

Middlesex County Assessors Association

Assessing Solar Photovoltaic Facilities



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Beacon Disclaimer

- ❖ Beacon Integrated Solutions principals advise clients with respect to a broad range of energy and related matters and are not attorneys or assessing professionals.
- ❖ Our approach has been relied upon by dozens of Municipalities, and to date our approach has not been contested by MA Department of Revenue (“MDOR”).
- ❖ Up Next: Attorney Matt Thomas, a leading expert specializing in assessing and taxation, and municipal real estate tax law.



About Beacon

- ❖ Massachusetts woman-owned energy solutions firm specializing in energy management services, performance contracting solutions, traditional and renewable energy solutions, energy analysis and energy procurement.
- ❖ Certified by the Massachusetts Supplier Diversity Office (SDO) as a woman-owned business enterprise (“WBE”) and are a qualified vendor under the MA State Contract PRF-74 to provide Energy, Climate Action and Facility Advisory Services.
- ❖ Provide a client-centric approach, which focuses first on understanding and defining client needs, and then developing strategies and solutions to meet the needs.



Evolution of MA Renewable Regulations



MA Regulatory and Legislative Landscape

Part 1: Early Days

- ❖ The Massachusetts Renewable Portfolio Standard (“RPS”) is a statutory obligation that requires electricity suppliers (both regulated utilities and competitive suppliers) to purchase an escalating percentage of electricity from qualified renewable sources or by purchasing local and national Renewable Energy Credits (“RECs”).
- ❖ In January 2010, the Department of Energy Resources (“DOER”) carved-out a portion of the RPS Class I requirement to support local solar photovoltaic energy systems.
- ❖ Solar Renewable Energy Certificates (SRECs) became the vehicle to verify compliance with the above Solar Carve-Out portion of the RPS requirements. SRECs were relied upon by solar developers to provide crucial revenue assurances necessary to construct the initial 1600 megawatts of solar generation in Massachusetts.

MA Regulatory and Legislative Landscape

Part 2: Next Generation

- ❖ Having met its initial goals well ahead of schedule, DOER expanded the SREC-I program, creating SREC-II, doubling the initial capacity from 1600 to 3200 megawatts of capacity.
- ❖ With the expansion of the SREC program, DOER introduced reduced incentive levels and certain project and land-use restrictions to reflect market maturation, technology adoption and address land-use protection concerns.
- ❖ In early 2016, DOER announced that the SREC-II program goals had been fully achieved and suspended new program participation. A limited number of projects in advanced-stage were allowed to proceed with the certainty of qualification under the SREC Program.
- ❖ In response to the legislative mandate in Chapter 75 of the Acts of 2016 to develop and implement a solar program with broad application and reach across the Commonwealth, DOER introduced its new solar incentive program, known as Solar Massachusetts Renewable Target (“SMART”) Program.



SMART Program – The New Frontier



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MA Regulatory and Legislative Landscape

Part 3: SMART Program

- ❖ SMART Program is a paradigm shift from the SREC-I and SREC-II programs.
 - ❑ It is structured as a utility tariff, with declining incentives and project restrictions.
 - ❑ Regulations (225 CMR 20:00) were promulgated in August 2017, and the program was fully launched in late-November 2018.
 - ❑ Initially targeted 1600-megawatts of solar generating capacity, implemented in eight 200-megawatt blocks, with each subsequent block receiving a 4% reduction in incentives.
- ❖ SMART Program incentive structure includes a base incentive, determined by the size of the solar PV array, plus adders and subtractors based on key regulatory initiatives, driven by project specifics including location, off-taker and policy.
- ❖ Due to a highly successful launch and over-subscription, the SMART Program was expanded to 3200-megawatts of solar generating capacity, with an additional eight 200-megawatt blocks.
- ❖ Regulations and program guidelines were further refined to encourage certain types of projects while discouraging others.

MA Regulatory and Legislative Landscape

Part 3: SMART Program Incentives and Revenues

- ❖ SMART Program incentive payment is structured to decouple energy and environmental attributes, known as Renewable Energy Certificates (“RECs”), and compensate owners of solar arrays for the RECs through the incentive. The RECs are transferred to the local utility for the life of the incentive payment.
- ❖ Revenue streams to owners of solar arrays are highly dependent on the type of solar array, the configuration of how the solar array is interconnected, the method of compensation for exported generation, and whether the solar array is paired with energy storage systems (battery).
- ❖ Categories of revenue include:
 - ❑ SMART Program incentives
 - ❑ Net metering credits or alternative on-bill credits
 - ❑ Power purchase revenues
 - ❑ Federal Investment Tax Credits
 - ❑ RECs (if not participating in SMART), and
 - ❑ Revenues from upstream capacity market programs

Regulation for Renewable Energy in MA

It's Complicated



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Personal Property Tax Exemptions

- ❖ Chapter 8 of the Acts of 2021, An Act Creating A Next-Generation Roadmap for Massachusetts Climate Policy (“Act”), replaces the authority for Municipalities to enter into PILOT agreements for renewable generation assets under M.G.L. c. 59, § 38H (b) with an amended M.G.L. c. 59, § 5, clauses 45 and 45B.
- ❖ Amended Clause 45 now allows a 20-year property tax exemption for solar or wind energy systems, and solar or wind energy systems paired with battery storage, if the systems meet certain size requirements as follows:
 - ❑ Systems that are 25 kW or less, and
 - ❑ Systems that will not produce more than 125% of the annual electricity requirements of the underlying real property (which can include both contiguous and non-contiguous commonly owned real property in the same municipality).

MA Regulatory and Legislative Landscape

Personal Property Tax Exemptions

- ❖ Added Clause 45B allows a 20-year property tax exemption for fuel cell energy systems if the system will not produce more than 125% of the annual energy requirements of the underlying real property (which can include both contiguous and non-contiguous commonly owned real property).
- ❖ Clauses 45 and 45B exemptions are now available to qualified privately-owned systems that serve properties owned by non-profits and public entities.

MA Regulatory and Legislative Landscape

PILOTS

- ❖ Renewable generation systems not qualifying for the property tax exemption based on the size criteria, may enter into a PILOT agreement.
- ❖ Section 63 of the Act now allows a municipality to enter into a PILOT under the amended Clause 45:
 - ❑ For a term of 20 years, or longer if specified in the PILOT,
 - ❑ For all personal property taxes on the system and any real property taxes attributable to the land on which the system is located provided the land and the system are in common ownership.
- ❖ If the land on which the system is located is not owned by the same entity that owns the qualifying system, the taxes on the land cannot be included in the PILOT agreement. The owner of the land will continue to be assessed real estate taxes.

MA Regulatory and Legislative Landscape

Personal Property Tax Valuation

- ❖ PILOTs previously executed under M.G.L. c. 59, § 38H(b) required Municipalities to establish PILOT payment amounts that were equivalent to the otherwise property tax based on the full and fair cash valuation of the system, with annual escalation.
- ❖ While the amended Clause 45 does not specifically address the valuation approach, in MA Department of Revenue (“MDOR”), Bureau of Municipal Finance Law, IGR 21-24, MDOR stated that the “current or projected full and fair cash value of the system should be determined”.
- ❖ Also in IGR 21-24, MDOR indicated that Municipalities that have entered into PILOTs under amended Clause 45 must provide documentation to the BLS including:
 - ❑ Copies of the executed PILOT agreements along with a certified copy of the legislative body vote authorizing, approving or ratifying the PILOT agreements.
 - ❑ Appraisal documentation used to support the estimates of full and fair cash value included in any PILOT agreement.
 - ❑ Any executed amendments to the PILOT agreements.

Renewable Generation Property Valuation

Background and Approach

- ❖ **MA DOR 2013 Guidance from Sansoucy Associates for Personal Property:**
 - ❑ Income/Revenue Method
 - ❑ Cost Method
 - ❑ Sales/Discounted Cash Flow Method
- ❖ **Beacon's Approach Relies on the Cost Method:**
 - ❑ Revenue data for the Income or DCF Method is indicative at best and not fully transparent for many reasons:
 - The SMART Program is a complicated financial construct.
 - Upstream capacity revenue markets are less certain and not fully transparent.
 - The valuation process is less repeatable.
 - ❑ The Cost Method is:
 - A familiar approach to valuing personal property and the data requirements and analysis are more transparent.
 - More easily repeatable across a broad range of renewable energy technology types.
 - Sansoucy Cost Method includes key cost reduction allowances for deterioration and Federal Investment Tax Credits, which remain current under recent Federal legislation.

Renewable Generation Property Valuation

Beacon's Approach to Personal Property Valuation

- ❖ We believe a valuation strategy and approach should be reasonable, repeatable and defensible to MDOR and your taxpayers.
- ❖ We establish a fixed methodology and fixed calculation to determine the full and fair cash value of the renewable generation systems, including annual escalation.
- ❖ Collect Data:
 - ❑ Require detailed project costs including:
 - All equipment and materials.
 - Contracted and in-house labor.
 - Entitlement costs, including permitting and interconnection.
 - ❑ Require detailed project assumptions including:
 - Project size in kilowatts DC and AC.
 - Estimated first year kilowatt-hour generation.
 - Estimated acres or square footage involved in the system.



Renewable Generation Property Valuation

Beacon's Approach to Personal Property Valuation

❖ Conduct Analysis:

- ❑ Establish residual values for each specific technology (i.e., solar photovoltaic and battery storage).
- ❑ Develop a straight-line depreciation schedule down to the residual value.
- ❑ Include an annual tax rate escalator of 2.5% (or other defensible rate as determined by the Municipality) as a proxy for escalating Municipal revenue requirements.
- ❑ Calculate the annual tax payment using declining valuation and increasing tax rate.
- ❑ Calculate the annual average fixed PILOT payment amount.
- ❑ Impute the average PILOT payment amount in terms of dollars per kilowatt-DC for use in implementing adjustments in PILOT agreements due to incremental changes in project size.

Best Practices

❖ Do's:

- ❑ Require transparency and offer transparency.
- ❑ Use a standard repeatable methodology which provides a fair and balanced foundation for all projects, including Municipal projects owned by private entities.
- ❑ Provide certainty and eliminate risk:
 - Renewable generation owners want predictable annual costs for financing.
 - Consider varying payment structures including fixed annual payment, escalating payment or declining payment, solving for the same total tax revenue to the Town over the term.

❖ Don'ts:

- ❑ Don't rely on offered values from renewable generation owners.
- ❑ Don't apply the conclusions from one PILOT to the next. Every project is different and imputed values are not transferable.

Questions



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Thank You!

Beacon Integrated Solutions

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