Solar....Solar....Solar: Just Give Me the Warm Power of the Sun....

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MAAO 2019 Annual School

August 8, 2019

A QUICK SOLAR PILOT PRIMER

- In the beginning, there was SREC I
 - SREC I was a market based program that was designed to support 400 MW (DC).
- Then there was SREC II
 - SREC II was a market based program that was designed to get the Commonwealth to 1,600 MW (DC) by 2020.
- Now we've gotten SMART

DEVELOPER'S SOLAR PILOT GOALS

- Developers have three basic goals when negotiating Solar PILOTs
 - Addressing the fear of the unknown future assessments;
 - Reducing the potential volatility of future assessments;
 - Equalizing tax payments for the life of the project.

MUNICIPALITY'S SOLAR PILOT GOALS

Municipalities have three basic goals when negotiating Solar PILOTs

- Equitably taxing the project at its full and fair cash value;
- Providing a definite and sustainable revenue for future budgetary planning;
- Reducing future costs of ATB cases and future impacts on overlay.

VALUATION OF THE SOLAR ARRAY

Really, there are 3 possible methods

Direct Cap Method

Direct capitalization or discounted cash flow (DCF) Application (Property Tax Rate added to DCF).

Central Valuation

Value of Solar Arrays is established by DOR.

<u>Cost Hybrid</u>

Typical PP Cost Approach (incl. inverter replacement), accounts for specific project costs, then annualized over 20 years.

- First, let's look at the impact on real estate tax
 - Solar PILOTs should only apply to personal property tax
 - Lease / Year \$47,500 12.34 Acres

\$47,500/12.34\$ 3,849.27Vacancy 3% 115.48\$ 3,733.79Expenses 5% 186.69\$ 3,547.10NNN Cap8.5%

Rounded

\$3,547.10/.085 = \$41,730.59 \$42,000/AC

Now, let's look at the impact on personal property tax: Project Size: 2.5 MW(DC) Project Cost: \$ 4 Million Direct Cap Method

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Project Size/kW/AC		1,786
Est. Project Cost \$/kW/AC		\$ 2,240
Annual Generation kWh		\$ 3,129,072
Capacity Factor		20%
Revenue Assumptions		
Contract Rate for Elec. \$/kWh	0.10	\$ 312,907
SREC Price	\$280	<u>\$876,140</u>
Gross Income		\$1,189,047

 Now, let's look at the impact on personal property tax: Project Size: 2.5 MW(DC) Project Cost: \$ 4 Million Direct Cap Method

Expense Assumptions		Capitalization		
O & M	3.50 x EPC	\$6,251	Pre Tax Cash Flow	\$ 1,157,792
Admin & General	2.00 x EPC	\$3,572	Tax Rate	\$13.02
Insurance	12.00 X EPC	\$21,432	Capitalization Rate	20.00%
Land Lease		<u>\$0.00</u>	Cap Rate (Loaded)	<u>21.30%</u>
Total Expenses		\$31,255	Estimated Value By Income	\$ 5,435,643

If SREC is at \$200-299 value should be 58-79% of cost new

Initial Value: \$3,800,608

Initial Tax Load: \$49,483.92

 Now, let's look at the impact on personal property tax: Project Size: 2.5 MW(DC) Project Cost: \$ 4 Million

Personal Property Cost Method

Project Cost: \$4 Million

Depreciation: 5%/Year

Inverter Replacement in Year 11 results in recalculation of cost

Depreciated to 30% of Gross and remains there while project in service

Initial Value: \$4,000,000.00 Initial Tax Load \$ 52,080

- Initial Value per Direct Cap Method \$3,800,608
- Initial Value per Cost Method
 \$4,000,000
- Cost Method is easier and less impacted by Income deviations even though cost of arrays has declined due to technology advances.
- Regardless of the valuation method, PILOT should include an escalation factor of 2.5%.
- In SREC II we used \$13,500/MW(DC) and due to the escalation still will collect more over 20 years than if taxed.

SHOULD I PRORATE THE 1ST YEAR'S PAYMENT ?

- Normally the PILOT provides that the value is established as of December 31st.
- Benefit of pro-rating the 1st year's payment.
 - Pick up portion of new growth;
- Drawbacks of pro-rating the 1st year's payment.
 - Added complication to assessment/billing
 - Less confusion in collection

IMPORTANT PILOT PROVISIONS

- Be very clear as to when the PILOT payments begin and when they are due .
 - Consider the issue of construction delays
- Be very clear regarding changes to inventory .
 - Improvements & Additions after completion of construction
 - Reductions after completion of construction
 - Annual Inventory Reports

IMPORTANT PILOT PROVISIONS

- Be very clear as to the municipalities collection remedies .
 - Collection pursuant to Chapter 60
 - Agreement to collect as if real estate tax;
 - Offset pursuant to Chapter 60, § 93;
 - Permit Denial/Revocation Chapter 40, § 57.
- Include "Good Taxpayer" Provisions.
- Include "Clawback" Provisions .

IMPORTANT PILOT PROVISIONS

- Try to anticipate the impact of pending legislation.
 - Legislation will be prospective and will most likely include language grandfathering existing PILOTs
 - However, this will create two classes of Solar PILOTs – one class under Chapter 59, § 38H and one class under Chapter 59, § 5, cl.

MUNICIPAL APPROVAL OF PILOT AGREEMENT

- PILOTs must be approved by the Executive & Legislative branches of the municipality.
 - PILOTs should also be approved by the Board of Assessors.
 - A Solar PILOT allows otherwise taxable property to be exempt and pay through a PILOT this requires approval of the appropriating body.
 - <u>ISM Solar Dighton 2, LLC v. Town of Dighton</u>, Dkt#1873CV01029 Bristol Superior Ct. 7/15/19

SOLAR ARRAY DECOMMISSIONING ISSUES

- Solar Array decommissioning is usually addressed in the municipality's Zoning Bylaw or the ground lease between the property owner and developer.
 - Decommissioning process and costs usually secured by a "Decommissioning Bond" or similar financial surety.
 - Be careful if your municipality does not have a Solar Zoning Bylaw and the owner and developer are the same entity.

SOLAR PILOTS AND NEW GROWTH

- In much the same way as TIF Agreements, Solar PILOTs provide for phased & reliable New Growth.
- Amount of 1st payment added to new growth.
- Subsequently, the increased payment due to the escalator provisions becomes new growth.

- SMART stands for Solar Massachusetts Renewable Target.
- The SMART Program is a much more technical and segmented program than the SREC Programs were.
- The SMART Program is a fixed subsidy program whereas SREC was a variable subsidy program.

- The SMART program steers development away from "Greenfields" through use of a Greenfield subtractor.
- The SMART program created tranches (or slices) and "capacity blocks" based on distribution company service areas.
- While the subsidy on the solar panels is fixed, the adder on energy storage is variable.

- Two Important Features •
 - A Greenfield Subtractor will be applied to the Base Compensation Rate of any facility sited on open space that does not meet the criteria to receive the full incentive.
 - The use of "Adders" to increase the compensation rate.
 - Location Based
 Off-Taker Based
- - Energy Storage
- Solar Tracker

- Agricultural Land Can Remain Chapterland if:
 - The Solar Facility produces energy for the exclusive use of the of the land and farm upon which it is located, which shall include contiguous or non-contiguous land owned or leased by the owner or in which the owner otherwise holds an interest.
 - Does not produce more than 125 per cent of the annual energy needs.
 Chapter 61A, Section 2A

- Agricultural Solar Tariff Generation Units:
 - A Solar Tariff Generation Unit located on Land in Agricultural Use or Prime Agricultural Farmland that allows the continued use of the land for agriculture.
 - Panel Height Requirements
- Growing Season
- Sunlight Reduction Limits
- Maximum Size 2 MWAC

- Energy Storage Adder:
 - "Energy Storage System" A commercially available technology that is capable of absorbing energy, storing it for a period of time and thereafter dispatching the energy.
 - Essentially a battery.
 - Energy Storage System can be co-located with a Solar Generating Unit.



Thank You!



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