

Watts' the Deal?

Solar & BESS PILOTs Explained



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Just Give Me the Warm Power of the Sun

Since 2018 we have been presenting on Solar Power Facilities, the ability to tax them, and the benefits of PILOT agreements.

Today, we're going to quickly review:

- The basics of assessing & taxing Solar Power Facilities;
- Update on Challenges, Opportunities, and Issues with specific types of Solar Facilities.

Solar Facility Assessment Basics

Types of exempt Solar Facilities:

- Capable of producing not more than 125 per cent of the annual electricity needs of the real property upon which it is located;
- The “real property” includes both contiguous or non-contiguous real property within the same municipality in which there is a common ownership interest;

Solar Facility Assessment Basics

Types of exempt Solar Facilities:

- A solar or wind powered system or a solar or wind powered system that is co-located with energy storage that is equal to or less than 25 kilowatts or less in capacity;
- A facility that has entered into an agreement for payment in lieu of taxes associated with the system with the municipality where the system is located.

Solar Facility Assessment Basics

Whether you're taxing the facility or negotiating a PILOT, the first step is to determine the assessed value of the Solar Facility;

- The Panels, Inverters, Racking System and associated equipment are assessed as personal property;
- The land or rooftop on which it is developed is assessed as real property.

Solar Facility Assessment Basics

Determining the Assessed Value of the Personal Property

YEAR	1	2	3	4
FISCAL YEAR	<u>FY 2027</u>	<u>FY 2028</u>	<u>FY 2029</u>	<u>FY 2030</u>
COST NEW	\$ 5,750,000	\$ 5,750,000	\$ 5,750,000	\$ 5,750,000
PERCENT GOOD	100%	96.00%	92.00%	88.00%
RCNLD	\$ 5,750,000	\$ 5,520,000	\$ 5,290,000	\$ 5,060,000
TAX RATE	\$ 21.18	\$ 21.71	\$ 22.25	\$ 22.81
TAX LOAD	\$ 121,785.00	\$ 119,836.44	\$ 117,714.34	\$ 115,411.23

- The Cost New comes from the Pro Forma supplied by the Developer.
- Assumptions regarding Depreciation & Future Tax Rates

Solar Facility Assessment Basics

Now Calculate the Proposed Annual PILOT Payments

- Determine the Total Projected Tax Load
- The Total Projected PILOT Payments should be between 95% & 105% of the Projected Tax Load

20	
FY 2046	
\$5,750,000	
30.00%	
\$1,725,000	
\$30.00	
\$ 51,750.00	\$1,821,992.96
\$119,706.93	\$1,912,783.96
	104.98%

Make sure to update the default PILOT Annual Payment set forth in your Solar PILOT Guidelines.

Why are PILOTS better than typical taxation?

- PILOT Agreements can provide:
 - enhanced collection;
 - prevent Abatement Applications & ATB Appeals;
- PILOT agreements convert the revenue to an Estimated Receipt
 - 2 1/2 % Annual Escalator
 - No Residual Affect on Tax Base
- PILOTs are assignable.

Challenges/Opportunities to Keep in Mind



Landfill Solar

- Chapter 40, Section 22E
- Impacts on Cap Maintenance
- Interconnection Issues



Municipal Rooftop Solar

- Chapter 40, Section 3
- Chapter 59, Section 2B
- Procurement Considerations

Challenges/Opportunities to Keep in Mind



Dual Use Solar

- Pre-Determination Letter
- Final Determination Decision
- Cranberry Wet Harvesting Issue



Residential Rooftop Solar

- Typically under 25KW
- Must Grant Exemption Once
- Exemption Good for 20 years

Did You Know?

It's projected that over \$750 Billion will be spent this year on the development and construction of Data Centers.

Large Data Center developers accounted for 72% of clean power procurement by corporations in the Americas region via power purchase agreements in 2025.

Large Data Centers = More Battery Energy Storage Systems.

What is a Battery Energy Storage System?



Battery storage, or battery energy storage systems (BESS), are devices that enable energy from renewables, like solar and wind, to be stored and then released when the power is needed most.

How Does a BESS Work?

Intelligent battery software uses algorithms to coordinate energy production and computerized control systems are used to decide when to store energy or to release it to the grid.

- Energy is released from the battery storage system during times of peak demand, keeping costs down and electricity flowing.

Lithium-ion batteries, are currently the dominant storage technology for large scale plants.

Where Can a BESS be located?

A BESS can be “co-located” with a solar or wind facility or it can be standalone.

Co-location can be with a rooftop or ground mounted solar facility. When co-located, the BESS helps unlock the full efficiency of the renewable energy source.

Large scale Battery Energy Storage Systems are typically located near a large energy substation or power lines.

How Long Do the Batteries Last?

As with any Lithium-ion Battery there is degradation over time.

The typical BESS is designed with a 20 – 30 life expectancy – after that it will be removed and the site will be restored to its previous condition.

It is possible to purchase Service Contracts with companies like TESLA that will service the batteries to guarantee no more than 1% degradation a year.

A Hybrid Facility

In discussing the value and cost of a Battery Energy Storage Facility, it's important to recognize that the value is a hybrid of real and personal property.

- Between 85% and 95% of the facility is personal property;
- Between 5% and 15% of the facility is real property.

The value of the portion of the facility that is real estate must be added to the real estate value (we'll discuss this a little later).

Storage & Discharge

In discussing the costs and value of a BESS there are two basic elements:

- The amount of power that it can store;
 - Typically measured in mW or kW
- The amount of useful energy available in a single discharge;
 - If a 50kW capacity battery has a 4-hour duration, then the complete cycle equivalent would be $50 \text{ kW} \times 4 \text{ hours} = 200 \text{ kilowatt-hours (kWh)}$.

Personal Property Valuation

In determining the value of the personal property component, the analysis begins with the life expectancy and depreciation schedule for each element.

- There is some debate regarding life expectancy and depreciation;
 - Some consultants will view the issues from the engineering perspective and so will only rely on useful life and not consider economic life (which is determined by the lease).

Real Estate Valuation

The real estate should be treated as a “Special-Use Property”;

- The real estate value is determined by adding the Lease Fee Value to the Projected Value of the Reversionary Interest;
- The Lease Fee Value will decrease each successive year of the Lease;
- The Projected Value of the Reversionary Interest will depend on whether there is a reuse value (i.e. a sports stadium) or a vacant parcel of land.

Personal & Real Property Valuation

<u>Description</u>	<u>Total Cost</u>	<u>RE</u>	<u>PP</u>
Battery Energy Storage System (BESS)	\$82,000,000.00	\$0.00	\$82,000,000.00
Project Substation	\$11,000,000.00	\$1,100,000.00	\$9,900,000.00
BOP & EPC	\$32,000,000.00	\$3,200,000.00	\$28,800,000.00
GSU	\$8,000,000.00	\$1,000,000.00	\$7,000,000.00
Non-Refundable Interconnection	\$0.00	\$0.00	\$0.00
Tesla Domestic Content 50% Revenue Sh	\$9,000,000.00	\$1,000,000.00	<u>\$8,000,000.00</u>
	\$142,000,000.00	\$6,300,000.00	\$135,700,000.00

Allocation of Costs			
Real Estate	9.95%	\$142,000,000.00	\$14,129,000.00
Personal Property	90.05%	\$142,000,000.00	\$127,871,000.00

Should You Enter a PILOT?

General Laws Chapter 59, Section 5, Clause 45th provides in part that an energy storage system that has entered a PILOT is located” is exempt from personal property taxation.

The arguments “pro” and “con” are similar to those that are involved in the consideration of whether a municipality should enter into a Solar PILOT.

PILOTs can only include provisions relative to taxation. If the municipality wants to be reimbursed for other costs, then negotiate a Host Community Agreement.

Some Things to Keep In Mind

What do you do with “Contribution in Aid of Construction”?
This can be a sizeable amount of money.

If you choose to negotiate a PILOT, the principles set forth in IGR 21-24 apply:

- The PILOT can only apply to the personal property portion of the facility;
- The PILOT’s purpose is not to provide a tax break, but rather to stabilize the projected revenue stream over the life of the agreement.

Some Things to Keep In Mind

Because the real estate value is a function of the Lease Fee Value you need a copy of the Lease.

Be realistic about the projected value of the reversionary interest:

- The Lease has a term of thirty (30) years and provides that at the end of term the facility has to be removed and the site returned to its pre-development state.
- The development of Battery Energy Storage Facilities is an emerging industry – it really should not be viewed as a power plant.

Thank You!

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