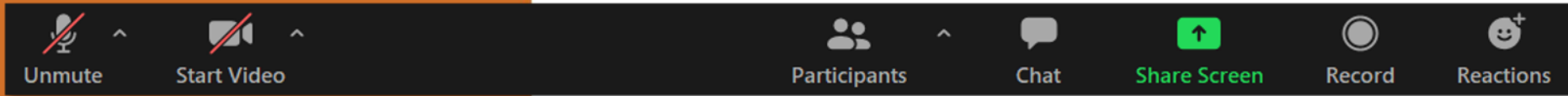
Interplay of PILOTs and Permitting



- PILOTs often play a role beyond improving the economic modeling for a project.
- PILOTs can often aid in building community support
 - Example: Village of Miller City
 - Abatement programs with a custom/negotiated PILOT can enable targeted funding to specific community needs
- Project permitting processes often require a proposed project to show benefits to the local community

- **Questions and Discussion**

Audience Questions



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Tuesday, September 27, 2022 / 2:00 PM - 4:00 PM Eastern

CDFA Infrastructure Finance Learning Series: Reviewing the Guidance

Tuesday, October 11, 2022 / 1:00 PM - 4:00 PM Eastern

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November 2-4, 2022 in Denver, CO

Contact Us



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