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# **NYSEIA Webinar - Understanding the Property Tax Exemption for Solar in New York**

The Extension of this Policy Through 2024, the  
Coming Valuation of Solar, and the Importance of  
Working with Local Governments On This Issue  
September 11, 2014



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# About Us

- Founded in 1994, the **New York Solar Energy Industries Association (NYSEIA)** is a statewide membership and trade association dedicated solely to advancing solar energy use in New York State.
- The presenter **Melissa Kemp** is a renewable energy professional with 10 years of extensive sales, engineering, project management, and business development experience with solar PV systems. She is currently the Program Director for Solar Tompkins, an innovative community solar initiative focused on facilitating a large sustained increase in the rate of solar power adoption by homeowners in Tompkins County, NY. She currently serves on the New York Solar Energy Industry Association (NYSEIA) Board.



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# Background

- Renewable energy development is bringing huge economic, health, and societal benefits to New York.
- As the rate of solar deployment in New York continues to grow, there are several policies that are becoming more important. **One of them is how solar PV systems are treated under property tax law.**
- In New York State, the property tax is a local tax, raised and spent to finance local governments and public schools. It is also an ad valorem tax (Latin for “based on value”), and it is based on the value of one’s real property.



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- **Real property is property you own that is attached to your land, home, or business. Personal property is property you own that is not attached.** In New York, solar systems to date have been categorized as real property through this is being debated in other states.
  - Property taxes in New York are paid annually to your village/town/city, school district, and county, and are calculated as \$'s per \$1,000 of the real property's assessed value.
  - These real property taxes typically total \$20.00 - \$59.00 per \$1,000 of assessed value



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# Types of Property Tax Policies for Solar

- **Property tax exemption** is when the value of a specific addition to your real property is assessed, but you are exempt from taxes on that additional value for a given period of time.
- **Property tax exclusion** is where the value of a specific addition to your real property is excluded from the assessed value for a given period of time, and thus it is also not taxed for that period.
- **Property tax abatement** is a reduction in the general real property taxes due for a property for a specific period of time because of an activity (in this case the installation of a solar system).



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- **Property tax policies currently exist in over 35 states to encourage renewable energy development.** In many leading renewable energy states such as California, Arizona, New Jersey and Massachusetts, all residential and commercial solar systems that produce electricity are generally exempt from property tax. Utility-scale systems are also exempt in California.



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# NY Property Tax Exemption

- The property tax exemption for solar and wind systems in New York - [Section 487 of the New York State Real Property Tax Law](#)- has been an important policy in New York since 1977.
- This policy was just extended in June through 2024 by the NY State Legislature.
- It is a similar policy to those in other leading states except that it has the option (added in 1990) for local jurisdictions to opt out of providing the exemption.



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# More Detail on Section 487

- Applies generally to **solar, wind, and farm waste** energy systems
- Provides a 15 year exemption on property taxes for these systems from the date of system completion
- Default is that all jurisdictions are opted in and providing the exemption until they adopt a local law or school board resolution otherwise
- Jurisdictions still allowed to require a Payment in Lieu of Taxes (PILOT) for certain systems while generally providing the exemption (Subdivision 9 of Section 487)



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# PILOTS

- Subdivision 9 does not specify when a PILOT should be required, but typically jurisdictions have done PILOTS for projects above a certain size. To date that size has been projects larger than 3 MW (these have all been wind projects so far)
- PILOTs across New York have typically been annual payments of \$8,000-\$9,000/MW of nameplate system capacity.
- State data demonstrates that jurisdictions that remain opted in and provide the property tax exemption have collected equal or at times better PILOTS than those who had opted out.



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- PILOTS are typically negotiated with the developer by local governments often under the lead of their Industrial Development Authorities (IDAs). IDAs are public benefit corporations were originally authorized by the Industrial Development Agency Act of 1969 focused on economic development.
  - For larger facilities that may require a PILOT, the developer must provide written notification of "start of construction" to the taxing jurisdiction(s) when they execute an interconnection agreement with the utility.
  - Upon notification of this start of construction, a taxing jurisdiction must notify the developer or owner within 60 days if such jurisdiction's intention is to require an agreement for payment in lieu of taxes.



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# Current State of the Exemption

- More than 92% of all jurisdictions continue to offer this exemption
- Note though currently for example in Tompkins County, there is no potential lost revenue stream from this property tax exemption, because Assessment Offices have not yet started adding additional value to homes and commercial buildings for solar (more on this later).
- 175 out of 2,308 jurisdictions have currently opted out of providing the property tax exemption – about 7.6% - and the list can be found [here](#).



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- Because Assessment Offices have often not yet started adding additional value to home and commercial buildings for solar, people are not yet experiencing the difference between the places that are providing this exemption and those that are not.
  - There is a growing national consensus, however, supported by Fannie Mae, Sandia National Lab, Lawrence Livermore National Lab, and the Appraisal Institute that solar does add value to buildings and they have a standard methodology for calculating that, so this will be changing (more on this later).
  - In addition, whether homeowners and business owners have a property tax exemption for their systems in the future is actually based on the date their system is completed and the policy in the relevant jurisdictions at that time. Thus policy today even before the valuation change has a dramatic effect on the future.



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# Why Does This Matter?

- There is strong evidence that solar adds value to properties, and jurisdictions are beginning to add value for solar in assessments. This will make the difference between jurisdictions with exemptions and those without exemptions gain importance in short order.
- The number of jurisdictions opting out of providing this exemption has been growing along with commercial wind development in New York, and will likely to continue to do so if the above happens as expected and no other action is taken. Many of these jurisdictions have opted out without fully exploring the potential consequences.



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- Property taxes on solar systems will have a significant negative economic and psychological impact, and will discourage the adoption of renewable energy. For example, for monthly solar loan and leases in the residential space, property taxes typically flip the economics. Instead of a solar lease costing similar or less per month than customers are paying the electric utility, a system would instead cost more.
  - To encourage rapid solar development, supportive, clear, and uniform policies are essential.



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# Solutions?

## Immediate

- Connect with your local county, municipal, and school district officials and educate them about this issue, and also the positive economic benefits of supporting solar development which can more than make up for any lost revenue from the property tax exemption.
- Work with them so that their jurisdictions remain opted in and providing this exemption, or work with them to opt back in if they have opted out.
- Step by step examples are available on how this has been done successfully.



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- Get all jurisdictions providing the exemption to adopt clear guidance on what size and nature of system triggers a PILOT
  - Obtain clarification on the treatment of leases and PPAs (who is responsible for a PILOT for example – the owner of the equipment, the owner of the land, or the offtaker of the electricity)

## **Medium Term**

- Simplify and streamline this important policy by eliminating the opt in/out option completely like other leading states
- Extend the term of exemption to at least the minimum solar system life of 25 years



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# The Coming Valuation of Solar



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# Why Solar Adds Value

- **Solar adds value to properties because energy is a required part of owning and operating a home or business in modern America.**
- A solar system (as could other renewable energy or energy efficiency systems) eliminates part or all of the annual electricity costs that are a standard and required part of home or businesses' operation
- A home or business with a lower or no monthly obligation for electricity costs allows the owners to avoid payments that must otherwise be borne as a direct and necessary consequence of owning a home.
- Thus having the cost of supplying all or part of this electricity built into the property itself adds clear value to the home or business upfront.



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- This is the same basic reasoning already present in the current Fannie Mae Uniform Residential Appraisal Report (Form 1004) - which is used nearly universally in home appraisals.
  - Form 1004 has two mandatory sections referencing “Energy Efficient Items” and “special energy efficient items” in its valuation of comparable homes since any reduction in the necessary monthly costs of energy to run a home is understood to add value upfront to the property.



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# How is the Value Calculated?

- The Appraisal Institute - a global professional association of real estate appraisers, with nearly 22,000 professionals throughout the world and now the world's largest publisher of real estate appraisal literature - offers a standard form for use in assessing the value of energy efficient and green buildings.
- Called "Form 820.04: Residential Green and Energy Efficient Addendum", this is the first residential green and energy efficient appraisal report addendum that has been made by appraisers, for appraisers.
- This form calculates valuation based on the energy savings, and **uses an income capitalization approach or discounted cash flow analysis** for appraising the value of solar. The tool they feature to do this standard calculation is [www.pvvalue.com](http://www.pvvalue.com) developed by Sandia National Laboratories.



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# Sandia's Rationale for This Income Capitalization Approach vs Comps

- “There is often a lack of comparable sales data on existing residential and commercial buildings with installed PV systems in the various regional multiple listing service (MLS) databases, and in some cases there may not even be a search option for renewable energy technology. It can be difficult for an appraiser to determine a value for a PV system using the principle of substitution with the sales comparison approach.”



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- “The income approach is based on the idea that the value of a property is equal to the capitalized value of the net income stream generated by that property. Applying this approach to PV looks at what one may be willing to pay today for the opportunity to receive future cash flows using a discounted cash flow model.”



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# Example of Valuation

- This example uses for illustrative purposes a residential system purchased under a current community-wide Solarize program.
- The assumptions used in the model are the discount rate (7 to 10 percent), the time span (25 years - equal to the warranty of the modules), the current avoided electric cost (\$0.12/kWh), and the potential escalation in future electricity prices from the electric utility (0 to 0.5 percent per year).



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- Total price of an example 7 kW solar PV system through the Solar Tompkins Program: **\$24,500**
  - Final cost of an example 7 kW solar PV system through the Solar Tompkins Program: **\$6,216**
  - Valuation of the solar using the income capitalization method of discounted cash flow techniques endorsed by the Appraisal Institute: **\$9,000 to \$12,000** depending on the exact assumptions



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# Comparison to Case Studies

- This valuation for the PV array in this example amounts to \$1.30 to \$1.70 per watt of capacity
- This range is consistent (and often less than) that found in the large scale studies of comparable home sale prices that have been done in California and Colorado where enough solar homes have been sold for their value to be clearly discernible in the sale price data.
- This range is also consistent with the large body of data on the price premium for weatherization and other home energy improvements that have been studied in many areas of the U.S. and Europe.



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# The Future

- Assessment offices are tracking these systems, and many will likely soon be adopting these standard practices due to the increasing number of homes that will be sold with solar.
- On addition, once there is a large enough number of systems here in New York, there are well-known statistical methods (hedonic analysis) that can also be used to extract the premium for solar via Comp Methods as well.
- **The above will be positive in a number of respects for reselling homes with solar and building homes with solar, but it will also bring the question of property taxes on solar to the forefront as an important issue and one we should be focused on now.**



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# Questions and Contact Info

- Questions?
- Please also feel free to contact us directly with any questions, or to request data sources and citations for any of these slides.

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